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Spiders (Arachnida: Araneae) of Milbridge, Washington County, Maine

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ABSTRACT

Adult spiders (N = 6,979) of 19 families, 145 genera, and 302 species (including 4 unknown) were collected from diverse inland, coastal, and offshore habitats of Milbridge, a 6,290-ha minor civil division of the East Coastal BioPhysical Region. Spider species richness per family ranged from 1 (Titanoecidae and Pisauridae) to 89 (Linyphiidae); species richness per genus ranged from 1 to 13, with 88 genera represented by a single species. As expected, the collected taxa were distributed unequally between two basic foraging strategies: 10 families, 98 genera, and 179 species of web spinners; 9 families, 47 genera, and 123 species of hunters.

Spider abundances varied widely among taxa; individuals per family ranged from 1 (Titanoecidae and Pisauridae) to 1,691(Lycosidae); individuals per species ranged from 1 (86 species) to 470. *Pardosa moesta* was the most frequently collected spider. Although total species composition favored web spinners over hunters, more hunters were collected than web spinners, and more female spiders were collected than male spiders, a pattern evident for both web spinners and hunters. Spider sex ratios varied widely among the collected species and were influenced by sampling method, habitat, and season. Pitfall traps yielded more species and more individuals than any other sampling method. Fully 47.0 percent of the inventoried fauna were method-unique species; most were taken by pitfall traps, searches, and sweep nets. Species-faunal compositions among habitats were generally distinct among habitats (QS ≤ 50.0), and included habitat-unique spedies.

Species-range extensions include 31 new state records, 6 New England records, and 3 national records. At least 12 invasive species were among the inventoried spiders; 5 were associated with domestic habitats. Based on published and unpublished records from the same biophysical region, total estimated richness is 24 families, 172 genera, and ~ 411 species. Loss of habitat and displacement of native species by invasives pose potential threats to this diverse fauna.

COVER PHOTO

Araneus orb weaver, courtesy of Lt. Col. Murray Cragin, USAF (retired).

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INTRODUCTION

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Spiders are among the dominant predators in terrestrial ecosystems (Gertsch 1979, Ubick et al. 2005) that feed chiefly on insects (Nyffeler et al. 1994, Riechert and Harp 1987). In turn, spiders are eaten by diverse wildlife, including other spiders, predatory wasps, fish, amphibians, reptiles, birds, and mammals (Foelix 1996, Gertsch 1979, Wise 1993). As obligate insectivores, spiders play significant regulatory roles in forest ecosystems and agroecosystems (see reviews by Maloney et al. 2003, Nyffeler and Benz 1987, Nyffeler et al. 1994, Riechert and Bishop 1990, Riechert and Lockley 1984).

Spiders are found in virtually all terrestrial habitats (Turnbull 1973), including some freshwater and marine habitats, and on all continents except Antarctica (Cushing 2005). Globally, spiders are the seventh most diverse order of animals in terms of named species (Coddington and Levi 1991). Some 108 families, 3,677 genera, and 39,725 species have been described to date (Platnick 2007), and estimates of extant species range as high as 170,000 species (Coddington and Levi 1991). However, despite their ubiquitous occurrence, relative abundance, and ecological importance, spiders are seldom included among the organisms collected, counted, and identified during faunal surveys in Maine or elsewhere. In reference to faunal surveys, Grimaldi and Engel (2005, p. 12) state: "Another surprise about these kinds of studies is that there have been very few surveys of the insects or terrestrial arthropods of natural areas…Even though that type of study is so important to estimating how many species…exist."

Here we describe our efforts to inventory the spiders associated with diverse communities and habitats of Milbridge, a minor civil division (MCD) encompassing some 6,289.8 ha of Washington County, ME. These efforts began in 1991 and continued through 2005. Our goals were to 1) visit and collect spiders in as many representative habitats of Milbridge as possible; 2) use a variety of collecting and sampling techniques (e.g., beating sheets, sweep nets, pitfall traps) to sample ground, herb, shrub, and tree strata; 3) identify the collected specimens to family, genus, and species where possible; and 4) compare and contrast the observed spider fauna of Milbridge with that found on Mount Desert Island in Hancock County, ME. Before the Milbridge study, Mount Desert Island was the area most comprehensively inventoried for spiders in Maine; an inventory conducted by William Procter and associates during the 1920s to1940s (Procter 1933, 1938, 1946).

STUDY SITES AND HABITATS

Study Sites

During the 15-year study period (1991-2005), about 60 sites within the MCD of Milbridge were sampled for spiders (Table 1, Figure 1). All study sites and collecting localities were within the East Coastal BioPhysical Region as defined by McMahon (1990). This region is characterized by low ridges surrounded by relatively flat terrain; elevations are generally less than 100 ft (30.5 m); bedrock is predominantly igneous, with headlands and islands composed of biotite or granite (McMahon 1990). The regional climate is characterized by cool summers and high annual precipitation that occurs chiefly in the winter. Fog is common during the summer. Soils range from poorly developed, shallow acidic soils on ridgetops and outer peninsulas, to deep marine clays and glaciolacustrine deposits in low-lying areas, to glacial till and deep, moderately well drained loamy soils of ridge slopes (McMahon 1990). Prominent physical features in Milbridge include the Narraguagus River, which drains into Narraguagus Bay; Mill River, which drains into Flat Bay; Beaver Meadow Brook, which drains into Back Bay; the Gulf of Maine; fresh, brackish, and saltwater marshes; several offshore islands; and coastal granite ledges along the shorelines of bays, peninsulas, and some offshore islands (USGS topographic maps).

Two terrestrial ecosystems make up the Eastern Coastal Region: coastal spruce-fir forests and coastal raised peatlands (McMahon 1990). The coastal spruce-fir forests are comprised chiefly of red spruce (*Picea rubens* Sarg.) and balsam fir (*Abies balsamea* (L.) Mill.). In cutover and disturbed areas of these forests, prominent tree species include paper birch (*Betula papyrifera* Marsh.), red maple (*Acer rubrum* L.), and bigtooth aspen (*Populus grandidentata* Michx.).

Habitats

Specific habitats included seashores and associated cobble, sand and shingle beaches; seashore-backshores above wrack lines; granite ledges of seashores, islands, and headlands; freshwater marshes, brackish marshes, and saltmarshes; a salt meadow; riparian edges of rivers, streams, and a dry streambed; freshwater pond and beaver flowages; herbaceous-shrub-small tree vegetation of old fields, old field edges; disturbed roadsides and a school playground; a gravel pit; a *Kalmia-Vaccinium* heath; an *Amelanchier-Rubus* stand, an alder-old field edge; mixed deciduous-coniferous woodland; inland ledges; deciduous forest stands of bigtooth aspen, paper birch, and mixed red maple-paper (white) birch; and coniferous forest stands of coastal red spruce, and mixed red spruce-balsam fir. Special efforts were made to record specific spider-plant habitat associations; e.g., on common goldenrod inflorescence; in silk retreat on curled red maple leaf; beating white spruce foliage. A list of common and Latin names of plants with associated spiders is found in the Appendix. The plant names given by Haines and Vining (1998) served as the primary source for both common and Latin names.

MATERIALS AND METHODS

Spider Collection Methods

Pitfall Traps

For terrestrial habitats, we used a modified version of the large-capacity pitfall trap described by Houseweart et al. (1979). The new, modified design consisted of three basic components: 1) a trap apron (17.8 x 17.8 cm) cut from 0.55-cm tempered hardboard, with a centrally located 9.9-cm-diameter hole whose circumference was routed to form a ledge (~ 0.3 cm deep x ~ 0.3 cm wide);

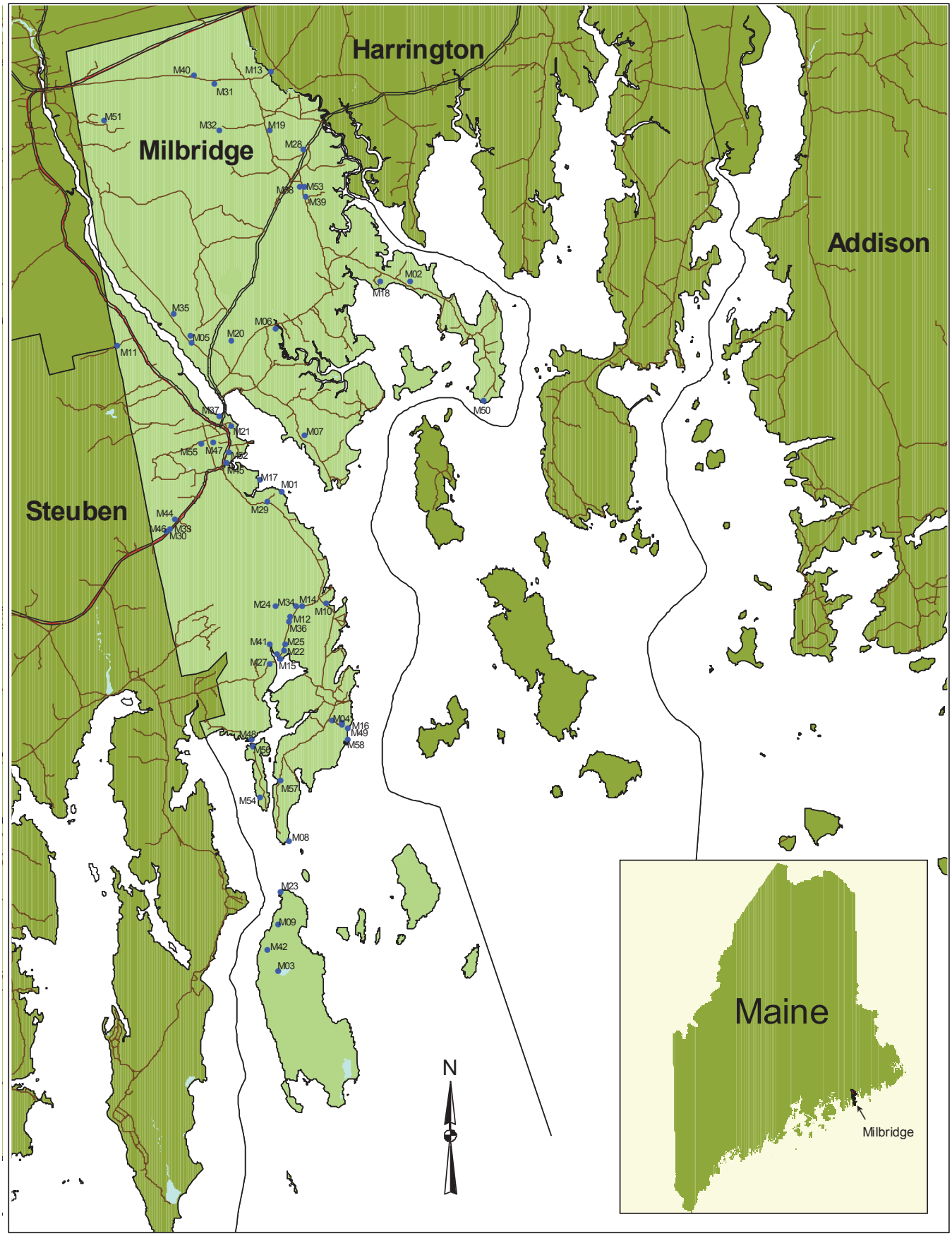

Figure 1.—Distribution of spider collecting sites in Milbridge, a minor civil division of the East Coastal BioPhysical Region, Washington County, Maine.

2) a 473-ml plastic Solo® cup, filled to ~ 2.5 cm with 110 ml of propylene glycol (RV antifreeze) as a killing-preservative agent; and 3) a rain cover (22.9 x 22.9 cm) fashioned from ~ 0.32-cm exterior plywood, and supported by four 16d galvanized nails. The circumferential ledge suspends and holds the trap cup, whose lip fits flush with the surrounding apron. In Minnesota, Cutler et al. (1975) found that similar pitfall traps with aprons caught twice as many spiders as traps without aprons. The trap aprons also help to exclude soil and debris, thus yielding cleaner catches that are easier to sort.

Depending on available continuous microhabitat (i.e., same biotic-physical features), we deployed pitfall traps either in line transects or in 3 x 3 m grids. For both deployment designs, individual traps were spaced 3 m apart. Numbers of traps per site ranged from 5 to 9; periods of trapping ranged from May to September, but were not consistent among study years. However, trapping periods were always consistent among study sites for individual years.

After deployment, pitfall-trap contents were collected at about weekly intervals (range 5-14 days); content collections were always consistent among study sites for individual years. For these collections, the trap cups were removed from the apron; their captured contents were passed through a small-mesh (kitchen) strainer and stored in plastic urine specimen jars (120 ml) containing 70-75 percent isopropyl or ethyl alcohol. A pre-printed waterproof label was added to each jar; recorded data included collection locality, collection date(s) (i.e., trapping period), habitat, pitfall number, and collector's name.

For aquatic habitats, we used floating pitfall traps similar to those described by Graham et al. (2003). The Milbridge traps were fashioned from 3.8-cm Styrofoam™ cut into 17 x 17 cm squares to form an apron or platform. A centrally located hole (~ 10 cm diameter) with a circumferential ledge similar to that described above was then scribed and cut with a razor blade. The ledge suspended and held a 473-ml plastic Solo® cup that contained ~ 140 gm of plaster of paris, which helped stabilize the floating platform. After the plaster of paris dried, a size 10 screw-eye (3.6 cm long) was screwed into the bottom of each cup. During deployment about 110 ml of propylene glycol (RV antifreeze) was added to each platform cup as a killing-preservative agent.

Unlike Graham et al. (2003), who tied their floating pitfall traps to an anchoring pole, we fashioned anchors from 149-ml plastic juice cups containing ~ 140-155 gm of quick-setting cement. Before the cement dried, a size 10 screw-eye was placed in the uppermost surface of the cement. Depending on water depth, variable lengths of nylon cord were attached to the screw-eye--one end to the platform cup, the opposite end to the anchoring cup. Such an arrangement eliminated the need for anchoring poles and allowed some horizontal movement of the floating trap on the water's surface, depending on wind and currents.

To deploy these aquatic pitfall traps, we used a long (~ 2 m) pole to extend the anchoring cord and cup anchor out over the water 1-2 m from the bank. As the anchor was lowered into the water, the trap platform was released, thereby pulling the floating platform away from the bank. Slack in the anchor's cord allowed some horizontal movement of the floating trap, depending on wind and currents. Five aquatic pitfall traps were deployed in each of four sampling sites: two beaver flowages, one freshwater marsh pond, and one human-made pond.

To retrieve aquatic pitfall traps, we used a pole mounted with a shepherd's hook to snag the trap's anchoring cord. The floating trap and anchor were then pulled slowly to the bank. To retrieve trap contents (if any) and processing samples, we followed the same procedures as described above for terrestrial pitfall traps.

Sweep Nets

Standard insect-collecting nets were used to collect spiders from herbaceous-shrub-small tree vegetation. Two commonly used nets and sizes were BioQuip® Professional Series Insect Net, 30.5-cm-diameter net of polyester or muslin netting, with a 91.5-cm handle; and BioQuip® Heavy Duty Sweep Net, 38-cm-diameter net of sailcloth with a 61-cm handle. Captured spiders were removed from sweep nets by aspirator or vial and stored in small jars or vials containing 70-75 percent isopropyl or ethyl alcohol. A penciled waterproof label bearing collection data was added to each jar or vial. Sweep nets were used chiefly in old fields and in marshes, along edge habitats (e.g., roadsides, banks or shores of waterways, forest-woodland edges), and in forest openings and where understory vegetation was present. Other than recording numbers and frequency of captures by species, no attempts were made to quantify sweep-net collections either by volume or vegetation area swept.

Beating Sheets

To collect arboreal spiders from woody shrubs and trees, we used two styles and sizes of beating sheets: BioQuip® Canvas Beating Sheet, 71 x 71 cm square, with marine canvas (tan) supported by pivotal oak cross members; and BioQuip® Ripstop Beating Sheet, 1 x 1 m square, with lightweight nylon ripstock supported by four 71-cm sections of PVC tubing. Dislodged spiders were captured by aspirator or dry vial and then transferred to vials or jars containing 70-75 percent isopropyl or ethyl alcohol. A waterproof label bearing collection data was added to each storage container.

Tree-Bole Brush and Net

Tree boles were brushed with a medium soft handbrush (whitewash brush) and dislodged spiders were captured with a specially designed net (Dunn and Reeves 1980). The net was fashioned from a standard insect net. One-half of the net's supporting metal rim was replaced with an elastic band that allowed close placement of the net against a tree bole. Dislodged spiders were retrieved by aspirator or dry vial and transferred to vials or jars containing alcohol. A waterproof label bearing collection data was added to each storage container.

Litter Condenser-Extraction

Samples of litter were collected from forest floors and marsh edges and condensed by a two-handled litter condenser, similar to that illustrated in the latest BioQuip® Products (2007), online catalog. However, the litter condenser used at Milbridge is equipped with a single 6 x 6 mm mesh screen, instead of two screens (mesh sizes 1 cm and 50 mm). Condensed litter was either 1) sorted by hand in white plastic or porcelain trays, or on black plastic sheets; or 2) processed by modified Berlese funnels. Resultant specimens were processed as described earlier.

Searches

Spiders were also collected by searching under rocks, logs, ground debris, and loose dead bark of trees and snags. Numerous specimens of several species were taken by examining interior and exterior walls, floors, and ceilings of houses, sheds, cottages, and other buildings. In such synanthropic

habitats, spiders were captured by aspirator, dry vial, or dry jar; specimens were processed and stored like the other collections.

Collection Site and Habitat Descriptors

Global Positioning System Coordinates

At each sampling-collection site, latitude-longitude coordinates were determined by Garmin™ GPS 38 and Garmin™ GPS map 60CS hand-held meters. The coordinates were then plotted using Maptech® Terrain Navigator 2002 and GIS Arcview® 9.1 software in WMF format, Region 601, for preparation of Figure 1.

Habitat Descriptors

Habitat descriptions were based chiefly on dominant and co-dominant vegetation type (e.g., *Betula-Acer* stand, mixed hardwood-conifer, mixed conifer-hardwood) and on general physiographic features (e.g., seashore, seashore-backshore, gravel pit).

Specimen Identifications and Museum Deposits

Spider Identifications

Collected specimens were processed in the laboratory and examined with stereo-zoom microscopes Swift™ MZ 800, 10.5-67.5x magnification; Leica™ MZ-8, 10.1-80.0x magnification), both equipped with fiber-optic lighting. With few exceptions, both authors examined and identified each collected specimen. Most adult spiders were identified to species following Kaston (1981) and other consulted sources, which included Opell and Beatty (1976) for the Hahniidae, Leech (1972) for the Amaurobiidae, Chamberlin and Gertsch (1958) for the Dictynidae, Dondale and Redner (1982) for the Clubionidae, Dondale and Redner (1978b) for the Philodromidae and Thomisidae, Dondale and Redner (1990) for the Lycosidae and Pisauridae, and Platnick and Dondale (1992) for the Gnaphosidae. For determining species of Linyphiidae (Linyphiinae, Erigoninae), numerous taxonomic papers were consulted; a few difficult specimens were sent to colleagues (Drs. C. D. Dondale, Ottawa, and P. J. van Helsdingen, Leiden, The Netherlands) for identifying or verifying species. Arrangement and enumeration of spider taxa generally follow that of Platnick (2007), except families are listed by foraging guild.

Museum Specimen Deposits

With few exceptions, representative specimens of all identified species are slated for deposit in the arachnid collections of the Museum of Comparative Zoology at Harvard University. Females of two unidentified erigonids (*Tapinocyba* sp., and Unknown genus, species), plus one unidentified male *Ozyptila*, are in the Canadian National Collection at Ottawa. Males of a new *Pirata* were sent to James C. Cokendolpher for species description.

Data Summaries and Analyses

Data Summaries

Specimen collection data (i.e., locality, date collected, method, habitat, and collector) were entered by species into versions 1.61 and 2.02 of Biota©: The Biodiversity Database Manager for tabulation and summarization. Only adult spiders were included in the database. All 12 of Biota's core tables were used with individual specimens receiving the following codes: specimen, species, collection, and locality. For each species, summary tables were printed showing the number of specimens collected by locality, date(s), collection method, specimen sex, habitat, and microhabitat.

Data Analyses

For most variables, descriptive statistics were used to calculate means and standard errors. Nonparametric procedures (Sokal and Rohlf 1981) were used to compare observed vs. expected proportions at $P = 0.05$.

Sørensen's similarity quotient (QS) as defined by Price (1975) was used as a qualitative measure of similarity between the Milbridge spider fauna and that of Mount Desert Island (MDI). The latter was inventoried chiefly by William Procter and associates during the 1920s-1940s (Procter 1933, 1938, 1946). The formula used was QS = 2c x 100/(a + b), where a = the number of spider taxa (family, genera, species) in study A (Milbridge); b = the number of spider taxa in study B (MDI); and c = the number of spider taxa common to both studies. Only identified taxa were included in these comparisons; unknown species and species represented by juveniles were excluded. Quantitative indices of similarity (e.g., Bray-Curtis, Simpson's) were not appropriate because spider abundances were not always recorded by species for the MDI fauna.

However, before such faunal comparisons could be made, recent species synonymies and other taxonomic changes (e.g., reassignment of genera, species to other families) (Platnick 2007) had to be considered. For example, Procter (1946, p. 525) listed *Phrurotimpus palustris* Banks as a member of the Clubionidae. This species has since been designated as a junior synonym of *Phrurotimpus alarius* (Hentz 1847), and subsequently the genus *Phrurotimpus* was reassigned first to the Gnaphosidae (Brignoli (1983), then to the Liocranidae (Platnick 1989, 1993, 1997), and most recently to the Corinnidae (Bosselaers and Jocqué 2002, Platnick 2007). Similar revisions were made for other outdated taxa listed by Procter (1946) for the Mount Desert Island fauna.

Table 1.—Sampling sites, coordinates, and habitats of spiders collected in Milbridge, Washington County, ME, 1991-2005

Site #	Locality name [1]	Coordinates [2]	Habitats sampled
M01	Graham's property, 170 Wyman Rd.	44° 31.6′ N, -67° 52.1′ W	Seashore; Seashore-Backshore; Mixed Deciduous-Coniferous Woodland; *Amelanchier-Rubus* Stand; *Betula-Acer* Stand; Freshwater Pond Edge; Old Field; Old Field-Edges; Old Field-Alder Edge; Arboreal; Domestic (house, screen house, shed, cabin, boats, etc.)
M02	Rays Point Road, roadside parking 1.6 km E jct. Back Bay Road & Ray's Point Road	44° 33.8′ N, -67° 50.2′ W	Roadside Vegetation, Mixed Conifer
M03	Bois Bubert Island	44° 26.5′ N, -67° 52.3′ W	Freshwater Pond Edge
M04	McClellan Park, Narraguagus Bay	44° 29.2′ N, -67° 51.4′ W	Coastal Red Spruce Forest
	……	44° 29.1′ N, -67° 51.3′ W	Wet Meadow
	……	44° 29.2′ N, -67° 51.3′ W	Roadside, Coastal Red Spruce Forest
M05	Kansas Road, Narraguagus River 0.5 km NW of jct. Kansas Road & Kennedy Hwy. (Rt. 1A).	44° 33.2′ N, -67° 53.4′ W	Old Field
	……..	44° 33.1′ N, -67° 53.4′ W	Old Field-Brackish Marsh Edge
M06	Beaver Meadow Brook, Back Bay Road	44° 33.3′ N, -67° 52.1′ W	Saltmarsh; Saltmarsh Edge; Arboreal
M07	Ficketts Point Road, Cemetery 1.3 km SE jct. Ficketts Point Road & Bayview Street	44° 32.2′ N, -67° 51.7′ W	*Kalmia-Vaccinium* Heath
M08	Tom Leighton Point	44° 27.9′ N, -67° 52.1′ W	Seashore; Seashore-Backshore
M09	Bois Bubert Island	44° 27.1′ N, -67° 52.3′ W	Old Field-Abandoned Farm; Arboreal
M10	Hubbell property, 0.2 km S jct. Wyman & Tom Leighton Pt. Roads	44° 30.4′ N, -67° 51.5′ W	Mixed Conifer-Hardwood; Ledges; Arboreal
M11	Gravel pit, 2.4 km NW of Milbridge	44° 33.1′ N, -67° 54.7′ W	Gravel Pit
M12	Petit Manan NWR, 0.6 km SW jct. Wyman & Marsh Roads	44° 30.3′ N, -67° 52.0′ W	Freshwater Marsh Pond
M13	Heath Road and Mill River	44° 36.0′ N, -67° 52.2′ W	Mixed Hardwood-Conifer; Roadside (culvert); Riparian-Streamside; Arboreal
M14	Wyman, Trail to Sawyer Marsh 0.3 km SW jct. Wyman & Marsh Roads	44° 30.4′ N, -67° 51.8′ W	Mixed Hardwood-Conifer (understory); Sand Pit
M15	Wyman, Sawyer Saltmarsh, 1.4 km SW jct. Wyman & Marsh Roads	44° 29.8′ N, -67° 52.2′ W	Saltmarsh
M16	McClellan Park, Narraguagus Bay	44° 29.1′ N, -67° 51.2′ W	Seashore Ledges
M17	Cain's Creek N of Graham's property, W of Timmy Point	44° 31.7′ N, -67° 52.4′ W	Saltmarsh
M18	Rays Point Road, Back Bay Road 1.1 km NW jct. Ray's Point & Back Bay Roads	44° 33.8′ N, -67° 50.6′ W	Roadside (culvert); Arboreal
M19	Heath Road, 1.1 km NW jct. Heath & Kennedy Hwy., (Rt. 1A)	44° 35.4′ N, -67° 52.2′ W	Mixed Hardwood-Conifer; Arboreal
M20	Bayside Supermarket, 23 Main Street	44° 33.2′ N, -67° 52.9′ W	Domestic (paved parking lot)
M21	Headquarters, Petit Manan NWR, 14 Water Street	44° 32.3′ N, -67° 52.8′ W	Domestic (building)

continued

Table 1.—continued

Site #	Locality name [1]	Coordinates [2]	Habitats sampled
M22	Petit Manan NWR, Sawyer Division, 1.2 km SW jct. Wyman & Marsh Roads	44° 29.9′ N, -67° 52.7′ W	Bigtooth Aspen Stand
M23	Bois Bubert Island	44° 27.4′ N, -67° 52.2′ W	Seashore; Seashore-Backshore; *Sphagnum* Bog; Mixed Conifer (opening)
M24	Petit Manan NWR, Sawyer Division, 0.8 km SW of Wyman & Marsh Roads	44° 30.4′ N, -67° 52.2′ W	Red Maple Sapling Stand; Red Maple Sapling (understory)
M25	Petit Manan NWR, Sawyer Division, 1.1 km SW of Wyman & Marsh Roads	44° 30.0′ N, -67° 52.1′ W	White Birch Stand; White Birch (understory)
M26	Petit Manan NWR, Sawyer Division, 1.4 km SW of Wyman & Marsh Roads	44° 29.9′ N, -67° 52.2′ W	Saltmarsh Edge
M27	Petit Manan NWR, Sawyer Division 1.6 km NE of jct. Joe Leighton & Bar Island Roads	44° 29.8′ N, -67° 52.3′ W	Red Maple-White Birch Stand
M28	E. Milbridge, Rt. 1A & Mill River	44° 35.2′ N, -67° 51.7′ W	Roadside Disturbed Area
M29	W. side of 170 Wyman Road 1.1 km SE jct. Wyman Road & Rt. 1 (Main Street)	44° 31.5′ N, -67° 52.3′ W	Roadside; Arboreal; Domestic (mailbox)
M30	Freeman's Marsh (roadside), 1.6 km SW jct. Washington Street & Rt. 1	44° 31.2′ N, -67° 53.8′ W	Roadside; Roadside-Alder Edge; Mixed Conifer (understory)
M31	Old County Road, 0.7 km W jct. Heath & Lynch Hill Roads	44° 35.9′ N, -67° 53.0′ W	White Pine-Mixed Conifer
M32	Heath Road, 1.3 km NW of Rt.1A	44° 35.4′ N, -67° 53.0′ W	Roadside; Mixed Conifer-Hardwood
M33	Freeman's Marsh (meadow), 1.6 km SW jct. Washington Street & Rt. 1	44° 31.2′ N, -67° 53.8′ W	Freshwater Marsh
M34	Petit Manan NWR, 0.5 km SW of Wyman & Marsh Roads	44° 30.4′ N, -67° 51.9′ W	Riparian (dry streambed); Mixed Hardwood-Conifer; Ledge
M35	Kansas Road, 1.1 km NW jct. Kansas Road & Kennedy Hwy., (Rt. 1A).	44° 33.5′ N, -67° 53.6′ W	Brackish Marsh
M36	Petit Manan NWR, 0.7 km SW jct. Wyman & Marsh Roads; trail NE of freshwater marsh pond	44° 30.2′ N, -67° 52.0′ W	Mixed Conifer-Hardwood (understory)
M37	Red Barn Motel property, 3 North Main Street	44° 32.4′ N, -67° 53.0′ W	Old Field; Old Field Edge
M38	Flaherty Road, E. Milbridge, 0.3 km S jct. Flaherty & Kennedy Hwy., (Rt. 1A)	44° 34.8′ N, -67° 51.8′ W	Bog (*Sphagnum*-cranberry-rush)
M39	Flaherty Road, E. Milbridge, 0.3 km S jct. Flaherty Road & Kennedy Hwy., (Rt. 1A)	44° 34.7′ N, -67° 51.7′ W	Red Maple (understory); Red Maple-Red Oak (ledge)
M40	Old County Road, 1.1 km W jct. Heath & Lynch Hill Roads	44° 36.0′ N, -67° 53.3′ W	Lowbush Blueberry Field
M41	Petit Manan NWR, Sawyer Saltmarsh, 1.3 km SW jct.Wyman & Marsh Roads	44° 30.0′ N, -67° 52.3′ W	Saltmarsh Edge (impaled leaves)
M42	Bois Bubert Island	44° 26.9′ N, -67° 52.4′ W	Mixed Conifer Ledges
M44	Evergreen Cemetery, Rt. 1	44° 31.3′ N, -67° 53.7′ W	Roadside-Domestic
M45	Jct. Rt. 1 & Wyman Road	44° 31.9′ N, -67° 52.9′ W	Roadside-Riparian Streamside
M46	Pinkham residence, 1.6 km SW jct. Washington Street & Rt. 1, near Freeman's Meadow	44° 31.2′ N, -67° 53.9′ W	Domestic

continued

Table 1.—continued

Site #	Locality name [1]	Coordinates [2]	Habitats sampled
M47	Milbridge, Washington Street, 0.2 km S. jct. Washington & Cottage Streets	44° 32.1′ N, -67° 53.1′ W	Riparian-Freshwater Streamside
M48	Bobby Creek Causeway, N shore	44° 29.0′ N, -67° 52.6′ W	Seashore-Backshore; Ledges
M49	S of McClellan Park, Narraguagus Bay	44° 29.1′ N, -67° 51.2′ W	Seashore-Backshore
M50	Ray Point, Harrington Bay, 4.0 km SE jct. Back Bay & Rays Point Roads	44° 32.5′ N, -67° 49.1′ W	Seashore (cobble beach); Seashore-Backshore
M51	Old Fairgrounds, NW Milbridge 5.1 km NW jct. Kansas Road & Kennedy Hwy., (Rt. 1A)	44° 35.5′ N, -67° 54.7′ W	Mixed Conifer (opening); Roadside
M52	Chapman residence, 88 Main Street	44° 32.0′ N, -67° 52.9′ W	Domestic (house, barn)
M53	Flaherty Road, E. Milbridge, 0.3 km SE jct. Flaherty Road & Kennedy Hwy., (Rt. 1A)	44° 34.8′ N, -67° 51.7′ W	Mixed Hardwoods; Aspen-Maple
M54	Bar Island, McCormick property, 281 Bar Island Road	44° 28.4′ N, -67° 52.5′ W	Mixed Conifer (litter); Arboreal
M55	Milbridge Elementary School, 39 Washington Street	44° 32.1′ N, -67° 53.3′ W	Riparian-Beaver Flowage; School Playground-Disturbed Area
M56	Bar Island, near Bobby Creek Causeway	44° 28.9′ N, -67° 52.6′ W	Salt Meadow
M57	N of Tom Leighton Point, parking 3.6 km S jct. Wyman & Tom Leighton Point Roads	44° 28.6′ N, -67° 52.2′ W	Brackish Marsh
M58	S of McClellan Park, 2.8 km S jct. Wyman & Tom Leighton Point Roads	44° 29.0′ N, -67° 51.2′ W	Seashore Brackish Marsh

[1] Locality names, including roads, points, bays, streams, and marshes, are per The Maine Atlas and Gazetteer, 29th ed. 2006. Yarmouth, ME: DeLorme. 78 p.

[2] Coordinates were determined by Garmin™ GPS 38 and Garmin™ GPSmap 60CS hand-held meters, and then plotted using Maptech® Terrain Navigator 2002 and GIS Arcview 3.2 software in WMF format, Region 601, for preparation of Map 1.

ANNOTATED FAUNAL LIST: INTRODUCTION

Spider families are grouped first by two basic foraging guilds, the web spinner families and the hunter families. Within each guild, the families are listed according to the classification of Platnick (2007). Families and genera of North American spiders can be identified using the keys and descriptions in Ubick (2005). Species identifications require consultations with monographs and revisionary works; pertinent sources are listed for each family and species included herein. The spider identification manuals of Dondale and Redner (1978b, 1982, 1990), Dondale et al. (2003), and Platnick and Dondale (1992) are especially helpful for identifying species found in New England and maritime Canada. Excellent illustrations of the spiders of Québec are provided by Paquin and Dupérré (2003). Although somewhat outdated, B. J. Kaston's (1981) classical "Spiders of Connecticut" gives insights into spider natural history.

With modification, our annotation style and format follows that of Burian and Gibbs (1991) "Mayflies of Maine: An Annotated Faunal List" and Bélanger and Hutchinson (1992) "Liste Annotée des Araignées (Araneae) du Québec." Taxonomy includes literature citations of pertinent revisions, and sources of keys, descriptions, and illustrations. Collection records are listed by Milbridge collection-site number and include the number of males and females collected at each site. The collecting sites are defined in Table 1 and include location name, latitude-longitude coordinates, and habitats sampled. Map 1 shows the distribution of all sampled sites. Method(s) include the number of males and females taken by each sampling method; e.g., beating cloth, pitfall trap, search, sweep net. Month(s) include the cumulative number of males and females taken each month. Habitat associations include habitat (e.g., saltmarsh, freshwater marsh, old field) and microhabitat descriptors (e.g., on cobble beach; on red spruce foliage; in marsh litter), followed by the number of male and female specimens per habitat. A few specimens were received bearing no information about method, date, or habitat; these are indicated by the standard abbreviation "n. d." for no data. Species regional distributions include only the New England States (ME, NH, VT, MA, CT, RI, NY) and the Maritime Provinces of Canada (ON, QC, NB, NS, PE, NF, LB). State and provincial abbreviations follow standard postal codes. If additional geographic-distributional data are needed, they can be found elsewhere; e.g., species-generic revisions, identification manuals, and some regional faunal lists. To avoid redundancy, geographic-citation sources are somewhat cumulative. The source(s) of the earliest known Maine record (if any) is listed first, followed by the source(s) with the most comprehensive listing of species range (usually revisionary work), and lastly, by any recent additions. New State records are indicated by (*), new records for New England by (**), and new National records by (***).

ANNOTATED FAUNAL LIST:
WEB SPINNER FAMILIES

FAMILY PHOLCIDAE

The pholcids or cellar spiders have long thin legs with flexible tarsi. The anterior median eyes are the smallest or lacking, while the other eyes are arranged in two triads. The webs are either sheet-like or irregular, with the spiders hanging in an inverted position, either beneath or in the lower portions of the web. The webs are usually found in dark corners or ceilings of basements and cellars. After egg-laying, the eggs are covered by only a few strands of silk and held by the female in her chelicerae. See Huber (2005) for additional information on family characteristics, notes on natural and taxonomic histories, and a key to the genera found in North America north of Mexico. Identification keys for North American species are limited and, in some cases, misleading; however, see revisionary works by B. A. Huber as listed in Huber (2005) and Platnick (2007). Several species of *Pholcus* have yet to be described.

Members of the Pholcidae are more common in warmer regions; however, several species are cosmopolitan, especially those associated with domestic habitats. Thus far, only two genera and three species have been found in Maine; a single genus and species have been taken in Milbridge. Most likely, the cosmopolitan *Pholcus phalangioides* (Fuesslin 1775) also occurs in Milbridge, but remains to be found.

Pholcus manueli Gertsch, 1937

Taxonomy: Gertsch (1937); Kaston (1981, as *Pholcus opilionoides* (Schrank, 1781)); Senglet (2001).

Records: M01 (1 female); M21 (1 male). *N* = 2 adults; 1 male, 1 female.

Method: search (1 male, 1 female).

Months: September (1 male); November (1 female).

Habitats: in web, house cellar (1 female); by floor and wall, government building (1 male).
Regional Distribution: ME (Jennings, unpubl.); NY (Kaston 1981, as *Pholcus opilionoides* (Schrank)).

Note: Gertsch (1937) first described *Pholcus manueli* based on specimens collected in a garage in Mendham, NJ. Later, Kaston (1977, 1981) indicated that Gertsch's *manueli* was a junior synonym of *Pholcus opilionoides* (Schrank, 1781), a European species. However, Senglet (2001) challenged Kaston's synonymy and provided evidence the two species were clearly separate. Before the Milbridge study, specimens of *P. manueli* were taken from a field laboratory in Bradley, and from a building on the University of Maine campus in Orono, both localities in Penobscot County, ME. Like other pholcid spiders, *P. manueli* appears to be a synanthropic species closely associated with domestic habitats.

FAMILY THERIDIIDAE

Most theridiids or cobweb weavers have a ventral row of serrated bristles on tarsus IV that are used to comb silk from the spinnerets. Males of some species lack a comb. Spiders of this family spin irregular mesh webs, with the resident spider hanging in an inverted position in the web. Captured prey is enswathed with viscid silk by the hind legs. Members of this large family are found in diverse habitats depending on species and their habits; some are arboreal, living in and among foliage of conifers and hardwoods; others live in the herb-shrub layer, often folding and tying leaves to form egg retreats; still others are ground dwellers and are found in litter or under rocks.

This family is represented in Maine by 18 genera and 52 species, including some invasive species, and at least three medically important species of *Latrodectus* or widow spiders. None of the latter are known to occur in Milbridge. Thus far, only 15 genera and 27 species of theridiids have been found in Milbridge; no doubt other species can be found. Most of the North American genera of Theridiidae have been revised by H. W. Levi, Museum of Comparative Zoology, at Harvard University. These excellent revisionary works include descriptions and illustrations of species and diagnostic keys to genera and species. For listings of revisionary literature, see Levi and Randolph (1975) and Levi (2005).

Achaearanea globosa (Hentz, 1850)

Taxonomy: Levi (1955a, 1963a); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (1 female); M06 (1 female); M07 (1 female); M22 (1 female); M28 (1 female). *N* = 5 adult females.

Methods: pitfall traps (2 females); search (1 female); sifted litter-hand sorted (1 female); sweep net (1 female).

Months: May (1 female); June-July (1 female); July (1 female); August (2 females).

Habitats: forest-floor litter, bigtooth aspen stand (1 female); litter, saltmarsh (1 female); sifted litter, *Kalmia-Vaccinium* heath (1 female); sweeping roadside vegetation, disturbed area (1 female); in web on lawn chair, old field edge (1 female).

Regional Distribution: ME (Bryant 1908, as *Theridion globosum* Hentz); CT (Kaston 1981); NY (Crosby and Bishop 1928, as *Theridion globosum* Hentz); ON, QC (Levi and Randolph 1975).

Achaearanea tabulata Levi, 1980

Taxonomy: Levi (1980a); Paquin and Dupérré (2003).

Records: M01 (40 males, 62 females); M04 (1 female); M06 (4 females); M07 (1 female); M13 (7 females); M16 (1 male, 3 females); M18 (3 females); M46 (4 females); M47 (3 females); M48 (5 females). *N* = 134 adults; 41 males, 93 females.

Methods: pitfall traps (4 females); search (41 males, 88 females); n. d. (1 female).

Months: May (1 male, 4 females); June (16 males, 18 females); July (15 males, 31 females); August (8 males, 30 females); September (8 females); October (1 male, 2 females).

Habitats: litter, saltmarsh (3 females); litter, *Kalmia-Vaccinium* heath (1 female); descending on dragline from cinquefoil (1 male); in rolled leaf retreat on large rock, old field (1 female); in rolled leaf inside cement block (1 female); on foliage, old field (1 male); in webs, seashore ledges (1 male, 8 females); in webs, roadside culvert, mixed conifer-low wet area (3 females); in webs, roadside culvert, mixed hardwood-conifer (6 females); in webs under bridge, freshwater stream (3 females); in web with *Callobius bennetti* prey, bridge guardrail, freshwater stream (1 female); near bridge, saltmarsh (1 female); in woodpile (2 males, 2 females); in retreats, outdoor woodbin (3 females); in web, woodbin (1 female); in vegetable garden (1 female); in web, compost drum, feeding on Tipulid (1 female); running outside compost bin (1 female); in webs, boat and canoe (1 male, 2 females); in webs, interior walls, window, floor, shoe, and door, house garage (5 males, 10 females); in webs, house basement or cellar (2 males, 6 females); on cellar stairs (1 female); in cellar (1 female); in webs, exterior (shingled) walls and window, house (1 male, 6 females); on exterior walls, house (10 males, 6 females); in webs, exterior foundation, house (5 males); on exterior foundation, house (3 females); in webs, or on interior walls, ceiling, window, and screen door (4 males, 2 females); in bathtub, house (2 males); in bedroom, house (1 male); on house deck (1 male); dead among books, house deck (1 male); in webs, inside or on shed (2 males, 11 females); on floor, screened house near freshwater pond (1 female); under lawn furniture (1 female); on back of lawn chair (1 female); in web, exterior wall, camp (cabin) near seashore (1 male); in webs under sun porch, house (3 females); in web under porch step with beetle prey (1 female); n. d. (1 female).

Regional Distribution: ME (Jennings, unpubl.), NY (Levi 1980a); ON, QC, NB (Dondale et al. 1994).

Note: This is an invasive species first discovered and described from a single female collected in 1976 on Long Island, NY (Levi 1980a). It since appears to have spread inland and northward, and as far west as Chicago, IL (B. Cutler, pers. comm.). The country of origin is unknown. Levi (1980a) concluded that *A. tabulata* was not a European species; historically, the theridiid fauna of Europe has been well studied. More recently specimens have been found in urban areas of Germany and Austria (see Dondale et al. 1994, lit. cited). Dondale et al. (1994) indicated this introduced species might have originated in Japan, Korea, or some other southeastern Asian country or countries. Because of its close resemblance to *Parasteatoda tepidariorum* (C. L. Koch, 1841) and possible misidentifications, *A. tabulata* may have a wider distribution in New England and Canada than previously known.

Crustulina sticta (O. Pickard-Cambridge, 1861)

Taxonomy: Levi (1957a); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (1 male); M23 (1 male). *N* = 2 adult males.

Methods: search (2 males).

Months: May (1 male); July (1 male).

Habitats: [on] *Spartina*, rocky beach, seashore (1 male); on exterior wall, house (1 male).

Regional Distribution: ME (Procter 1946, as *Crustulina borealis* Banks); NY (Crosby and Bishop 1928); NH, MA, CT, ON, QC, NS, NF (Levi 1957a).

Dipoena nigra (Emerton, 1882)

Taxonomy: (Levi 1953); Kaston (1981); Paquin and Dupérré (2003).

Records: M06 (1 male, 6 females); M23 (1 male); M49 (2 females). *N* = 10 adults; 2 males, 8 females.

Methods: beating cloth (1 male, 7 females); sweep net (1 male, 1 female).

Months: June (1 male); July (1 male, 8 females).

Habitats: beating white spruce foliage, saltmarsh edge (1 male, 5 females); beating red spruce foliage, seashore-backshore (2 females); sweeping vegetation, saltmarsh edge (1 female); sweeping *Kalmia* sp. near freshwater pond, mixed conifer (1 male).

Regional Distribution: ME (Emerton 1882, as *Steatoda nigra* Emerton); NY (Crosby and Bishop 1928); CT (Kaston 1981); NH, VT, MA (Levi 1953); QC (Bélanger and Hutchinson 1992).

**Enoplognatha intrepida* (Sørensen, 1898)

Taxonomy: Levi (1957b); Kaston (1981); Paquin and Dupérré (2003).

Record: M01 (1 female). *N* = 1 adult female.

Method: search (1 female).

Month: July (1 female).

Habitat: under white (paper) birch bark (1 female).

Regional Distribution: ME (this study); NH, MA, CT, NY, ON (Levi 1957b); QC Paquin and Dupérré (2003).

Enoplognatha ovata (Clerck, 1757)

Taxonomy: Levi (1957b); Kaston (1981, as *Theridion redimitum* (Linnaeus, 1758)); Paquin and Dupérré (2003).

Records: M01 (14 males, 75 females); M04 (1 female); M07 (2 males, 18 females); M14 (6 males, 1 female); M17 (2 males, 5 females); M23 (1 male, 1 female); M28 (2 males, 12 females); M29 (1 female); M30 (3 females); M47 (1 male, 5 females); M50 (2 males, 6 females). *N* = 158 adults; 30 males, 128 females.

Methods: beating cloth (2 males, 13 females); pitfall traps (2 males, 18 females); search (5 males, 23 females); sweep net (21 males, 74 females).

Months: May (2 males, 18 females); June (1 male); July (21 males, 73 females); August (6 males, 29 females); September (8 females).

Habitats: beating spruce (*Picea* sp.) branches (1 female); beating foliage, alder (*Alnus* sp.) thicket (2 males, 10 females); beating understory red spruce foliage, mixed conifer-hardwoods (1 female); beating red spruce foliage, roadside (1 female); sweeping *Vaccinium* and *Myrica*, old field (6 females); sweeping vegetation, old field (1 male, 10 females); sweeping vegetation, old field edge (3 males, 11 females); sweeping *Vaccinium* and low shrubs, old field edge (2 females); sweeping aster and raspberry (1 female); sweeping understory low shrubs, *Betula-Acer* woods (1 male, 5 females); sweeping meadowsweet stand (1 female); sweeping vegetation, freshwater pond edge (1 male, 2 females); sweeping grasses, seashore-backshore (1 male, 2 females); sweeping grasses and sedges, seashore-backshore (1 female); sweeping understory vegetation, spruce-mixed hardwood (1 female); sweeping grasses and forbs along trail, mixed hardwood-conifer (6 males, 1 female); sweeping grasses, saltmarsh (1 male); sweeping grasses and shrubs, saltmarsh (1 male, 4 females); sweeping vegetation, saltmarsh (1 female); sweeping *Vaccinium* sp., mixed conifer (1 male); sweeping roadside vegetation, disturbed land (5 females); sweeping roadside white and yellow clover, disturbed area, mixed hardwood-conifer (2 males, 7 females); sweeping roadside grasses, forbs, ferns, and rushes, alder-aspen edge (3 females); sweeping marsh vegetation, freshwater streamside, riparian (1 male, 5 females); sweeping grasses, forbs, and shrubs, seashore-backshore (2 males, 6 females); litter, *Kalmia-Vaccinium* heath (2 males, 18 females); in rolled wild raspberry leaf (1 female); in bigtooth aspen leaf, freshwater pond edge (1 female); in web, garden-heliotrope flower head (1 female); in folded alder leaf (1 female); in web on chokecherry (1 female); in silken retreat, folded seaside goldenrod leaf (1 female); in rolled leaf, seaside goldenrod, seashore-backshore (1 female); among clump of seaside goldenrod, seashore-backshore (1 female); in webs, in or on alders, alder thicket (2 males, 5 females); inside folded leaf (n. d.) with egg sac (1 female); in rolled leaf of witch alder, ornamental garden (1 female); on white (paper) birch with prey (1 female); on marsh grass with prey, saltmarsh (1 female); descending silk line from tree (n. d.), woodland (1 male); on woodland floor (1 male); on small rocks, seashore (1 female); in vegetable garden (2 females); on pea plant, vegetable garden (1 female); inside boat, old field (1 female); on house deck (1 female); descending silk line from room ceiling, house (1 male).

Regional Distribution: ME (Procter 1946, as *Theridion redimitum* (Linnaeus)); MA, RI, NY, ON (Levi 1957b); CT (Kaston 1981); QC (Reillo 1989, Bélanger and Hutchinson 1992).

Note: This is an introduced species that probably originated in Europe where it is widely distributed (Levi 1957b). Early records of this species in North America are chiefly from coastal regions of the Pacific Northwest and the Atlantic seaboard (Levi 1957b, Map 1); such distribution suggests a maritime introductory mode. More recently, populations of *E. ovata* have been detected further inland in New York, along the St. Lawrence River in Québec (Reillo 1989), and in inland regions of Québec (Bélanger and Hutchinson 1992).

Euryopis funebris (Hentz, 1850)

Taxonomy: Levi (1954a), as *E. limbata* (Walckenaer, 1841); Kaston (1981); Paquin and Dupérré (2003).

Records: M06 (1 female); M10 (1 female); M51 (1 female). *N* = 3 adult females.

Method: beating cloth (3 females).

Months: May (1 female); June (1 female); July (1 female).

Habitats: beating white spruce, saltmarsh edge (1 female); beating red spruce foliage (saplings), mixed conifer-hardwood (1 female); beating red spruce foliage, mixed conifer (1 female).

Regional Distribution: ME (Procter 1946); NH, MA, CT, NY, ON, QC (Levi 1954a, as *E. limbata* (Walckenaer, 1841)).

Neospintharus trigonum (Hentz, 1850)

Taxonomy: Exline and Levi (1962, as *Argyrodes trigonum* (Hentz)); Kaston (1981, as *Conopistha trigona* (Hentz)); Paquin and Dupérré (2003, as *Argyrodes trigonum* (Hentz, 1850)); Agnarrson (2004).

Records: M01 (1 male); M06 (1 male); M13 (1 female). *N* = 3 adults; 2 males, 1 female.

Methods: beating cloth (1 female); search (1 male); sweep net (1 male).

Months: July (1 male); August (1 male, 1 female).

Habitats: beating red spruce foliage, mixed hardwood-conifer (1 female); sweeping vegetation, saltmarsh (1 male); in large orb web, timothy grass, old field (1 male).

Regional Distribution: ME (Hentz 1875, as *Theridion trigonum*); NH, MA, CT, NY, ON (Exline and Levi 1962, as *Argyrodes trigonum* (Hentz)); QC (Bélanger and Hutchinson 1992, as *Argyrodes trigonum* (Hentz)).

Note: This species keys to the genus *Argyrodes* in Levi (2005c).

Neottiura bimaculata (Linnaeus, 1767)

Taxonomy: Levi (1956); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M07 (1 male); M12 (1 male, 1 female); M14 (1 female). *N* = 6 adults; 3 males, 3 females.

Methods: pitfall trap (1 male); search (1 male, 1 female); sweep net (1 male, 2 females).

Months: June (2 males); July (1 male, 2 females); August (1 female).

Habitats: litter, *Kalmia-Vaccinium* heath (1 male); sweeping grasses and forbs, mixed hardwood-conifer (1 female); sweeping vegetation, freshwater marsh (1 male, 1 female); on bush-honeysuckle leaf (1 female); in web, overturned canoe (1 male).

Regional Distribution: ME (Jennings, unpubl.); VT (Kochalka 1979); QC (Bélanger and Hutchinson 1992).

Phoroncidia americana (Emerton, 1882)

Taxonomy: Levi (1955b, as *Oronota americana* (Emerton)); Levi (1964b); Kaston (1981); Paquin and Dupérré (2003).

Records: M07 (1 male); M31 (1 male). *N* = 2 adult males.

Methods: beating cloth (1 male); pitfall trap (1 male).

Months: May (1 male); July (1 male).

Habitats: beating red spruce foliage, mixed white pine-red spruce stand (1 male); litter, *Kalmia-Vaccinium* heath (1 male).

Regional Distribution: ME (Jaros-Su et al., unpubl.); MA, CT, NY (Levi 1955b, as *Oronota americana* (Emerton)); NS, ON (Levi 1964b); QC (Bélanger and Hutchinson 1992).

Note: Emerton (1882) first described this species placing it in the genus *Ulesanis*. Subsequently, Levi (1955b) transferred this species to the genus *Oronota*, and later (Levi 1964b) to the genus *Phoronicidia*.

**Robertus banksi* (Kaston, 1946)

Taxonomy: Kaston (1946, as *Ctenium banksi* n. sp.); Kaston (1981); Paquin and Dupérré (2003).

Records: M12 (5 males, 4 females). *N* = 9 adults; 5 males, 4 females.

Method: pitfall traps (5 males, 4 females).

Months: June-July (1 male, 1 female); August (1 male, 2 females); August-September (1 male, 1 female); September (2 males).

Habitat: litter, freshwater marsh edge (5 males, 4 females).

Regional Distribution: ME (this study); NH, VT, MA, NY, ON (Kaston 1946); QC (Bélanger and Hutchinson 1992, Paquin and Dupérré 2003).

Rugathodes aurantius (Emerton, 1915)

Taxonomy: Levi (1957b, as *Theridion aurantium* (Emerton, 1915); Paquin and Dupérré 2003.

Record: M01 (1 female). *N* = 1 adult female.

Method: pitfall trap (1 female).

Month: July (1 female).

Habitat: litter, deciduous-coniferous woodland (1 female).

Regional Distribution: ME (Emerton 1915, as *Theridion aurantium* Emerton); NY (Crosby and Bishop 1928, as *Theridion aurantium* Emerton); NH, VT, ON, QC, NS, NF (Levi 1957b, as *Theridion aurantium* Emerton).

Rugathodes sexpunctatus (Emerton, 1882)

Taxonomy: Levi (1957b, as *Theridion sexpunctatum* Emerton, 1882); Kaston (1981, as *Theridion sexpuncatum* Emerton); Paquin and Dupérré (2003).

Records: M01 (2 females). *N* = 2 adult females.

Method: search (1 female); sweep net (1 female).

Months: May (1 female); June (1 female).

Habitats: sweeping vegetation, freshwater pond edge (1 female); on exterior wall, house (1 female).

Regional Distribution: ME (Bryant 1908, as *Theridion sexpunctatus* (Emerton)); NY (Crosby and Bishop 1928, as *Theridion sexpunctatus* (Emerton)); NH, VT, MA, ON, QC, NF (Levi 1957b, as *Theridion sexpunctatum* Emerton).

Steatoda americana (Emerton, 1882)

Taxonomy: Levi (1957a, 1962); Kaston (1948, as *Asagena americana* Emerton, 1882); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (3 males). *N* = 3 adult males.

Methods: search (3 males).

Months: May (1 male); June (2 males).

Habitats: in hot tub, house deck (1 male); on exterior walls, house (2 males).

Regional Distribution: ME (Bryant 1908, as *Asagena americana* Emerton); NY (Crosby and Bishop 1928, as *Asagena americana* Emerton); NH, VT, RI, CT, ON (Levi 1957a); QC (Bélanger and Hutchinson 1992).

Steatoda bipunctata (Linnaeus, 1758)

Taxonomy: Levi (1957a, 1962); Paquin and Dupérré (2003).

Records: M01 (25 males, 39 females); M52 (1 female). *N* = 65 adults; 25 males, 40 females.

Methods: pitfall traps (2 females); search (25 males, 38 females).

Months: February (1 male, 1 female); March (1 male); April (4 females); May (3 males, 12 females); June (2 males, 9 females); July (2 males, 5 females); August (6 males, 7 females); September (2 males); October (6 males, 1 female); November (2 males, 1 female).

Habitats: litter, *Amelanchier-Rubus* stand (2 females); in web, base of crabapple tree (1 female); in meadowsweet (1 female); in garden (1 female); in webs, outdoor shed (4 females); in webs, house basement or cellar (2 males, 11 females); in bathtub, house (9 males, 4 females); in web, bathroom wash basin, house (1 male, 1 female); on bathroom wall and ceiling, house (2 females); in webs or on interior walls, ceilings, and floors, house (6 males, 7 females); in webs or on exterior walls, house (1 male, 2 females); in webs or on floor, window, storage box, and woodbin, house garage (3 males, 2 females); on screen door, house (1 female); on patio, house (1 male); in boat (1 male); in water bucket, drowned (1 male); in web, interior window frame, barn (1 female).

Regional Distribution: ME (Procter 1938); NH, ON, QC, NB, NS, NF (Levi 1957a).

Note: In some locales along the Atlantic seaboard of New England and in southeastern Canada, this invasive species has displaced the native *Steatoda borealis* (Hentz, 1850) (Nyffeler et al. 1986).

Steatoda borealis (Hentz, 1850)

Taxonomy: Levi (1957a, 1962); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female). *N* = 2 adults; 1 male, 1 female.

Method: search (1 male, 1 female).

Months: May (1 female); September (1 male).

Habitats: in web, outdoor woodbin (1 male); in rolled garden hose, shed (1 female).

Regional Distribution: ME (Hentz 1875, as *Theridion boreale*); NY (Crosby and Bishop 1928); NH, VT, MA, RI, CT, ON, QC, NS (Levi 1957a).

Takayus lyricus (Walckenaer, 1842)

Taxonomy: Levi (1957b, as *Theridion lyricum* Walckenaer); Kaston (1981, as *Theridion lyricum* Walckenaer); Yoshida (2001); Paquin and Dupérré (2003, as *Theridion lyricum* Walckenaer, 1841).

Record: M01 (1 female). *N* = 1 adult female.

Method: search (1 female).

Month: July (1 female).

Habitat: on exterior wall, house (1 female).

Regional Distribution: ME (Procter 1946, as *Theridion kentuckyense* Emerton); NY (Crosby and Bishop 1928, *Theridion kentuckyense* Key.); NH, MA, CT, ON (Levi 1957b, as *Theridion lyricum* Walckenaer); QC (Bélanger and Hutchinson 1992, as *Theridion lyricum* Walckenaer, 1841).

Note: This species keys to the genus *Theridion* in Levi (2005c).

Theridion albidum Banks, 1895

Taxonomy: Levi (1957b, 1963b); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M35 (1 male). *N* = 3 adults; 2 males, 1 female.

Method: sweep net (2 males, 1 female).

Month: July (2 males, 1 female).

Habitats: sweeping vegetation, old field (1 male, 1 female); sweeping marsh vegetation, brackish marsh (1 male).

Regional Distribution: ME, MA, CT, NY, ON (Levi 1957b); QC (Bélanger and Hutchinson 1992).

Theridion differens Emerton, 1882

Taxonomy: Levi (1957b, 1963b); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (4 males, 3 females); M06 (6 males, 10 females); M10 (2 males); M12 (1 female); M19 (1 male, 1 female); M28 (1 female); M51 (3 males). *N* = 32 adults; 16 males, 16 females.

Methods: beating cloth (10 males, 8 females); pitfall traps (1 male, 2 females); search (1 male, 1 female); sweep net (4 males, 5 females).

Habitats: beating white spruce foliage, saltmarsh edge (4 males, 7 females); beating eastern larch foliage (sapling), conifer-mixed hardwood (1 male); beating red spruce foliage, conifer-mixed hardwood (1 male); beating red spruce foliage, mixed hardwood-conifer (1 male, 1 female); beating eastern larch foliage, mixed conifer opening (2 males); beating red spruce foliage, mixed conifer opening (1 male); litter, *Amelanchier-Rubus* stand (1 male, 2 females); sweeping vegetation, old field (2 males); sweeping vegetation (*Juncus-Spartina*), saltmarsh (1 female); sweeping vegetation, saltmarsh edge (2 males, 2 females); sweeping vegetation, freshwater marsh (1 female); sweeping roadside vegetation, disturbed land (1 female); in webs, small trees and shrubs (1 female); in woodpile (1 male).

Regional Distribution: ME (Bryant 1908); NY (Crosby and Bishop 1928); NH, VT, MA, CT, ON, QC, NS (Levi 1957b).

Theridion frondeum Hentz, 1850

Taxonomy: Levi (1957b, 1963b); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (3 males, 6 females); M03 (2 females); M04 (1 male, 3 females); M14 (3 males, 4 females); M23 (4 males); M33 (2 females). *N* = 28 adults; 11 males, 17 females.

Methods: beating cloth (1 male); search (3 males, 4 females); sweep net (7 males, 11 females); n. d. (2 females).

Months: May (2 females); June (3 males, 2 females); July (8 males, 10 females); August (3 females).

Habitats: beating understory red spruce foliage, mixed conifer-hardwood (1 male); sweeping *Vaccinium* and *Myrica* near woods, old field edge (2 females); sweeping understory vegetation, spruce-mixed hardwood (1 female); sweeping roadside grasses, forbs, and shrubs, red spruce forest (1 male); sweeping grasses and forbs, mixed hardwood-conifer (1 male, 2 females); sweeping vegetation along trail, mixed hardwood-conifer (2 males, 2 females); sweeping *Kalmia* sp. near freshwater pond, island (2 females); sweeping *Kalmia*, mixed conifer-hardwood, island (1 male); sweeping blueberries, spruce (seedlings), mixed conifer opening, island (1 male); sweeping blue-joint grass, seashore-backshore (1 male); sweeping marsh grasses and sedges, freshwater marsh (2 females); running across graveled lane, mixed hardwood-conifer (2 males, 2 females); in woodpile (2 females); on screen door, house (1 male); n. d. (2 females).

Regional Distribution: ME (Bryant 1908); NY (Crosby and Bishop 1928); NH, VT, MA, CT, ON, QC, NS (Levi 1957b).

Theridion glaucescens Becker, 1879

Taxonomy: Levi (1957b, 1963b); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (2 females); M06 (2 males); M33 (2 females). *N* = 6 adults; 2 males, 4 females.

Methods: beating cloth (2 males); search (3 females); sweep net (1 female).

Months: May (2 females); June (2 males, 2 females).

Habitats: beating white spruce, saltmarsh edge (2 males); sweeping grasses and sedges, freshwater marsh (1 female); in silk retreat, meadowsweet inflorescence, freshwater marsh edge (1 female); fell into hot tub (Jacuzzi), house deck (1 female); on exterior wall, house (1 female).

Regional Distribution: ME (Bryant 1908, as *Theridion spirale* Emerton); NY (Crosby and Bishop 1928, as *Theridion spirale* Emerton); NH, VT, MA, CT, ON, QC, NS, PE, NF (Levi 1957b).

Theridion montanum Emerton, 1882

Taxonomy: Levi (1957b, 1963b); Kaston (1981); Paquin and Dupérré (2003).

Records: M04 (2 females); M48 (1 female). *N* = 3 adult females.

Methods: beating cloth (1 female); pitfall trap (1 female); sweep net (1 female).

Months: August (2 females); September (1 female).

Habitats: beating red spruce foliage, seashore-backshore (1 female); sweeping understory vegetation, spruce-mixed hardwood (1 female); litter, coastal red spruce stand (1 female).

Regional Distribution: ME (Emerton 1914); NY (Crosby and Bishop 1928); NH, VT, ON, QC, NS, PE, NF (Levi 1957b); NB (Loughton et al. 1963).

Theridion murarium Emerton, 1882

Taxonomy: Levi (1957b, 1963b); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (5 males, 10 females); M04 (1 female); M06 (2 females); M19 (2 males, 2 females); M23 (1 female); M31 (1 female); M51 (4 females). *N* = 28 adults; 7 males, 21 females.

Methods: beating cloth (4 males, 15 females); pitfall traps (1 male, 2 females); search (2 males, 3 females); n. d. (1 female).

Months: May (1 male, 2 females); June (3 males, 10 females); July (3 males, 6 females); August (1 female); September (1 female); October (1 female).

Habitats: beating red spruce foliage, old field edge (2 males, 6 females); beating spruces (1 female); beating red spruce foliage, mixed hardwood-conifer (2 females); beating winterberry, roadside, mixed hardwood-conifer (1 male); beating balsam fir foliage, mixed hardwood-conifer (1 male); beating red spruce foliage, mixed conifer (2 females); beating red spruce foliage, white pine-red spruce stand (1 female); beating eastern larch foliage, mixed conifer (3 females); litter, *Amelanchier-Rubus* stand (1 male); litter, saltmarsh (2 females); freshwater pond edge (1 female); on rock in lawn (1 male); running through grass (1 female); in garage, house (1 male); on exterior shingled wall, house (1 female); n. d., coastal spruce-mixed hardwood (1 female).

Regional Distribution: ME (Bryant 1908); NY (Crosby and Bishop 1928); MA, NH, VT, RI, CT, ON, QC, NS (Levi 1957b); NB (Loughton et al. 1963).

Theridion pictum (Walckenaer, 1802)

Taxonomy: Levi (1957b, as *Theridion ornatum* Hahn); Levi 1963b; Kaston (1981, as *Theridion ornatum* Hahn); Paquin and Dupérré (2003).

Records: M02 (2 females); M06 (1 male, 2 females); M09 (1 female); M23 (2 females); M30 (1 female); M34 (1 female); M50 (1 female). *N* = 11 adults; 1 male, 10 females.

Methods: beating cloth (2 females); pitfall traps (2 females); search (3 females); sweep net (1 male, 3 females).

Habitats: beating young balsam fir foliage, mixed conifer (1 female); beating understory red spruce foliage, mixed conifer-hardwood, island (1 female); litter, saltmarsh (2 females); sweeping vegetation, saltmarsh edge (1 male); sweeping *Kalmia* sp., old field, abandoned farm, island (1 female); sweeping

Vaccinium, island (1 female); sweeping grasses, forbs, and shrubs, seashore-backshore (1 female); in web, roadside meadowsweet, mixed conifer (1 female); in web, balsam fir understory, balsam fir-red spruce stand (1 female); in downed burned trees, dry streambed, mixed hardwood-conifer (1 female).

Regional Distribution: ME (Emerton 1882, as *Theridion zelotypum* Emerton); NY (Crosby and Bishop 1928, as *Theridion zelotypum* Emerton); NH, MA, CT, ON, QC, NS (Levi 1957b, as *Theridion ornatum* Hahn).

Note: During epidemics of the spruce budworm, *Choristoneura fumiferana* (Clemens), this spider captures and feeds on budworm moths entangled in its web (Jennings and Houseweart 1988).

Theridula emertoni Levi, 1954

Taxonomy: Levi (1954b); Kaston (1981); Paquin and Dupérré (2003).

Record: M23 (1 female). *N* = 1 adult female.

Method: sweep net (1 female).

Month: July (1 female).

Habitat: sweeping *Kalmia*, mixed conifer opening, island (1 female).

Regional Distribution: ME (Levi 1954b); CT (Kaston 1981); ON, NF (Levi and Randolph 1975); QC (Bélanger and Hutchinson 1992).

Thymoites unimaculatus (Emerton, 1882)

Taxonomy: Levi (1957b, as *Paidisca unimaculata* (Emerton)); Levi (1964a); Kaston (1981, as *Thymoites unimaculatum* (Emerton)); Paquin and Dupérré (2003).

Records: M01 (2 males, 3 females); M05 (1 female); M06 (1 male, 2 females); M12 (1 female); M30 (1 female); M51 (2 females). *N* = 13 adults; 3 males, 10 females.

Methods: beating cloth (1 female); pitfall trap (1 female); search (1 female); sweep net (3 males, 7 females).

Months: May (1 female); June (1 male, 2 females); July (2 males, 4 females); August (3 females).

Habitats: beating eastern larch foliage, mixed conifer (1 female); litter, saltmarsh (1 female); sweeping vegetation, old fields (1 male, 3 females); sweeping vegetation, freshwater pond edge (1 male); sweeping vegetation (*Juncus-Spartina*), saltmarsh (1 male, 1 female); sweeping marsh grasses and sedges, freshwater marsh (1 female); sweeping roadside grasses, forbs, ferns, and rushes, alder-aspen edge (1 female); sweeping meadowsweet, mixed conifer opening (1 female); in web, screen house interior (1 female).

Regional Distribution: ME (Bryant 1908, as *Theridion unimaculatum* Emerton); NY (Crosby and Bishop 1928, as *Theridion unimaculatum* Em.); MA, CT, RI, NY, ON, QC (Levi 1957b, as *Paidisca unimaculata* Emerton).

Wamba crispulus (Simon, 1895)

Taxonomy: Levi (1957b, as *Theridion intervallatum* Emerton); Levi (1963b, as *Theridion crispulum* Simon); Kaston (1981, as *Theridion crispulum* Simon); Wunderlich (1995).

Records: M06 (2 females); M23 (1 female); M31 (1 female). $N = 4$ adult females.

Methods: beating cloth (2 females); pitfall trap (1 female); n. d. (1 female).

Months: May (1 female); July (3 females).

Habitats: beating white spruce foliage, saltmarsh edge (1 female); beating red spruce foliage (1 female); litter, saltmarsh (1 female); spruce (*Picea* sp.), mixed conifer-hardwood, island (1 female).

Regional Distribution: ME (Levi 1957b, as *Theridion intervallatum* Emerton); NY (Crosby and Bishop 1928, as *Theridion blandum* Hentz); MA (Kaston 1981, as *Theridion crispulum* Simon); NS (Levi and Randolph 1975).

FAMILY LINYPHIIDAE—Subfamily Linyphiinae

The linyphiids or sheet-web spiders are the most diverse family of spiders in Maine. Unlike the Theridiidae, the members of this family lack a comb on tarsus IV and usually have thinner legs with spines. The chelicerae are generally more robust and lack a boss, but may have a horizontal row of striae that forms a stridulating area. The labium is strongly rebordered. Their sheet-like webs usually have a platform, bowl, or dome, with an irregular portion above. The resident spider hangs in an inverted position below and bites potential prey falling to the bowl or dome.

Some investigators recognize two or more subfamilies of the Linyphiidae; others claim that the distinctions between subfamilies are incomplete or lack a consensus among investigators (Buckle et al. 2001). Nonetheless, we have chosen to follow Paquin and Dupérré (2003) and recognize two prominently represented subfamilies in North America, the Linyphiinae and the Erigoninae. Our rationale for doing so is based more on ecological-habitat preferences than on morphological traits. In general, most species of Linyphiinae inhabit aerial or aboveground strata, whereas most species of Erigoninae are ground or litter inhabitants.

The Linyphiinae are represented by 25 genera and at least 56 species in Maine. Species of *Meioneta* (or *Agyneta*), *Lepthyphantes*, *Oreonetides*, *Porrhomma*, and "unknown" remain to be identified. The Linyphiinae fauna at Milbridge consists of 19 genera and 35 species. Unfortunately, identification keys are lacking for several species of Linyphiinae in North America. Although a number of genera have recently been revised (see Buckle et al. 2001, Draney and Buckle 2005a, and Platnick 2007), most have not. Draney and Buckle (2005a) provide an excellent, well-illustrated key to the genera of Linyphiinae in North America, as well as family and subfamily character descriptors, notes on natural history, and taxonomic history. We include pertinent citations for each of the identified species found at Milbridge.

**Allomengea dentisetis* (Grube, 1861)

Taxonomy: Helsdingen (1974, as *Allomengea pinnata* (Emerton)); Paquin and Dupérré (2003).

Record: M06 (1 male). *N* = 1 adult male.

Method: pitfall trap (1 male).

Month: September (1 male).

Habitat: litter, saltmarsh (1 male).

Regional Distribution: ME (this study); NH, MA, NY, NF, NS, NB, ON (Buckle 1988, as *Allomengea pinnata* (Emerton)); QC (Bélanger and Hutchinson 1992).

**Bathyphantes brevis* (Emerton, 1911)

Taxonomy: Ivie (1969); Kaston (1981); Paquin and Dupérré (2003).

Record: M01 (1 male). *N* = 1 adult male.

Method: pitfall trap (1 male).

Month: June-July (1 male).

Habitat: litter, deciduous-coniferous woodland (1 male).

Regional Distribution: ME (this study); VT, MA, CT, NY, ON, NF (Ivie 1969); QC (Bélanger and Hutchinson 1992).

Bathyphantes gracilis (Blackwall, 1841)

Taxonomy: Ivie (1969); Paquin and Dupérré (2003).

Records: M12 (2 females). *N* = 2 adult females.

Method: pitfall traps (2 females).

Months: June (1 female); July (1 female).

Habitat: litter, freshwater marsh edge (2 females).

Regional Distribution: ME (Maloney 2002); NF (Ivie 1969); QC, ON, NS (Buckle et al. 2001).

Bathyphantes pallidus (Banks, 1892)

Taxonomy: Ivie (1969); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (6 males, 3 females); M04 (2 males, 3 females); M12 (32 males, 49 females); M22 (3 females); M24 (4 males, 5 females); M26 (2 females); M27 (1 female). *N* = 110 adults; 44 males, 66 females.

Method: pitfall traps (44 males, 66 females).

Months: June (3 males, 6 females); June-July (4 males, 2 females); July (14 males, 26 females); July-August (9 males, 10 females); August (12 males, 20 females); August-September (1 male, 2 females); September (1 male).

Habitats: litter, freshwater marsh edge (32 males, 49 females); litter, red maple sapling stand (4 males, 5 females); litter, deciduous-coniferous woodland (4 males, 3 females); litter, coastal red spruce stand (2 males, 3 females); litter, bigtooth aspen stand (3 females); litter, seashore-backshore (2 males); litter, saltmarsh edge (2 females); litter, red maple-white (paper) birch stand (1 female).

Regional Distribution: ME, MA, NH, VT, CT, RI, NY, ON, QC, NF, LB (Ivie 1969); NB, NS (Buckle et al. 2001).

Centromerus cornupalpis (O. Pickard-Cambridge, 1875)

Taxonomy: Helsdingen (1973); Kaston (1981).

Records: M25 (1 male, 1 female); M27 (1 female). *N* = 3 adults; 1 male, 2 females.

Method: pitfall traps (1 male, 2 females).

Months: May (1 male); May-June (1 female); July (1 female).

Habitats: litter, white (paper) birch stand (1 male, 1 female); litter, red maple-white (paper) birch stand (1 female).

Regional Distribution: ME (Bryant 1908, as *Microneta cornupalpis* (Cambridge) Emerton); NH, VT, MA, CT, NY, NF (Buckle 1988); ON, NS (Buckle et al. 2001).

Centromerus longibulbus (Emerton, 1882)

Taxonomy: Helsdingen (1973); Kaston (1981); Paquin and Dupérré (2003).

Records: M12 (1 male, 1 female). *N* = 2 adults; 1 male, 1 female.

Method: pitfall traps (1 male, 1 female).

Months: June-July (1 male, 1 female).

Habitat: litter, freshwater marsh edge (1 male, 1 female).

Regional Distribution: ME (Jennings et al. 1988); NH, MA, NY (Helsdingen 1973); QC (Bélanger and Hutchinson 1992); NF (Buckle 1988); ON (Buckle et al. 2001).

Centromerus persolutus (O. Pickard-Cambridge, 1875)

Taxonomy: Helsdingen (1973); Kaston (1981); Paquin and Dupérré (2003).

Records: M24 (1 male); M25 (1 male); M27 (1 male, 3 females); M53 (7 females). *N* = 13 adults; 3 males, 10 females.

Methods: litter condenser-Berlese funnel (7 females); pitfall traps (3 males, 3 females).

Months: May (2 males, 3 females); May-June (1 male); July (7 females).

Habitats: sifted aspen-maple litter, mixed hardwoods (7 females); litter, red maple-white (paper) birch stand (1 male, 3 females); litter, red maple sapling stand (1 male); litter, white (paper) birch stand (1 male).

Regional Distribution: ME, NH, MA, CT, NY, ON, QC, NF (Helsdingen 1973); NS (Buckle et al. 2001).

Centromerus sylvaticus (Blackwall, 1841)

Taxonomy: Helsdingen (1973); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (15 males, 4 females). *N* = 19 adults; 15 males, 4 females.

Method: pitfall traps (15 males, 4 females).

Months: October (3 males, 2 females); October-November (12 males, 2 females).

Habitat: litter, edge of old field and alder swamp (15 males, 4 females).

Regional Distribution: ME (Jennings et al., unpubl.); NH, MA, CT, NY, NF, QC, ON (Buckle 1988).

Diplostyla concolor (Wider, 1834)

Taxonomy: Ivie (1969, as *Bathyphantes concolor* (Wider)); Kaston (1981, as *Bathyphantes concolor* (Wider)); Paquin and Dupérré (2003, as *Bathyphantes concolor* (Wider)); Platnick (2007).

Records: M01 (34 males, 5 females); M11 (1 male); M22 (1 male); M26 (1 male). *N* = 42 adults; 37 males, 5 females.

Method: pitfall traps (37 males, 5 females).

Months: June (4 males); June-July (5 males, 1 female); July (18 males); July-August (3 males, 1 female); August (6 males, 2 females); August-September (1 male, 1 female).

Habitats: litter, seashore-backshore (25 males, 5 females); litter, deciduous-coniferous woodland near seashore (6 males); litter, *Amelanchier-Rubus* stand near seashore (3 males); litter, bigtooth aspen stand (1 male); litter, saltmarsh edge (1 male); ground, gravel pit, mixed conifer-hardwood (1 male).

Regional Distribution: ME, MA, CT, NY, ON, QC, NS, NF (Ivie 1969, as *Bathyphantes concolor* (Wider)).

Note: This species keys to the genus *Bathyphantes* in Draney and Buckle (2005a); however, see Platnick (2007).

Drapetisca alteranda Chamberlin, 1909

Taxonomy: Chamberlin (1909); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (6 males, 7 females); M04 (1 female). *N* = 14 adults; 6 males, 8 females.

Methods: brush-tree bole net (2 males, 5 females); search (4 males, 3 females).

Months: August (3 males, 1 female); September (2 males, 6 females); October (1 male, 1 female).

Habitats: brushing bark of white (paper) birch, *Betula-Acer* stand (2 males, 5 females); on limb of apple tree (1 female); on bark of paper birch (1 male); on or under bark of dead tree (1 male), mixed hardwood-conifer; on trunk of birch tree, (1 male); spruce-*Rugosa*, seashore-backshore (1 female); on side of house (1 female); on porch post (1 male).

Regional Distribution: ME (Bryant 1908, as *Drapetisca socialis* (Sundevall) Menge); CT (Kaston 1981); NY (Crosby and Bishop 1928); QC (Bélanger and Hutchinson 1992); NB (Buckle et al. 2001).

Estrandia grandaeva (Keyserling, 1886)

Taxonomy: Hackman (1954); Kaston (1981); Paquin and Dupérré (2003).

Record: M23 (1 female). *N* = 1 adult female.

Method: beating cloth (1 female).

Month: July (1 female).

Habitat: beating red spruce foliage, mixed conifer (1 female).

Regional Distribution: ME, NH, MA, NY, NS, NF, LB (Buckle 1988); QC (Bélanger and Hutchinson 1992); ON (Buckle et al. 2001).

Frontinella communis (Hentz, 1850)

Taxonomy: Chamberlin and Ivie (1944, as *Frontinella pyramitela* (Walckenaer,1841)); Kaston (1981); Paquin and Dupérré (2003, as *Frontinella pyramitela* (Walckenaer,1841)).

Records: M01 (4 males, 17 females); M04 (1 female); M06 (1 male, 3 females); M07 (1 female); M10 (1 male); M14 (2 females); M19 (1 female); M24 (1 female); M51 (1 male, 3 females). *N* = 36 adults; 7 males, 29 females.

Methods: beating cloth (1 male, 6 females); pitfall traps (6 females); search (4 males, 13 females); sweep net (2 males, 4 females).

Months: May (2 males, 6 females); June (2 males, 13 females); July (3 males, 8 females); August (2 females).

Habitats: beating red spruce foliage, seashore-backshore (1 female); beating red spruce foliage, mixed hardwood-conifer (1 female); beating red spruce foliage, mixed conifer (1 male, 1 female); beating white spruce foliage, saltmarsh edge (1 female); beating *Larix laricina* foliage, mixed conifer (2 females); sweeping beach grasses at shore, seashore (1 female); sweeping old field (1 female); sweeping grasses, forbs, and shrubs, roadside, red spruce forest (1 female); sweeping saltmarsh vegetation (*Juncus* sp.) (1 male); sweeping low vegetation, mixed conifer-hardwood (1 male); sweeping understory vegetation, red maple sapling stand (1 female); litter, *Amelanchier-Rubus* stand (3 females); litter, saltmarsh (2 females); litter, *Kalmia-Vaccinium* heath (1 female); in webs, dead terminals on shrubs, old field-wood edge (2 females); in web among aster blooms (1 female); in web, blackberry bush (1 female); in web on alder (1 female); in web on alder along shore, seashore (1 female); in web on meadowsweet at shore, seashore (1 female); in web on shrub with female (escaped) (1 male); in alders along shore, seashore (1 male); in *Prunus* (1 male); in web, trailside shrub, mixed hardwood-conifer understory (1 female); along trail, mixed hardwood-conifer understory (1 female); picked from shrubs along lane, mixed hardwood-conifer (1 female); in web on common pea vine, vegetable garden (1 female); in web on lawn chair (1 female); on cultivated cinquefoil (1 male); on rock, lawn (1 female).

Regional Distribution: ME (Bryant 1908, as *Linyphia communis* Hentz); CT (Kaston 1981); NY (Crosby and Bishop 1928, as *Linyphia communis* Hentz); QC (Bélanger and Hutchinson 1992, as *Frontinella pyramitela* (Walckenaer)).

Notes: Although some recent authors (e.g., Buckle et al. 2001, Paquin and Dupérré 2003, Draney and Buckle 2005a) refer to this species as *Frontinella pyramitela* (Walckenaer, 1841), we follow Platnick (2007) who indicates that *Frontinella communis* (Hentz, 1850) is the valid name for this species in North America.

Buckle et al. (2001) noted that *F. pyramitela* is widespread in Canada and the United States; this range no doubt includes all of the New England States and the Maritime Provinces of Canada. During outbreaks of the spruce budworm in Maine, this spider captures and feeds on budworm moths entangled in its web (Jennings and Houseweart 1988, as *F. pyramitela* (Walck.)).

Incestophantes calcaratus (Emerton, 1909)

Taxonomy: Zorsch (1937, as *Lepthyphantes calcarata* (Emerton)); Paquin and Dupérré (2003, as *Lepthyphantes calcaratus* (Emerton, 1909).

Records: M01 (1 male, 2 females); M04 (1 male); M48 (1 female). *N* = 5 adults; 2 males, 3 females.

Methods: beating cloth (1 female); brush-tree bole net (1 female); search (1 female); sweep net (2 males).

Months: August (2 males); September (3 females).

Habitats: beating red spruce foliage, seashore-backshore (1 female); brushing bark, white (paper) birch, *Betula-Acer* stand (1 female); sweeping understory vegetation, spruce-mixed hardwood (1 male); sweeping *Vaccinium* and small shrubs, old field (1 male); in canoe cover (turned), old field (1 female).

Regional Distribution: ME, NH, NS (Zorsch 1937, as *Lepthyphantes calcaratus* (Emerton); QC, NF (Buckle 1988, as *Lepthyphantes calcaratus* (Emerton)); NB, LB (Buckle et al. 2001, as *Lepthyphantes calcaratus* (Emerton 1909)).

Note: This species keys to the genus *Lepthyphantes* in Draney and Buckle (2005a); however, see Platnick (2007).

Incestophantes duplicatus (Emerton, 1913)

Taxonomy: Zorsch (1937, as *Lepthyphantes duplicata* Emerton); Paquin and Dupérré (2003).

Records: M03 (1 male, 1 female). *N* = 2 adults; 1 male, 1 female.

Methods: search (1 female); sweep net (1 male).

Month: July (1 male, 1 female).

Habitats: sweeping mixed conifer, freshwater pond edge, island (1 male); in reindeer lichen on ledge, mixed conifer-hardwood (1 female).

Regional Distribution: ME (Emerton 1913, as *Bathyphantes duplicatus* Emerton); QC (Bélanger and Hutchinson 1992); NF (Hackman 1954, as *Lepthyphantes triramus* Chamberlin and Ivie, 1947); NB, LB (Buckle et al. 2001, as *Lepthyphantes duplicatus* Emerton, 1913).

Kaestneria pullata (O. Pickard-Cambridge, 1863)

Taxonomy: Ivie (1969, as *Bathyphantes* (*Coniphantes*) *pullatus* (O. Pickard-Cambridge); Kaston (1981, as *Bathyphantes pullatus* (O. P.-Cambridge)); Paquin and Dupérré (2003).

Records: M12 (1 male, 2 females). *N* = 3 adults; 1 male, 2 females.

Method: pitfall traps (1 male, 2 females).

Month: July (1 male); July-August (2 females).

Habitats: litter, freshwater marsh edge (1 male, 2 females).

Regional Distribution: ME (Dixon, unpubl.); NY (Crosby and Bishop 1928, as *Bathyphantes conicus* Emerton); MA (Kaston 1981, as *Bathyphantes pullatus* (O. P.-Cambridge); ON, QC (Ivie 1969, as *Bathyphantes* (*Coniphantes*) *pullatus* (O. Pickard-Cambridge); NF (Buckle et al. 2001).

Lepthyphantes alpinus (Emerton, 1882)

Taxonomy: (Zorsch 1937, as *Lepthyphantes alpina* (Emerton)); Paquin and Dupérré (2003).

Records: M12 (1 male, 3 females). *N* = 4 adults; 1 male, 3 females.

Methods: pitfall traps (1 male, 2 females); sweep net (1 female).

Months: June (1 female); July (1 male); July-August (2 females).

Habitats: litter, freshwater marsh edge (1 male, 2 females); sweeping grasses and other vegetation, freshwater marsh (1 female).

Regional Distribution: ME, NH, VT, NY, QC (Zorsch 1937); NF (Buckle 1988); NS (Buckle et al. 2001).

Lepthyphantes leprosus (Ohlert, 1865)

Taxonomy: (Zorsch 1937, as *Lepthyphantes leprosa* (Ohlert)); (Kaston 1981, as *Lepthyphantes leprosa* (Ohlert)); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M06 (1 male). *N* = 3 adults; 2 males, 1 female.

Methods: pitfall trap (1 male); search (1 male, 1 female).

Months: May (1 male); June (1 female); October (1 male).

Habitats: litter, saltmarsh (1 male); in web between house door and storm door (1 female); in bathroom sink, house (1 male).

Regional Distribution: ME (Procter 1946, as *Lepthyphantes leprosa* (Ohlert)); NH, RI, NY, NS (Zorsch 1937); CT (Kaston 1981, as *Lepthyphantes leprosa* (Ohlert)); QC (Bélanger and Hutchinson 1992).

Lepthyphantes turbatrix (O. Pickard-Cambridge, 1877)

Taxonomy: Zorsch (1937, as *Lepthyphantes subalpina* (Emerton, 1882)); Paquin and Dupérré (2003).

Records: M01 (4 males, 1 female); M04 (1 female); M06 (1 female); M24 (1 female). *N* = 8 adults; 4 males, 4 females.

Methods: pitfall traps (1 male, 4 females); search (3 males).

Months: May (1 female); June (2 males); July (1 male, 3 females); August (1 male).

Habitats: litter, seashore-backshore (1 male, 1 female); litter, saltmarsh (1 female); litter, coastal red spruce stand (1 female); litter, red maple sapling stand (1 female); in house among papers (1 male); on bathroom wall, house (1 male); on patio, house (1 male).

Regional Distribution: ME (Jennings et al. 1988); NH, NY, ON, QC, NF (Zorsch 1937); NB (Buckle et al. 2001).

Linyphia triangularis (Clerck, 1757)

Taxonomy: Helsdingen (1969); Roberts (1985, 1987).

Records: M01 (5 males, 26 females); M02 (1 female); M04 (1 female); M17 (1 male); M48 (1 female); M49 (1 male, 1 female); M54 (2 females). *N* = 39 adults; 7 males, 32 females.

Methods: beating cloth (1 female); search (4 males, 17 females); sweep net (2 males, 13 females); shake-sweep net (1 male); n. d. (1 female).

Months: August (4 males, 10 females); September (3 males, 20 females); October (2 females).

Habitats: sweeping vegetation (grasses, forbs, shrubs, small trees), old field (2 males, 13 females); beating red spruce foliage, old field edge (1 female); shaking red spruce foliage over sweep net, saltmarsh edge (1 male); on red spruce seedling with prey, mixed conifer-hardwood (1 female); in webs, small balsam fir trees, mixed conifer (2 females); in web, small balsam fir tree, seashore-backshore (1 female); in webs on low understory shrubs, *Betula-Acer* stand near seashore (2 females); in same web on white pine seedling, mixed conifer-hardwood, ledges (1 male, 1 female); in web on small trees and shrubs, mixed conifer-hardwood, ledge (1 female); in web on low alder, old field edge (1 female); in webs among low wild cherry, old field (1 male, 1 female); in webs on low forbs, old field (2 females); in web among mixed low herbs, old field (1 male); in web between two goldenrod plants, old field (1 female); in web, old field (1 female); in web, roadside *Juncus* sp., roadside-mixed conifer (1 female); in black crowberry on backshore, seashore-backshore (1 female); among spruce-*Rugosa*, seashore-backshore (1 male); in vegetable garden (1 female); n. d. (1 female).

Regional Distribution: ME (Jennings et al. 2002).

Note: This is a Palearctic species recently introduced into coastal regions of Maine (Jennings et al. 2002); thus far, it is not known to occur elsewhere in North America.

Macrargus multesimus (O. Pickard-Cambridge, 1875)

Taxonomy: Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (3 males, 2 females); M04 (2 males); M25 (3 females). *N* = 10 adults; 5 males, 5 females.

Methods: beating cloth (2 males, 1 female); pitfall traps (3 males, 4 females).

Months: May (1 female); May-June (2 males, 2 females); July (1 female); October (3 males, 1 female).

Habitats: litter, white (paper) birch stand (3 females); litter, coastal red spruce stand (2 males); litter, edge of old field and alder swamp (1 male); litter, deciduous-coniferous woodland (1 female); beating alders and shrubs, old field edge (2 males, 1 female).

Regional Distribution: ME (Procter 1946, as *Microneta multesima* Cambridge); CT (Kaston 1981); NY (Crosby and Bishop 1928, as *Microneta multesima* Cambridge); MA (Buckle et al. 2001); QC (Bélanger and Hutchinson 1992).

Meioneta fabra (Keyserling, 1886)

Taxonomy: Kaston (1981); Saaristo (1973, as *Agyneta fabra* (Keyserling, 1886)); Saaristo and Koponen (1998, as *Agyneta fabra* (Keyserling, 1886)); Paquin and Dupérré (2003, as *Agyneta fabra* (Keyserling, 1886)); Platnick (2007).

Record: M01 (1 male). *N* = 1 adult male.

Method: search (1 male).

Month: May (1 male).

Habitat: running through grass near vegetable garden (1 male).

Regional Distribution: ME (Chamberlin 1925, as *Bathyphantes wana* Chamberlin); CT (Kaston 1981); NY (Crosby and Bishop 1928, as *Microneta fabra* Keyserling); QC (Bélanger and Hutchinson 1992); ON, NB (Buckle et al. 2001, as *Agyneta fabra* (Keyserling, 1886)).

Note: This species keys to the genus *Agyneta* in Draney and Buckle (2005a); however, see Platnick (2007).

******Meioneta nigripes*** **(Simon, 1884)**

Taxonomy: Saaristo and Koponen (1998, as *Agyneta nigripes* (Simon, 1884)); Paquin and Dupérré (2003, as *Agyneta nigripes* (Simon, 1884)).

Record: M01 (1 female). *N* = 1 adult female.

Method: pitfall trap (1 female).

Month: July (1 female).

Habitat: litter, mixed deciduous-coniferous woodland (1 female).

Regional Distribution: ME (this study); QC (Paquin and Dupérré 2003, as *Agyneta nigripes* (Simon, 1884)).

Note: This species keys to the genus *Agyneta* in Draney and Buckle (2005a); however, see Platnick (2007).

Meioneta simplex (Emerton, 1926)

Taxonomy: Kaston (1981); Saaristo and Koponen (1998, as *Agyneta simplex* (Emerton, 1926)); Paquin and Dupérré (2003, as *Agyneta simplex* (Emerton, 1926)); Platnick (2007).

Records: M01 (1 female); M06 (1 female); M07 (3 males, 1 female); M22 (2 females); M24 (2 males, 4 females); M25 (2 males, 4 females); M26 (3 males, 1 female); M27 (4 females). *N* = 28 adults; 10 males, 18 females.

Method: pitfall traps (10 males, 18 females).

Months: May (1 male); May-June (1 female); June (4 males, 6 females); June-July (1 male, 2 females); July (4 males, 7 females); July-August (1 female); August (1 female).

Habitats: litter, red maple sapling stand (2 males, 4 females); litter, white (paper) birch stand (2 males, 4 females); litter, red maple-white birch stand (4 females); litter, bigtooth aspen stand (2 females); litter, saltmarsh edge (3 males, 1 female); litter, *Kalmia-Vaccinium* heath (3 males, 1 female); litter, *Betula-Acer* stand (1 female); litter, saltmarsh (1 female).

Regional Distribution: ME (Collins et al. 1996); MA, NS (Emerton 1926, as *Lepthyphantes simplex* n. sp.); QC (Bélanger and Hutchinson 1992); ON (Buckle et al. 2001, as *Agyneta simplex* (Emerton, 1926)).

Note: This species keys to the genus *Agyneta* in Draney and Buckle (2005a); however, see Platnick (2007).

Meioneta unimaculata (Banks, 1892)

Taxonomy: Kaston (1981); Paquin and Dupérré (2003, as *Agyneta unimaculata* (Banks, 1892)); Platnick (2007).

Records: M06 (1 female); M25 (1 male). *N* = 2 adults; 1 male, 1 female.

Method: pitfall traps (1 male, 1 female).

Months: July (1 male); August (1 female).

Habitats: litter, saltmarsh (1 female); litter, white (paper) birch stand (1 male).

Regional Distribution: ME (Jennings et al., unpubl.); NY (Crosby and Bishop 1928, as *Bathyphantes unimaculatus* Banks); QC (Bélanger and Hutchinson 1992); ON, NS (Buckle et al. 2001, as *Agyneta unimaculata* (Banks, 1892)).

Note: This species keys to the genus *Agyneta* in Draney and Buckle (2005a); however, see Platnick (2007).

Meioneta zygia (Keyserling, 1886)

Taxonomy: Kaston (1981); Platnick (2007).

Records: M12 (2 females); M22 (2 females). *N* = 4 adult females.

Method: pitfall traps (4 females).

Months: June (1 female); August (3 females).

Habitats: litter, freshwater marsh edge (2 females); litter, bigtooth aspen stand (2 females).

Regional Distribution: ME (Sferra et al., unpubl.); CT (Kaston 1981); NY (Crosby and Bishop 1928, as *Bathyphantes zygios* Keyserling); ON (Buckle et al. 2001, as *Agyneta zygia* (Keyserling, 1886)).

Note: This species keys to the genus *Agyneta* in Draney and Buckle (2005a); however, see Platnick (2007).

Microlinyphia mandibulata (Emerton, 1882)

Taxonomy: Helsdingen (1970); Kaston (1981); Paquin and Dupérré (2003, as *Microlinyphia m. mandibulata* (Emerton, 1882)).

Records: M01 (1 male, 3 females); M04 (1 female); M06 (1 female); M12 (1 female); M23 (2 females); M30 (1 female); M33 (1 female). *N* = 11 adults; 1 male, 10 females.

Methods: search (1 male, 1 female); sweep net (8 females); n. d. (1 female).

Months: May (1 male, 2 females); June (5 females); July (2 females); August (1 female).

Habitats: sweeping old field (1 female); sweeping vegetation, pond edge (1 female); sweeping roadside grasses, forbs, and shrubs, red spruce forest (1 female); sweeping saltmarsh vegetation (*Juncus-Spartina*), saltmarsh (1 female); sweeping grasses and shrubs, freshwater marsh (1 female); sweeping *Vaccinium* sp., old field, island (1 female); sweeping roadside vegetation, roadside-alder edge (1 female); sweeping understory bordering freshwater marsh, mixed conifer-hardwood (1 female); in low plants at edge of lawn (1 female); outside window, house (1 male); spruce, cherry, and grass, island (1 female).

Regional Distribution: ME (Emerton 1882); CT (Kaston 1981); NH, NY, NF (Buckle 1988, as *Microlinyphia mandibulata mandibulata* (Emerton 1882); QC (Bélanger and Hutchinson 1992); ON, NB (Buckle et al. 2001, as *Microlinyphia mandibulata mandibulata* (Emerton 1882)).

Microneta viaria (Blackwall, 1841)

Taxonomy: Saaristo (1974); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (1 male, 3 females); M04 (1 male); M24 (6 males); M27 (1 male). *N* = 12 adults; 9 males, 3 females.

Methods: pitfall traps (9 males); sifted litter-hand sorted (3 females).

Months: May-June (1 male); June (5 males); June-July (2 males); July (1 male); August (3 females).

Habitats: litter, red maple sapling stand (6 males); litter, red maple-white (paper) birch stand (1 male); litter, coastal red spruce stand (1 male); litter, seashore-backshore (1 male); sifted litter, deciduous-coniferous woodland (3 females).

Regional Distribution: ME (Procter 1946); CT (Kaston 1981); NY (Crosby and Bishop 1928); QC (Bélanger and Hutchinson 1992); MA, ON (Buckle et al. 2001).

Neriene clathrata (Sundevall, 1830)

Taxonomy: Helsdingen (1969); Kaston (1981, as *Linyphia clathrata* (Sundevall)); Paquin and Dupérré (2003).

Records: M01 (1 male); M04 (1 female); M06 (1 female); M07 (4 males, 1 female); M14 (1 female); M26 (1 female). *N* = 10 adults; 5 males, 5 females.

Methods: pitfall traps (4 males, 3 females); search (1 male, 1 female); sweep net (1 female).

Months: April (1 male); May (4 males, 2 females); June (2 females); July (1 female).

Habitats: litter, *Kalmia-Vaccinium* heath (4 males, 1 female); litter, saltmarsh (1 female); litter, saltmarsh edge (1 female); sweeping grasses, forbs, and shrubs, roadside, red spruce forest (1 female); on ground among leaves and grass, mixed hardwood-conifer (1 female); in garage, house (1 male).

Regional Distribution: ME, NH, MA, CT, NY, NF (Buckle 1988); QC (Bélanger and Hutchinson 1992); ON, NB, NS (Buckle et al. 2001).

Neriene radiata (Walckenaer, 1842)

Taxonomy: Helsdingen (1969); Kaston (1981, as *Prolinyphia marginata* (C. L. Koch)); Paquin and Dupérré (2003).

Records: M01 (2 females); M04 (2 males, 3 females); M06 (1 female); M07 (2 males, 3 females); M14 (1 female); M23 (1 male, 8 females); M34 (1 female); M58 (1 female). *N* = 25 adults; 5 males, 20 females.

Methods: pitfall traps (2 males, 4 females); search (9 females); sweep net (3 males, 6 females); n. d. (1 female).

Months: May (1 female); June (4 males, 7 females); July (1 male, 9 females); August (3 females).

Habitats: sweeping grasses, forbs, and shrubs, roadside red spruce forest (2 males, 3 females); sweeping grassy area near cabin, mixed conifer opening, island (3 females); sweeping *Vaccinium* sp., island (1 male); litter, *Kalmia-Vaccinium* heath (2 males, 3 females); litter, saltmarsh (1 female); in web on red maple (1 female); in web on red spruce, mixed conifer, island (1 female); in web among understory foliage, deciduous-coniferous woodland (1 female); in web, small maple understory, mixed hardwood-conifer (1 female); in webs on rock ledges, mixed conifer-hardwood, island (3 females); in dome web on ledges, balsam fir-red spruce-mixed hardwood (1 female); on ground, marsh grasses and matted straw, seashore-brackish marsh (1 female); spruce-blueberry-cedar, island (1 female).

Regional Distribution: ME, NH, VT, MA, CT, RI, NY, NS, ON (Buckle 1988); QC (Bélanger and Hutchinson 1992); NB (Buckle et al. 2001).

Pityohyphantes costatus (Hentz, 1850)

Taxonomy: Chamberlin and Ivie (1943); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (7 males, 19 females); M02 (1 female); M04 (2 females); M06 (5 females); M07 (1 male, 2 females); M10 (1 female); M14 (2 males, 4 females); M23 (1 female); M24 (1 female); M30 (2 females); M36 (1 male, 1 female); M51 (1 male). *N* = 51 adults; 12 males, 39 females.

Methods: beating cloth (4 males, 21 females); pitfall traps (1 male, 4 females); search (6 males, 12 females); sweep net (1 male, 1 female); n. d. (1 female).

Months: April (1 male); May (6 males, 22 females); June (5 males, 13 females); July (3 females); August (1 female).

Habitats: beating spruces, old field edge (3 males, 14 females); beating red spruce foliage (1 female); beating red spruce foliage, mixed hardwood-conifer understory, forest trail (1 male); beating eastern larch foliage, mixed conifer (1 female); beating white spruce foliage, saltmarsh edge (5 females); sweeping grasses, forbs, and shrubs, roadside, red spruce forest (1 female); sweeping meadowsweet, mixed conifer opening (1 male); litter, coastal red spruce stand (1 female); litter, *Kalmia-Vaccinium* heath (1 male, 2 females); litter, red maple sapling stand (1 female); in webs, shrubs along forest trail, mixed hardwood-conifer (1 male, 4 females); in web, balsam fir understory, balsam fir-red spruce stand (2 females); in same web, dead shrub branchlet, mixed conifer-hardwood (1 male, 1 female); under rock on ledge, mixed conifer-hardwood (1 female); in web, cellar window, house (1 female); on outside wall, house (2 males); under mulch at edge of lawn (1 male); running in grass (1 female); under tarp in screen-house (1 male, 2 females); n. d., island (1 female).

Regional Distribution: ME (Hentz 1875, as *Linyphia*? *costata*); CT (Kaston 1981); QC (Bélanger and Hutchinson 1992); ON, NS, NF (Buckle et al. 2001).

Pityohyphantes phrygianus (C. L. Koch, 1836)

Taxonomy: Chamberlin and Ivie (1943); Roberts (1985, 1987).

Records: M01 (8 males, 26 females); M07 (1 female); M11 (1 female); M14 (1 male); M15 (8 males, 14 females); M49 (1 female); M55 (2 males, 2 females). *N* = 64 adults; 19 males, 45 females.

Methods: beating cloth (19 males, 42 females); pitfall traps (2 females); search (1 female).

Months: May (8 males, 15 females); June (11 males, 27 females); July (2 females); August (1 female).

Habitats: beating red spruce foliage, old field edge (3 males, 11 females); beating red spruce foliage (5 males, 11 females); beating red spruce foliage, seashore-backshore (3 females); beating red spruce foliage, saltmarsh edge (8 males, 14 females); beating red spruce foliage, freshwater streamside (2 males, 2 females); beating red spruce foliage, mixed hardwood- conifer understory (1 male); beating jack pine foliage, mixed conifer-hardwood (1 female); litter, *Kalmia-Vaccinium* heath (1 female); ground, gravel pit, conifer-mixed hardwood (1 female); in shrubs, old field (1 female).

Regional Distribution: ME (Keyserling 1886, as *Linyphia phrygiana* C. L. Koch); NY (Crosby and Bishop 1928); QC (Bélanger and Hutchinson 1992).

**Porrhomma convexum* (Westring, 1851)

Taxonomy: Roberts (1985, 1987).

Record: M01 (1 female). *N* = 1 adult female.

Method: beating cloth (1 female).

Month: June (1 female).

Habitat: beating red spruce foliage, seashore-backshore.

Regional Distribution: ME (this study).

Note: This is a Palaearctic species previously recorded in Alaska, Washington, British Columbia, and Greenland (Buckle et al. 2001); it evidently now has been introduced along the northeastern coast of Maine.

**Porrhomma terrestre* (Emerton, 1882)

Taxonomy: Bishop and Crosby (1938); Chamberlin and Ivie (1947); Kaston (1981); Paquin and Dupérré (2003).

Record: M12 (1 male). *N* = 1 adult male.

Method: pitfall trap (1 male).

Month: August (1 male).

Habitat: litter, freshwater marsh edge (1 male).

Regional Distribution: ME (this study); MA, NY, ON (Buckle 1988); QC (Bélanger and Hutchinson 1992).

Tapinopa bilineata Banks, 1893

Taxonomy: Chamberlin and Ivie (1944); Kaston (1981); Paquin and Dupérré (2003).

Record: M12 (1 male). *N* = 1 adult male.

Method: pitfall trap (1 male).

Month: September (1 male).

Habitat: freshwater marsh edge (1 male).

Regional Distribution: ME (Emerton 1909); CT, MA, NY (Kaston 1981); ON, NB, NS (Buckle et al. 2001).

Tenuiphantes zebra (Emerton, 1882)

Taxonomy: Zorsch (1937, as *Lepthyphantes zebra* (Emerton)); Kaston (1981, as *Lepthyphantes zebra* (Emerton)); Saaristo and Tanasevitch (1996); Buckle et al. (2001, as *Lepthyphantes zebra* (Emerton)); Paquin and Dupérré (2003).

Records: M01 (1 male); M12 (4 females); M24 (3 females); M27 (1 female). *N* = 9 adults; 1 male, 8 females.

Methods: pitfall traps (8 females); search (1 male).

Months: June (3 females); June-July (1 female); July (1 female); September (1 male, 3 females).

Habitats: litter, freshwater marsh edge (4 females); litter, red maple sapling stand (3 females); litter, red maple-white (paper) birch stand (1 female); in overturned canoe, old field (1 male).

Regional Distribution: ME (Bryant 1908, as *Lepthyphantes zebra* Emerton); MA, CT, VT, NY, ON, QC (Buckle 1988, as *Lepthyphantes zebra* (Emerton)); NB, NS (Buckle et al. 2001, as *Lepthyphantes zebra* (Emerton)).

FAMILY LINYPHIIDAE—Subfamily Erigoninae

The subfamily Erigoninae was formerly given full family status; first as the Micryphantidae, then later as the Erigonidae. Modern investigators have incorporated these earlier families into the Linyphiidae, with their member genera and species assigned to the subfamily Erigoninae or other subfamilies. However, controversy remains about the distinction and characterization of some linyphiid subfamilies (see Buckle et al. 2001). We follow Paquin and Dupérré (2003) in recognizing both the Linyphiinae and Erigoninae; most North American linyphiids belong to either of these two subfamilies.

Members of the Erigoninae are generally smaller than their counterparts assigned to the Linyphiinae. In general, erigonids are usually ground dwellers that live in litter on the forest floor, or in saltmarshes, freshwater marshes, seashores, and other habitats. A few species are arboreal.

Unfortunately, identification keys are generally lacking for most genera and species of Erigoninae; however, recently Draney and Buckle (2005b) published a generic key for identifying male erigonids. Although limited to males, this generic key is a gigantic leap forward in spider identification technology. The erigonid fauna in Maine comprises some 42 genera and 115 species; thus far, 29 genera (1 unknown) and 54 species (2 unknown) have been found at Milbridge. We cite only pertinent literature for each of the species found in Milbridge; see Buckle et al. (2001) for a more detailed review of literature and Platnick (2007) for recent name changes.

Baryphyma trifrons (O. Pickard-Cambridge, 1863)

Taxonomy: Crosby and Bishop (1933, as *Minyriolus aquatilis* Crosby & Bishop)); Buckle et al. (2001, as *Baryphyma trifrons affine* (Schenkel, 1930)); Paquin and Dupérré (2003, as *Baryphyma trifrons affine* (Schenkel, 1930).

Records: M01 (1 female); M05 (4 males, 8 females); M07 (3 females); M12 (12 females); M23 (1 female); M33 (5 females). *N* = 34 adults; 4 males, 30 females.

Methods: pitfall traps (4 females); search (1 female); sweep net (4 males, 25 females).

Months: May (4 males, 8 females); June (14 females); July (7 females); September (1 female).

Habitats: litter, *Kalmia-Vaccinium* heath (3 females); litter, freshwater marsh edge (1 female); sweeping vegetation, old field (1 female); sweeping grasses and forbs in open field, old field (4 males, 8 females); sweeping grasses and sedges, freshwater marshes (5 females); sweeping grasses and other vegetation, freshwater marsh (9 females); sweeping marsh grasses, freshwater marsh (2 females); in grass along beach, island, seashore (1 female).

Regional Distribution: ME (Mairs and Jennings, unpubl.); NY (Carroll and Roth 1988, as *Baryphyma trifrons affine* (Schenkel, 1930)); QC (Bélanger and Hutchinson 1992).

Note: According to Buckle et al. (2001), the subspecies *trifrons affine* apparently has not been formally reduced to full synonymy with *trifrons*. Some recent authors (e.g., Aitchison-Benell and

Dondale 1992, Bélanger and Hutchinson 1992, Eskov 1994) have used *trifrons* rather than *trifrons affine*; however, see Paquin and Dupérré (2003).

Carorita limnaea (Crosby & Bishop, 1927)

Taxonomy: Crosby and Bishop (1927); Duffey and Merrett (1964); Paquin and Dupérré (2003).

Record: M12 (1 male). *N* = 1 adult male.

Method: pitfall trap (1 male).

Month: June-July (1 male).

Habitat: freshwater marsh edge (1 male).

Regional Distribution: ME (Jennings et al. 1988, as *Carorita limnaeus* (Crosby & Bishop)); NY, ON, QC (Buckle et al. 2001).

Ceraticelus bulbosus (Emerton, 1882)

Taxonomy: Crosby and Bishop (1925); Kaston (1981); Paquin and Dupérré (2003).

Records: M05 (2 males). *N* = 2 adult males.

Method: sweep net (2 males).

Month: May (2 males).

Habitat: sweeping grasses and forbs, old field (2 males).

Regional Distribution: ME (Hilburn and Jennings 1988); CT, NY, ON, QC, NF (Buckle et al. 2001).

Ceraticelus emertoni (O. Pickard-Cambridge, 1874)

Taxonomy: Crosby and Bishop (1925); Kaston (1981); Paquin and Dupérré (2003).

Record: M01 (1 male). *N* = 1 adult male.

Method: sweep net (1 male).

Month: September (1 male).

Habitat: sweeping grasses, forbs, shrubs, and small trees, old field (1 male).

Regional Distribution: ME (Bryant 1908, as *Ceratinella emertoni* (Cambridge) Emerton); NH, MA, CT, NY, ON, QC, NS (Buckle et al. 2001).

Ceraticelus fissiceps (O. Pickard-Cambridge, 1874)

Taxonomy: Crosby and Bishop (1925); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (5 females); M07 (1 female); M23 (1 female); M27 (1 female). *N* = 8 adult females.

Methods: beating cloth (1 female); pitfall traps (2 females); search (1 female); sweep net (4 females).

Months: May (1 female); June (1 female); July (2 females); August (4 females).

Habitats: beating red spruce foliage (1 female); litter, *Kalmia-Vaccinium* heath (1 female); litter, red maple-white (paper) birch stand (1 female); sweeping *Vaccinium* and small shrubs (2 females); sweeping aster and raspberry, old field (1 female); sweeping grassy area around cabin, mixed conifer opening, island (1 female); under white (paper) birch bark, *Betula-Acer* stand (1 female).

Regional Distribution: ME (Bryant 1908, as *Ceratinella fissiceps* (Cambridge) Emerton); NH, MA, CT, NY, ON, QC, NB, NS, NF (Buckle et al. 2001).

Ceraticelus laetabilis (O. Pickard-Cambridge, 1874)

Taxonomy: Crosby and Bishop (1925); Kaston (1981); Paquin and Dupérré (2003).

Records: M24 (4 males, 1 female); M25 (7 males); M26 (1 male); M27 (4 males). *N* = 17 adults; 16 males, 1 female.

Method: pitfall traps (16 males, 1 female).

Months: May (1 female); June (15 males); July (1 male).

Habitats: litter, red maple sapling stand (4 males, 1 female); litter, white (paper) birch stand (7 males); litter, saltmarsh edge (1 male); litter, red maple-white birch stand (4 females).

Regional Distribution: ME (Jennings et al. 1988); NH, VT, MA, CT, NY, ON, QC, NB, NS, NF (Buckle et al. 2001).

Ceraticelus laticeps (Emerton, 1894)

Taxonomy: Crosby and Bishop (1925); Kaston (1981).

Record: M07 (1 male). *N* = 1 adult male.

Method: unsifted litter-Berlese funnel (1 male).

Month: August (1 male).

Habitat: litter, *Kalmia-Vaccinium* heath (1 male).
Regional Distribution: ME (Jennings et al., unpubl.); NY, ON (Buckle et al. 2001).

Ceraticelus minutus (Emerton, 1882)

Taxonomy: Crosby and Bishop (1925); Kaston (1981); Paquin and Dupérré (2003).

Records: M24 (1 female); M53 (2 females). *N* = 3 adult females.

Methods: litter condenser-Berlese funnel (2 females); pitfall trap (1 female).

Months: May-June (1 female); July (2 females).

Habitats: aspen-maple litter, mixed hardwoods (2 females); litter, red maple sapling stand (1 female).

Regional Distribution: ME (Jennings et al. 1988); NH, MA, CT, NY, ON, QC (Buckle et al. 2001).

Ceratinella brunnea Emerton, 1882

Taxonomy: Crosby and Bishop (1925); Kaston (1981); Paquin and Dupérré (2003).

Records: M04 (5 females); M24 (1 female); M26 (1 female). *N* = 7 adult females.

Method: pitfall traps (7 females).

Months: June (4 females); July (2 females); July-August (1 female).

Habitats: litter, coastal red spruce stand (5 females); litter, red maple sapling stand (1 female); litter, saltmarsh edge (1 female).

Regional Distribution: ME (Procter 1946); NH, CT, NY, ON, QC, NB, NF, LB (Buckle et al. 2001).

Ceratinella parvula (Fox, 1891)

Taxonomy: Crosby and Bishop (1925); Kaston (1981); Paquin and Dupérré (2003).

Record: M35 (1 female). *N* = 1 adult female.

Method: litter condenser-Berlese funnel (1 female).

Month: June (1 female).

Habitat: marsh litter (grasses, rushes), brackish marsh (1 female).

Regional Distribution: ME (Mairs and Jennings, unpubl.); MA, NY, ON, QC (Buckle et al. 2001).

**Ceratinops annulipes* (Banks, 1892)

Taxonomy: Crosby and Bishop (1933); Kaston (1981); Paquin and Dupérré (2003).

Records: M26 (1 female); M56 (17 males, 19 females). *N* = 37 adults; 17 males, 20 females.

Methods: litter condenser-Berlese funnel (9 males, 7 females); litter condenser-hand sorted (8 males, 12 females); pitfall trap (1 female).

Months: July (1 female); September (17 males, 19 females).

Habitats: litter, saltmarsh edge (1 female); litter (grasses, forbs, tidal debris), salt meadow (17 males, 19 females).

Regional Distribution: ME (this study); NY, ON, QC (Buckle et al. 2001).

Ceratinopsis nigriceps Emerton, 1882

Taxonomy: Bishop and Crosby (1930); Kaston (1981); Paquin and Dupérré (2003).

Records: M04 (1 female); M06 (1 male); M07 (1 female); M23 (1 female). *N* = 4 adults; 1 male, 3 females.

Methods: beating cloth (1 male); pitfall trap (1 female); sweep net (2 females).

Months: June (2 females); July (1 male, 1 female).

Habitats: beating white spruce foliage, saltmarsh edge (1 male); litter, *Kalmia-Vaccinium* heath (1 female); sweeping *Vaccinium* sp., mixed conifer-hardwood, island (1 female); sweeping understory grasses, forbs, and shrubs, red spruce forest (1 female).

Regional Distribution: ME (Murray and Jennings, unpubl.); NH, MA, CT, NY, ON, QC, NB, NS (Buckle et al. 2001).

Collinsia plumosa (Emerton, 1882)

Taxonomy: Crosby and Bishop (1928, as *Catabrithorax plumosus* (Emerton) (male only); Kaston (1981, as *Collinsia oxypaederotipus* (Crosby)); Paquin and Dupérré (2003, as *Halorates plumosus* (Emerton, 1882)); Buckle et al. (2001, as *Halorates plumosus* (Emerton, 1882)); Platnick (2007).

Records: M01 (1 female); M06 (1 male); M26 (1 male); M35 (1 female). *N* = 4 adults; 2 males, 2 females.

Methods: pitfall traps (2 males); search (1 female); sweep net (1 female).

Months: May (1 male, 1 female); July (1 male, 1 female).

Habitats: litter, saltmarsh (1 male); litter, saltmarsh edge (1 male); sweeping vegetation, brackish marsh (1 female); on large rock, seashore (1 female).

Regional Distribution: ME (Hilburn and Jennings 1988, as *Halorates plumosus* (Emerton, 1882)); NH, MA, CT, NY, ON, QC, NS, NB (Buckle et al. 2001, as *Halorates plumosus* (Emerton, 1882)).

Note: Some authors place this species in the genus *Halorates*; others place it in the genus *Collinsia*. See the discussion in Buckle et al. (2001) and subsequent listing by Platnick (2007).

Diplocephalus cristatus (Blackwall, 1833)

Taxonomy: Bishop and Crosby (1935); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (2 males, 11 females). *N* = 13 adults; 2 males, 11 females.

Method: pitfall traps (2 males, 11 females).

Months: June (1 male, 7 females); June-July (3 females); July (1 male, 1 female).

Habitat: litter, seashore-backshore (2 males, 11 females).

Regional Distribution: ME (Procter 1933); MA, ON, QC, NF (Buckle et al. 2001).

Diplocephalus subrostratus (O. Pickard-Cambridge, 1873)

Taxonomy: Crosby and Bishop (1933); Paquin and Dupérré (2003).

Records: M01 (1 female); M04 (2 males, 1 female). *N* = 4 adults; 2 males, 2 females.

Methods: pitfall traps (2 males, 1 female); search (1 female).

Months: June (2 males, 1 female); July (1 female).

Habitats: litter, coastal red spruce stand (2 males, 1 female); on deck, house (1 female).

Regional Distribution: ME (Procter 1946, as *Chocorua cuneata* Emerton); NH, NY, ON, QC, NS, NF (Buckle et al. 2001).

Dismodicus decemoculatus (Emerton, 1882)

Taxonomy: Crosby and Bishop (1933); Paquin and Dupérré (2003).

Record: M23 (1 female).

Method: sweep net (1 female).

Month: July (1 female).

Habitat: sweeping *Kalmia* sp. near freshwater pond, mixed conifer-hardwood, island (1 female).

Regional Distribution: ME (Jennings and Hilburn 1988, as *Dismodicus bifrons decemoculatus* (Emerton, 1882)); NH, NY, ON, QC, NB, NS, NF (Buckle et al. 2001).

Eperigone entomologica (Emerton, 1911)

Taxonomy: Crosby and Bishop (1928); Kaston (1981); Millidge (1987); Paquin and Dupérré (2003).

Record: M54 (1 female). *N* = 1 adult female.

Method: litter condenser-Berlese funnel (1 female).

Month: September (1 female).

Habitat: sifted forest-floor litter, red spruce stand (1 female).

Regional Distribution: ME, MA, CT, NY, ON, QC (Millidge 1987, Buckle et al. 2001).

**Eperigone undulata* (Emerton, 1914)

Taxonomy: Crosby and Bishop (1928, as *Eperigone contorta* var. *undulatum*); Millidge (1987); Paquin and Dupérré (2003).

Record: M53 (1 male). *N* = 1 adult male.

Method: litter condenser-Berlese funnel (1 male).

Month: July (1 male).

Habitat: sifted aspen-maple litter, mixed hardwoods (1 male).

Regional Distribution: ME (this study); NY, ON, QC, NB, NS (Millidge 1987, Buckle et al. 2001).

Erigone aletris Crosby & Bishop, 1928

Taxonomy: Crosby and Bishop (1928); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (2 males, 5 females). *N* = 7 adults; 2 males, 5 females.

Methods: litter condenser-Berlese funnel (4 females); pitfall traps (2 males, 1 female).

Months: June (1 male, 4 females); July (1 male); August (1 female).

Habitats: litter, seashore-backshore (2 males, 1 female); sifted rockweed (*Fucus vesiculosis*) debris, upper shore, seashore-backshore (4 females).

Regional Distribution: ME (Crosby and Bishop 1928); MA, NY, QC, NF (Buckle et al. 2001).

Erigone atra Blackwall, 1833

Taxonomy: Crosby and Bishop (1928); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (1 male); M06 (1 male); M12 (1 male). *N* = 3 adult males.

Methods: beating cloth (2 males); sweep net (1 male).

Months: May (1 male); June (2 males).

Habitats: beating spruce foliage (1 male); beating white spruce foliage, saltmarsh edge (1 male); sweeping marsh grasses and shrubs (*Spiraea-Kalmia*), freshwater marsh (1 male).

Regional Distribution: ME (Bryant 1908, as *Erigone longipalpis* (Sundevall) Menge); NH, MA, CT, NY, ON, QC, NB, NS, NF (Buckle et al. 2001).

**Erigone blaesa* Crosby & Bishop, 1928

Taxonomy: Crosby and Bishop (1928); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (5 males, 2 females); M07 (1 male). *N* = 8 adults; 6 males, 2 females.

Methods: pitfall traps (3 males, 1 female); search (3 males, 1 female).

Months: June (3 males, 1 female); July (1 male); October (1 male); November (1 male, 1 female).

Habitats: litter, seashore-backshore (1 male, 1 female); litter, mixed deciduous-coniferous woodland (1 male); litter, *Kalmia-Vaccinium* heath (1 male); on rocks at shore, seashore (1 male); running swiftly among wet rocks and sand, seashore (1 male); under board, cobble beach, seashore (1 male, 1 female).

Regional Distribution: ME (this study); MA, CT, RI, NY, ON, QC, NF, LB (Buckle et al. 2001).

****Erigone dentipalpis* (Wider, 1834)

Taxonomy: Locket and Millidge (1953); Roberts (1987).

Records: M07 (1 female); M33 (1 female); M50 (1 male). *N* = 3 adults; 1 male, 2 females.

Methods: pitfall trap (1 female); sweep net (1 male, 1 female).

Months: June (2 females); August (1 male).

Habitats: litter, *Kalmia-Vaccinium* heath (1 female); sweeping grasses and sedges, freshwater marsh (1 female); sweeping grasses, forbs, and shrubs, seashore-backshore (1 male).

Regional Distribution: ME (this study); NF (Buckle et al. 2001).

Note: Buckle et al. (2001) noted that this Palearctic species was possibly introduced into Newfoundland. Our collections of *Erigone dentipalpis* in Milbridge provide the first records of this species in New England and in the continental United States.

Erigone ephala Crosby & Bishop, 1928

Taxonomy: Crosby and Bishop (1928); Kaston (1981).

Record: M23 (1 female). *N* = 1 adult female.

Method: sweep net (1 female).

Month: July (1 female).

Habitat: sweeping blue-joint grass, seashore-backshore, island (1 female).

Regional Distribution: ME (Crosby and Bishop 1928); MA, NY, NF (Buckle et al. 2001).

**Erigone zographica* Crosby & Bishop, 1928

Taxonomy: Crosby and Bishop (1928); Paquin and Dupérré (2003).

Records: M01 (2 males). *N* = 2 adult males.

Methods: pitfall traps (1 male); search (1 male).

Months: June (1 male); July (1 male).

Habitats: litter, seashore-backshore (1 male); in high saltgrass (*Spartina* sp.) at shore, seashore-backshore (1 male).

Regional Distribution: ME (this study); NY, QC (Buckle et al. 2001).

**Floricomus rostratus* (Emerton, 1882)

Taxonomy: Bishop and Crosby (1935); Kaston (1981); Paquin and Dupérré (2003).

Records: M26 (2 males). *N* = 2 adult males.

Method: pitfall traps (2 males).

Months: May-June (1 male); July (1 male).

Habitat: litter, saltmarsh edge (2 males).

Regional Distribution: ME (this study); MA, CT, ON, QC (Buckle et al. 2001).

Gonatium crassipalpum Bryant, 1933

Taxonomy: Bishop and Crosby (1938, as *Gonatium rubens* (Blackwall)); Kaston (1981, as *Gonatium rubens* (Blackwall)); Millidge (1981a); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female). *N* = 2 adults; 1 male, 1 female.

Method: sweep net (1 male, 1 female).

Month: September (1 male, 1 female).

Habitats: sweeping grasses, forbs, shrubs, and small trees, old field (1 male); sweeping vegetation, old field (1 female).

Regional Distribution: ME (Bishop and Crosby 1935, as *Gonatium rubens* (Blackwall)); NH, VT, MA, CT, RI, NY, ON, QC, NB, NS, LB (Buckle et al. 2001).

Note: According to Buckle et al. (2001), early North American records of *Gonatium rubens* are misidentifications of *G. crassipalpum*. In his revision of *Gonatium*, Millidge (1981a) established that *G. crassipalpum* was distinct from the Palearctic *G. rubens*.

Grammonota angusta Dondale, 1959

Taxonomy: Dondale (1959); Paquin and Dupérré (2003).

Records: M01 (18 males, 40 females); M03 (1 female); M04 (6 females); M06 (9 females); M07 (1 male); M08 (1 male); M10 (3 males, 5 females); M11 (8 females); M12 (1 female); M13 (4 females); M14 (5 males, 2 females); M15 (6 males, 6 females); M19 (1 female); M23 (1 male, 1 female); M31 (5 females); M47 (1 male); M48 (1 female); M49 (2 males, 5 females); M51 (1 female); M55 (3 females). *N* = 137 adults; 38 males, 99 females.

Methods: beating cloth (33 males, 86 females); pitfall traps (1 male, 9 females); search (1 male); sifted litter-hand sorted (1 female); sweep net (3 males, 2 females); n. d. (1 female).

Months: May (20 males, 32 females); June (15 males, 24 females); July (3 males, 27 females); August (10 females); September (1 female); October (5 females).

Habitats: beating red spruce foliage, old field edge (16 males, 24 females); beating red spruce foliage, coastal spruce-mixed hardwood (5 females); beating red spruce foliage (saplings), conifer-mixed hardwood (3 males, 3 females); beating red spruce foliage, mixed hardwood-conifer (4 females); beating red spruce foliage, mixed conifer-hardwood understory (5 males, 2 females); beating red spruce foliage, saltmarsh edge (6 males, 6 females); beating red spruce foliage, white pine-red spruce stand (5 females); beating red spruce foliage, seashore-upper shore (2 males, 5 females); beating red spruce foliage, mixed conifer opening (1 female); beating red spruce foliage, freshwater streamside, riparian (3 females); beating red spruce foliage (13 females); beating white spruce foliage, saltmarsh edge (9 females); beating spruces (3 females); beating jack pine foliage (1 male); beating eastern larch foliage (saplings), mixed conifer-hardwood (2 females); beating balsam fir foliage, mixed hardwood-conifer (1 female); sweeping grasses, forbs, and sweetpea, seashore-upper beach (1 male); sweeping grasses, freshwater marsh edge (1 female); sweeping mixed conifer, freshwater pond edge, island (1 female); sweeping *Vaccinium* sp., mixed conifer-hardwood, island (1 male); sweeping vegetation, freshwater streamside, riparian (1 male); sifting forest-floor litter under maples (*Acer* sp.), mixed hardwood-conifer (1 female); litter, coastal red spruce stand (1 female); litter, *Kalmia-Vaccinium* heath (1 male); ground, gravel pit, conifer-mixed hardwood opening (8 females); cherry, mixed conifer-hardwood, island (1 female); on wall, house (1 male).

Regional Distribution: ME (Dondale 1959); NY, ON, QC, NB, NS, PE, NF, LB (Buckle et al. 2001).

Grammonota gigas (Banks, 1896)

Taxonomy: Bishop and Crosby (1933); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (1 female); M06 (10 males, 3 females); M12 (5 females); M26 (9 males, 1 female); M35 (3 males, 4 females); M56 (11 females). *N* = 47 adults; 22 males, 25 females.

Methods: litter condenser-Berlese funnel (3 males, 10 females); litter condenser-hand sorted (5 females); pitfall traps (19 males, 8 females); search (1 female); sweep net (1 female).

Months: June (5 males, 5 females); July (15 males, 3 females); July-August (2 males, 2 females); August (4 females); September (11 females).

Habitats: litter, saltmarsh (10 males, 3 females); litter, saltmarsh edge (9 males); litter, freshwater marsh edge (5 females); sifted marsh litter (grasses, rushes), brackish marsh (3 males, 4 females); sifted litter (grasses, forbs, tidal debris), salt meadow (11 females); sweeping grasses, saltmarsh (1 female); on cobble beach under stone, seashore (1 female).

Regional Distribution: ME (Hilburn and Jennings 1988); NH, MA, NY, ON, QC, NF (Buckle et al. 2001).

******Grammonota maritima*** **Emerton, 1925**

Taxonomy: Bishop and Crosby (1933); Paquin and Dupérré (2003).

Records: M56 (2 males, 3 females). *N* = 5 adults; 2 males, 3 females.

Method: litter condenser-hand sorted (2 males, 3 females).

Month: September (2 males, 3 females).

Habitat: sifted litter (grasses, forbs, tidal debris), salt meadow (2 males, 3 females).

Regional Distribution: ME (this study); QC, NS, NF (Buckle et al. 2001).

Grammonota trivittata Banks, 1895

Taxonomy: Bishop and Crosby (1933); Dondale (1959); Kaston (1981).

Records: M05 (2 females); M17 (1 female). *N* = 3 adult females.

Methods: sifted litter-hand sorted (2 females); sweep net (1 female).

Month: August (3 females).

Habitats: sifted dried rockweed, old field-brackish marsh edge (2 females); sweeping vegetation, saltmarsh (1 female).

Regional Distribution: ME (Emerton 1914); MA, CT, RI, NY (Buckle et al. 2001).

Hypselistes florens (O. Pickard-Cambridge, 1875)

Taxonomy: Crosby and Bishop (1933); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (11 females); M04 (4 females); M05 (1 female); M06 (26 females); M07 (12 females); M08 (5 females); M12 (4 females); M14 (13 females); M17 (1 female); M19 (2 females); M23 (2 females); M24 (4 females); M26 (2 females); M28 (1 female); M33 (4 females); M34 (2 females); M35 (6 females); M37 (3 females); M47 (2 females); M51 (1 female); M55 (3 females); M57 (2 females); M58 (3 females). *N* = 114 adult females.

Methods: beating cloth (5 females); pitfall traps (23 females); search (8 females); sweep net (78 females).

Months: May (11 females); June (53 females); July (35 females) August (15 females).

Habitats: beating white spruce foliage, saltmarsh edge (1 female); beating winterberry, roadside, mixed hardwood-conifer (1 female); beating wild-raisin, brackish marsh edge (1 female); beating meadowsweet near streamside, riparian (2 females); sweeping *Vaccinium* and *Myrica* near woods, old field edge (2 females); sweeping low shrubs, understory *Betula-Acer* woods (2 females); sweeping vegetation, freshwater pond edge (3 females); sweeping stand of meadowsweet (1 female); sweeping vegetation, old fields (3 females); sweeping vegetation, low wet area, coastal red spruce-mixed hardwood (1 female); sweeping vegetation (*Juncus-Spartina*), saltmarsh (3 females); sweeping vegetation, saltmarsh (10 females); sweeping vegetation, saltmarsh edge (1 female); sweeping grasses, forbs, and seaside-pea, seashore-upper beach (3 females); sweeping grasses and shrubs on shore, seashore (2 females); sweeping grasses, saltmarsh (1 female); sweeping vegetation, saltmarsh edge (2 females); sweeping grasses and sedges, freshwater marsh (2 females); sweeping grasses and other vegetation, freshwater marsh (2 females); sweeping grasses and forbs, forest trail, mixed hardwood-conifer (9 females); sweeping vegetation along trail, mixed hardwood-conifer (4 females); sweeping mixed hardwoods and conifers, roadside mixed hardwood-conifer (1 female); sweeping blue-joint grass, seashore-backshore, island (1 female); sweeping understory vegetation, white birch stand (2 females); sweeping understory vegetation, red maple sapling stand (2 females); sweeping disturbed land, roadside (1 female); sweeping grasses and sedges, freshwater marsh (3 females); sweeping marsh grasses, freshwater marsh (1 female); sweeping vegetation, dry streambed, mixed hardwood-conifer (1 female); sweeping grasses, sedges, and forbs, dry streambed, mixed hardwood-conifer (1 female); sweeping vegetation, brackish marsh (4 females); sweeping marsh grasses and rushes, brackish marsh (1 female); sweeping vegetation, mown field edge (3 females); sweeping vegetation, freshwater streamside, riparian (2 females); sweeping rhodora and *Spiraea*, mixed conifer opening (1 female); sweeping mixed vegetation, school playground edge, disturbed area (1 female); sweeping rushes, brackish marsh (2 females); litter, saltmarsh (11 females); litter, *Kalmia-Vaccinium* heath (12 females); on rocks at shore, seashore (1 female); on cobblestone beach and ledge, seashore (1 female); on reindeer lichen, ledge near seashore (1 female); on ledge under flaked stone, mixed conifer, island

(1 female); on ground near brackish marsh, seashore-brackish marsh (2 females); on ground, grass and matted straw, seashore-brackish marsh (1 female); in window, house (1 female).

Regional Distribution: ME (Procter 1946); NH, MA, CT, NY, QC, ON, NB, NS (Buckle et al. 2001).

**Islandiana flaveola* (Banks, 1892)

Taxonomy: Bishop and Crosby (1936); Ivie (1965); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (1 male); M06 (3 males). *N* = 4 adult males.

Method: pitfall traps (4 males).

Months: May (1 male); June (1 male); July (1 male); August (1 male).

Habitats: litter, seashore-backshore (1 male); litter, saltmarsh (3 males).

Regional Distribution: ME (this study); MA, NY, ON, QC (Buckle et al. 2001).

Metopobactrus prominulus (O. Pickard-Cambridge, 1872)

Taxonomy: Bishop and Crosby (1935, as *Maso alticeps* Emerton); Kaston (1981, as *Maso alticeps* (Emerton)); Locket and Millidge (1953); Roberts (1987); Paquin and Dupérré (2003).

Records: M07 (2 males, 1 female). *N* = 3 adults; 2 males, 1 female.

Method: pitfall traps (2 males, 1 female).

Months: May (1 male); June (1 male); June-July (1 female).

Habitat: litter, *Kalmia-Vaccinium* heath (2 males, 1 female).

Regional Distribution: ME (Jennings et al., unpubl.); NY (Crosby and Bishop 1928, as *Caseola alticeps* Emerton)); NH, MA, QC (Buckle et al. 2001).

Pocadicnemis americana Millidge, 1976

Taxonomy: Millidge (1976); Paquin and Dupérré (2003).

Records: M07 (1 male, 2 females); M12 (2 males, 13 females); M24 (1 male); M26 (2 males). *N* = 21 adults; 6 males, 15 females.

Methods: litter condenser-hand sorted (2 females); pitfall traps (6 males, 13 females).

Months: June (1 female); June-July (5 males); July (1 male, 2 females); July-August (1 female); August (11 females).

Habitats: sifted litter, *Kalmia-Vaccinium* heath (2 females); litter, *Kalmia-Vaccinium* heath (1 male); litter, freshwater marsh edge (2 males, 13 females); litter, red maple sapling stand (1 male); litter, saltmarsh edge (2 males).

Regional Distribution: ME (Hilburn and Jennings 1988); MA, CT, NY, ON, QC, NF (Buckle et al. 2001).

Satilatlas marxi Keyserling, 1886

Taxonomy: Millidge (1981b); Paquin and Dupérré (2003).

Records: M01 (1 male, 2 females); M06 (3 females); M07 (1 female). *N* = 7 adults; 1 male, 6 females.

Methods: pitfall traps (1 male, 3 females); sweep net (3 females).

Months: May (4 females); June (1 male, 2 females).

Habitats: litter, seashore-backshore (1 male); litter, saltmarsh (2 females); litter, *Kalmia-Vaccinium* heath (1 female); sweeping grasses, saltmarshes (3 females).

Regional Distribution: ME (Millidge 1981b); MA, CT, RI, NY, ON, QC, NS (Buckle et al. 2001).

Sciastes truncatus (Emerton, 1882)

Taxonomy: Bishop and Crosby (1938); Kaston (1981); Millidge (1984); Paquin and Dupérré (2003).

Record: M54 (1 male). *N* = 1 adult male.

Method: litter condenser-Berlese funnel (1 male).

Month: September (1 male).

Habitat: sifted forest-floor litter, red spruce stand (1 male).

Regional Distribution: ME (Bishop and Crosby 1938); NH, VT, MA, NY, ON, QC, NB, NS, NF (Buckle et al. 2001).

Scotinotylus exsectoides Millidge, 1981

Taxonomy: Millidge (1981c).

Records: M07 (1 female); M22 (1 female). *N* = 2 adult females.

Method: pitfall traps (2 females).

Months: May (1 female); July (1 female).

Habitats: litter, *Kalmia-Vaccinium* heath (1 female); litter, bigtooth aspen stand (1 female).

Regional Distribution: ME (Jennings et al., unpubl.); ON (Buckle et al. 2001).

Note: This species is known only by the female (Millidge 1981c); the male remains to be discovered and described.

Sisicottus montanus (Emerton, 1882)

Taxonomy: Bishop and Crosby (1938); Kaston (1981); Miller (1999); Paquin and Dupérré (2003).

Records: M01 (1 female); M04 (1 male, 2 females); M54 (1 female). *N* = 5 adults; 1 male, 4 females.

Methods: beating cloth (1 female); litter condenser-Berlese funnel (1 female); pitfall traps (1 male, 2 females).

Months: May (1 female); May-June (1 female); June (1 female); July (1 male); September (1 female).

Habitats: beating red spruce foliage, old field edge (1 female); litter, coastal red spruce stand (1 male, 2 females); sifted forest-floor litter, red spruce stand (1 female).

Regional Distribution: ME (Emerton 1914, as *Tmeticus montanus* Emerton); NH, VT, MA, NY, ON, QC, NB, NF (Buckle et al. 2001).

Sisicus penifusifer Bishop & Crosby, 1938

Taxonomy: Bishop and Crosby (1938, as *Sisicus penifusiferus* Bishop & Crosby); Paquin and Dupérré (2003).

Record: M24 (1 female). *N* = 1 adult female.

Method: pitfall trap (1 female).

Month: May-June (1 female).

Habitat: litter, red maple sapling stand (1 female).

Regional Distribution: ME (Bishop and Crosby 1938); NY, ON, QC, NB (Buckle et al. 2001).

Soulgas corticarius (Emerton, 1909)

Taxonomy: Crosby and Bishop (1936); Kaston (1981); Paquin and Dupérré (2003).

Record: M01 (1 female). *N* = 1 adult female.

Method: search (1 female).

Month: October (1 female).

Habitat: on exterior wall, house (1 female).

Regional Distribution: ME (Jaros-Su et al., unpubl.); MA, CT, RI, NY, QC (Buckle et al. 2001).

Styloctetor stativus (Simon, 1881)

Taxonomy: Roberts (1987); Paquin and Dupérré (2003).

Record: M24 (1 male). *N* = 1 adult male.

Method: pitfall trap (1 male).

Month: June (1 male).

Habitat: litter, red maple sapling stand (1 male).

Regional Distribution: ME (Drummond et al., unpubl.); ON, QC (Buckle et al. 2001).

Tapinocyba simplex (Emerton, 1882)

Taxonomy: Crosby and Bishop (1933); Kaston (1981); Paquin and Dupérré (2003).

Records: M04 (1 female); M07 (1 female); M25 (2 females); M27 (1 female). *N* = 5 adult females.

Method: pitfall traps (5 females).

Months: May (1 female); May-June (3 females); July (1 female).

Habitats: litter, *Kalmia-Vaccinium* heath (1 female); litter, coastal red spruce stand (1 female); litter, white (paper) birch stand (2 females); litter, red maple-white (paper) birch stand (1 female).

Regional Distribution: ME (Crosby and Bishop 1933); NH, VT, MA, NY, ON, QC, NB, NF (Buckle et al. 2001).

**Tapinocyba* sp.

Taxonomy: An unknown species per C. D. Dondale (pers. comm.).

Record: M01 (1 female). *N* = 1 adult female.

Method: search (1 female).

Month: October (1 female).

Habitat: "on my arm" (FG, Jr.).

Regional Distribution: ME (this study).

Note: This specimen is in the Canadian National Collection, Ottawa.

Tunagyna debilis (Banks, 1892)

Taxonomy: Kaston (1981); Millidge (1984); Paquin and Dupérré (2003).

Records: M04 (1 male); M06 (1 male); M24 (1 female). *N* = 3 adults; 2 males, 1 female.

Method: pitfall traps (2 males, 1 female).

Months: May-June (1 female); July (2 males).

Habitats: litter, saltmarsh (1 male); litter, coastal red spruce stand (1 male); litter, red maple sapling stand (1 female).

Regional Distribution: ME, (Millidge 1984); NH, MA, NY, ON, QC, NB, NS, NF (Buckle et al. 2001).

Walckenaeria atrotibialis O. Pickard-Cambridge, 1878

Taxonomy: Kaston (1981); Millidge (1983); Paquin and Dupérré (2003).

Records: M12 (2 males, 1 female); M26 (1 male). *N* = 4 adults; 3 males, 1 female.

Method: pitfall traps (3 males, 1 female).

Months: June-July (2 males); July-August (1 male); August (1 female).

Habitats: litter, freshwater marsh edge (2 males, 1 female); litter, saltmarsh edge (1 male).

Regional Distribution: ME (Millidge 1983); NH, VT, NY, ON, QC, NB, NS (Buckle et al. 2001).

Walckenaeria communis (Emerton, 1882)

Taxonomy: Kaston (1981); Millidge (1983); Paquin and Dupérré (2003).

Records: M01 (1 male); M04 (1 female); M12 (1 female). *N* = 3 adults; 1 male, 2 females.

Method: pitfall traps (1 male, 2 females).

Months: May-June (1 male); August (2 females).

Habitats: litter, deciduous-coniferous woodland (1 male); litter, coastal red spruce stand (1 female); litter, freshwater marsh edge (1 female).

Regional Distribution: ME (Jennings et al., unpubl.); NH, VT, MA, CT, RI, NY, QC, ON (Buckle et al. 2001).

Walckenaeria digitata (Emerton, 1913)

Taxonomy: Kaston (1981); Millidge (1983); Paquin and Dupérré (2003).

Records: M01 (1 female); M07 (1 male); M12 (1 female). *N* = 3 adults; 1 male, 2 females.

Method: pitfall traps (1 male, 2 females).

Months: June-July (1 male); July (1 female); August (1 female).

Habitats: litter, seashore-backshore (1 female); litter, *Kalmia-Vaccinium* heath (1 male); litter, freshwater pond edge (1 female).

Regional Distribution: ME (Jennings et al., unpubl.); NH, NY, ON, QC (Buckle et al. 2001).

Walckenaeria directa (O. Pickard-Cambridge, 1878)

Taxonomy: Kaston (1981); Millidge (1983); Paquin and Dupérré (2003).

Records: M04 (1 male, 2 females); M27 (1 male); M38 (1 female). *N* = 5 adults; 2 males, 3 females.

Methods: litter condenser-Berlese funnel (1 female); pitfall traps (2 males, 2 females).

Months: May (1 male); May-June (1 male); July (3 females).

Habitats: litter, coastal red spruce stand (1 male, 2 females); litter, red maple-white (paper) birch stand (1 male); sifted litter, *Sphagnum*-cranberry-rush bog (1 female).

Regional Distribution: ME (Crosby and Bishop 1931, *Cornicularia directa* Cambridge); NH, VT, MA, RI, CT, NY, ON, QC, NS (Buckle et al. 2001).

Walckenaeria exigua Millidge, 1983

Taxonomy: Millidge (1983); Paquin and Dupérré (2003).

Records: M04 (2 males, 3 females); M24 (1 male). *N* = 6 adults; 3 males, 3 females.

Methods: pitfall traps (3 males, 2 females); sifted litter-hand sorted (1 female).

Month: May (1 female); June (3 males); June-July (1 female); July (1 female).

Habitats: litter, coastal red spruce stand (2 males, 2 females); litter, red maple stand (1 male); sifted litter, coastal red spruce-maple stand (1 female).

Regional Distribution: ME (Millidge 1983); NH, MA, NY, ON, QC, NB, NS (Buckle et al. 2001).

Walckenaeria lepida (Kulczyński, 1885)

Taxonomy: Millidge (1983); Paquin and Dupérré (2003).

Records: M06 (1 female); M19 (1 female). *N* = 2 adult females.

Methods: beating cloth (1 female); pitfall trap (1 female).

Months: June (1 female); July (1 female).

Habitats: beating red spruce foliage, mixed hardwood-conifer (1 female); litter, saltmarsh (1 female).

Regional Distribution: ME (Jennings and Dimond 1988); NS (Buckle et al. 2001).

****_Walckenaeria redneri_ Millidge, 1983**

Taxonomy: Millidge (1983); Paquin and Dupérré (2003).

Record: M12 (1 female). *N* = 1 adult female.

Method: pitfall trap (1 female).

Month: July (1 female).

Habitat: litter, freshwater marsh edge (1 female).

Regional Distribution: ME (this study); QC (Buckle et al. 2001).

Walckenaeria spiralis (Emerton, 1882)

Taxonomy: Kaston (1981); Millidge (1983); Paquin and Dupérré (2003).

Record: M56 (1 female).

Method: litter condenser-hand sorted (1 female).

Month: September (1 female).

Habitat: sifted litter (grasses, forbs, tidal debris), salt meadow (1 female).

Regional Distribution: ME (Hilburn and Jennings 1988); MA, CT, RI, NY, ON, QC (Buckle et al. 2001).

Walckenaeria subspiralis Millidge, 1983

Taxonomy: Millidge (1983); Paquin and Dupérré (2003).

Records: M06 (1 female); M12 (1 female). *N* = 2 adult females.

Method: pitfall traps (2 females).

Months: May (1 female); August (1 female).

Habitats: litter, saltmarsh (1 female); litter, freshwater marsh edge (1 female).

Regional Distribution: ME (Jennings et al., unpubl.); NY, ON, QC, NB, NS (Buckle et al. 2001).

*Undetermined genus, species

Taxonomy: "Unknown" per C.D. Dondale (pers. comm.).

Record: M05 (1 female). *N* = 1 adult female.

Method: sweep net (1 female).

Month: May (1 female).

Habitat: sweeping wet meadow, old field-brackish marsh edge (1 female).

Regional Distribution: ME (this study).

Note: This specimen is in the Canadian National Collection, Ottawa.

FAMILY TETRAGNATHIDAE

The tetragnathids or long-jawed orb weavers usually spin their webs near water. The common name, long-jawed orb weaver (also four-jawed spiders), stems from their large, powerful chelicerae, which in some species project forward. The web is sometimes large with many radii or small with few radii. The hub is bitten out after the spirals are in place (Dondale et al. 2003). Some species spin their webs over running water, others among tall grass of meadows and marshes, and others in shrubs and trees. Apparently juveniles of *Pachygnatha* spin webs, but the adults do not. Levi (2005b) provides additional information about family characteristics, natural history, and a key to the genera of North America north of Mexico.

Levi (2005b) also includes notes on the taxonomic history of this family. For example, Levi (1980b) lowered the Tetragnathidae to subfamily status; subsequently, Dondale et al. (2003) returned it to full family status. Early revisers included *Meta* and *Zygiella* in the Tetragnathidae or Araneidae; currently, *Meta* resides in the Tetragnathidae while *Zygiella* resides in the Araneidae. Important revisionary works, with keys to genera and species in the northern region, are given by Levi (1980b, 1981). The tetragnathid fauna in Maine is represented by 3 genera and 14 species; that of Milbridge by 3 genera and 10 species.

Meta ovalis (Gertsch, 1933)

Taxonomy: Levi (1980b, as *Meta menardi* (Latreille, 1804)); Kaston (1981, as *Meta menardi* (Latreille, 1804)); Dondale (1995); Paquin and Dupérré (2003).

Record: M01 (1 male). *N* = 1 adult male.

Method: search (1 male).

Month: August (1 male).

Habitat: on front door, house (1 male).

Regional Distribution: ME (Bryant 1908, as *Meta menardi* (Latreille) Simon); NH, VT, MA, CT, RI, NY, ON, QC, NS, NF (Levi 1980b, as *Meta menardi* (Latreille)).

Note: Gertsch (1933) first described the species *ovalis* placing it in the genus *Auchicybaeus*, but later Gertsch and Ivie (1936) indicated that *Auchicybaeus ovalis* Gertsch, 1933 was a junior synonym of *Meta menardi* (Latreille, 1804), a European species. However, Marusik and Koponen (1992) concluded that the species in eastern North America was distinct from *M. menardi*, and named it *M. americana* Marusik & Koponen, 1992. Dondale (1995) showed that Gertsch's earlier name *ovalis* has priority and that *M. ovalis* and *M. americana* represent a single species.

Pachygnatha autumnalis Marx, 1884

Taxonomy: Levi (1980b); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (1 female); M07 (1 female). *N* = 2 adult females.

Methods: pitfall traps (2 females).

Months: June-July (1 female); August (1 female).

Habitats: litter, old field edge and alder swamp (1 female); litter, *Kalmia-Vaccinium* heath (1 female).

Regional Distribution: ME (Procter 1946); NY (Crosby and Bishop 1928); CT (Kaston 1981); NH, VT, MA, ON (Levi 1980b); QC (Bélanger and Hutchinson 1992).

Pachygnatha brevis Keyserling, 1884

Taxonomy: Levi (1980b); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 5 males, 7 females); M05 (1 female); M06 (8 females); M17 (2 males, 3 females). *N* = 26 adults; 7 males, 19 females.

Methods: pitfall trap (1 male); search (1 male); sweep net (5 males, 18 females); n. d. (1 female).

Months: May (3 males, 6 females); June (1 male, 1 female); August (3 males, 10 females); September (2 females).

Habitats: litter, seashore-backshore (1 male); sweeping grasses (*Juncus-Spartina*), saltmarshes (5 males, 16 females); sweeping herbaceous vegetation, freshwater pond edge (2 females); at freshwater pond edge (1 male); n. d., old field (1 female).

Regional Distribution: ME (Bishop 1923); NY (Crosby and Bishop 1928); CT (Kaston 1981); NH, VT, MA, RI, ON (Levi 1980b); QC (Bélanger and Hutchinson 1992).

Tetragnatha caudata Emerton, 1884

Taxonomy: Levi (1981); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M12 (5 males, 9 females); M33 (4 males, 4 females); M55 (1 male). *N* = 25 adults; 11 males, 14 females.

Method: sweep net (11 males, 14 females).

Months: June (8 males, 7 females); July (3 males, 7 females).

Habitats: sweeping grasses and other vegetation, freshwater pond edge (1 male, 1 female); sweeping marsh grasses, sedges, and shrubs, freshwater marshes (9 males, 13 females); sweeping grasses, freshwater streamside (1 male).

Regional Distribution: ME (Bryant 1908); NY (Crosby and Bishop 1928, as *Eucta lacerta* Walckenaer); MA, RI, ON (Levi 1981); QC (Bélanger and Hutchinson 1992).

Tetragnatha elongata Walckenaer, 1842

Taxonomy: Levi (1981); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (3 males, 5 females). *N* = 8 adults; 3 males, 5 females.

Methods: search (2 males); sweep net (1 male, 5 females).

Months: June (2 males, 2 females); July (1 male); August (3 females).

Habitats: sweeping vegetation, freshwater pond edge (1 male, 5 females); on grasses, freshwater pond edge (1 male); on foundation, house (1 male).

Regional Distribution: ME (Bryant 1908); NY (Crosby and Bishop 1928); CT (Kaston 1981); MA, RI, ON, QC, NB (Levi 1981).

Tetragnatha extensa (Linnaeus, 1758)

Taxonomy: Levi (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (1 male); M06 (1 female); M17 (2 females); M33 (1 male, 1 female); M57 (1 male, 4 females). *N* = 11 adults; 3 males, 8 females.

Method: sweep net (3 males, 8 females).

Months: June (2 males, 4 females); July (1 male, 1 female); August (3 females).

Habitats: sweeping vegetation, freshwater pond edge (1 male); sweeping marsh vegetation, saltmarshes (3 females); sweeping grasses and sedges, freshwater marsh (1 male, 1 female); sweeping rushes, brackish marsh (1 male, 4 females).

Regional Distribution: ME (Banks 1893); NY (Crosby and Bishop 1928); NH, ON, QC, NS, NF (Levi 1981).

**Tetragnatha guatemalensis* O. Pickard-Cambridge, 1889

Taxonomy: Levi (1981); Kaston (1981); Dondale et al. (2003).

Records: M01 (2 females). *N* = 2 adult females.

Method: search (2 females).

Month: July (2 females).

Habitats: in shrubs on shore, seashore-backshore (1 female); on dead limb of *Amelanchier* sp., seashore-backshore (1 female).

Regional Distribution: ME (this study); CT (Kaston 1981); NY, ON, NS (Levi 1981).

Tetragnatha laboriosa Hentz, 1850

Taxonomy: Levi (1981); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (5 males, 6 females); M05 (3 males); M06 (10 males, 3 females); M14 (1 female); M15 (1 female); M23 (2 females); M30 (1 female); M35 (2 females); M58 (6 males, 2 females). *N* = 42 adults; 24 males, 18 females.

Methods: search (2 males, 4 females); sweep net (22 males, 13 females); n. d. (1 female).

Months: June (10 males, 5 females); July (11 males, 12 females); August (3 males, 1 female).

Habitats: sweeping vegetation, freshwater pond edge (1 male, 1 female); sweeping grasses on shore, seashore-backshore (2 males, 2 females); sweeping vegetation, old field (2 males); sweeping vegetation (*Juncus-Spartina*), saltmarshes (11 males, 3 females); sweeping grasses and forbs, mixed hardwood-conifer (1 female); sweeping grasses and sedges, saltmarsh (1 female); sweeping roadside grasses, forbs, ferns, and rushes, alder-aspen edge (1 female); sweeping marsh grasses and rushes, brackish marsh (2 females); sweeping grasses, forbs, and rushes, seashore-brackish marsh (6 males, 2 females); in web on meadowsweet bush, seashore-backshore (1 female); on grasses at shore, seashore-backshore (1 female); in high salt grass at shore, seashore-backshore (1 male); underside of wild *Sarsaparilla* leaf, old field (1 male); in old field (1 female); at freshwater pond edge (*Sphagnum*-water lilies-sedges-grass), island (1 female); on lawn chair (1 female).

Regional Distribution: ME (Bryant 1908); NY (Crosby and Bishop 1928); CT (Kaston 1981); NH, VT, MA, RI, ON, QC, NB, NS, NF (Levi 1981).

Tetragnatha straminea Emerton, 1884

Taxonomy: Levi (1981); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (1 male, 2 females); M14 (3 males, 4 females); M17 (1 male, 1 female); M24 (1 female); M33 (2 females). *N* = 15 adults; 5 males, 10 females.

Methods: search (1 female); sweep net (5 males, 9 females).

Months: June (1 male, 3 females); July (3 males, 4 females); August (1 male, 2 females); September (1 female).

Habitats: sweeping grasses and sedges, seashore-backshore (1 female); sweeping vegetation, freshwater pond edge (1 male); sweeping understory vegetation (grasses, forbs) along trail, mixed hardwood-conifer (3 males, 4 females); sweeping grasses, saltmarsh (1 male, 1 female); sweeping understory vegetation, red maple sapling stand (1 female); sweeping grasses and sedges, freshwater marsh (1 female); sweeping understory vegetation, freshwater marsh-mixed conifer-hardwood edge (1 female); on blackberry (1 female).

Regional Distribution: ME (Bryant 1908); NY (Crosby and Bishop 1928); CT (Kaston 1981); MA, ON (Levi 1981); QC (Bélanger and Hutchinson 1992).

Tetragnatha versicolor Walckenaer, 1842

Taxonomy: Levi (1981); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (5 males, 8 females); M04 (1 male); M06 (2 females); M12 (4 females); M14 (1 male); M17 (1 female); M23 (1 male); M47 (1 female); M49 (1 female). *N* = 25 adults; 8 males, 17 females.

Methods: beating cloth (3 females); search (1 male, 2 females); shake-sweep net (1 female); sweep net (6 males, 11 females); n. d. (1 male).

Months: May (1 male, 1 female); June (1 male, 4 females); July (4 males, 7 females); August (2 males, 5 females).

Habitats: beating alder foliage (2 females); beating red spruce foliage, seashore-backshore (1 female); shaking red spruce foliage over sweep net, saltmarsh edge (1 female); sweeping vegetation, freshwater pond edge (4 males, 4 females); sweeping vegetation, old field (1 female); sweeping vegetation near brackish pond, seashore-brackish marsh (1 male); sweeping vegetation, saltmarsh (2 females); sweeping marsh grasses, sedges, and meadowsweet freshwater marsh edge (4 females); sweeping understory vegetation along trail, mixed hardwood-conifer (1 male); sweeping marsh vegetation, freshwater streamside (1 female); n. d., spruce, mixed conifer-hardwood, island (1 male); on low understory foliage, *Betula-Acer* stand (1 male); on wall, shed (1 female).

Regional Distribution: ME (Seeley 1928, as *Tetragnatha extensa*); CT (Kaston 1981); NH, VT, NY, MA, RI, ON, QC, NB, NS, NF (Levi 1981).

Note: Levi (1981) indicates that *Tetragnatha extensa* of Seeley (1928) is *T. versicolor* Walckenaer, 1842.

FAMILY ARANEIDAE

The araneids or orb weavers include numerous genera and species; in species richness, they are the third largest spider family in the world (Dondale et al. 2003). This family includes large-bodied spiders whose webs are often seen in gardens, parks, meadows, old fields, and forests. Many spin large orb webs that are strikingly beautiful when covered with dew. Some spin retreats in folded leaves, but usually have an attachment line or "signal line" to the nearby orb web. Others remain at the center of the web in a "head-down" position. Some species add a zigzag pattern of silk, the stabilimentum, above and below the web's center.

Several morphological characters are unique to at least one representative of the Araneidae, but none are diagnostic for all (Dondale et al. 2003). These characters include protruding anterior median eyes; lateral eyes together or on tubercles; abdomen with or without dorsal humps; abdomen with or without lateral spines; and presence or absence of coxal hook on leg I of males. Additional character descriptors and notes on natural and taxonomic histories are given by Levi (2005a). Levi (2002, 2005a) provides identification keys to the theridiid genera of North America. In Maine, the Araneidae are represented by 16 genera and 44 species; in Milbridge, by 12 genera and 24 species.

Acanthepeira stellata (Walckenaer, 1805)

Taxonomy: Levi (1976); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Record: M55 (1 female). *N* = 1 adult female.

Method: sweep net (1 female).

Month: June (1 female).

Habitat: sweeping grasses and forbs, playground edge (1 female).

Regional Distribution: ME (Procter 1933, as *Marxia stellata* (Walckenaer); NH, VT, MA, CT, RI, NY, ON, QC (Levi 1976).

Araneus cavaticus (Keyserling, 1882)

Taxonomy: Levi (1971); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M50 (1 female). *N* = 3 adults; 1 male, 2 females.

Method: search (1 male, 2 females).

Month: August (1 male, 2 females).

Habitats: in orb web, camp house (1 female); in orb web, house porch ceiling (1 female); on screen door below kiwi vine, house (1 male).

Regional Distribution: ME (Bryant 1908, as *Araneus cavaticus* (Keyserling) Simon); NH, VT, MA, CT, RI, NY, ON, QC, NB (Levi 1971).

Araneus iviei (Archer, 1951)

Taxonomy: Levi (1971); Dondale et al. (2003); Paquin and Dupérré (2003).

Record: M01 (1 male). *N* = 1 adult male.

Method: search (1 male).

Month: July (1 male).

Habitat: on dead stem, meadowsweet (1 male).

Regional Distribution: ME, VT, MA, CT, NY (Levi 1971); QC Paquin and Dupérré (2003).

Araneus juniperi (Emerton, 1884)

Taxonomy: Levi (1973); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Record: M35 (1 male). *N* = 1 adult male.

Method: sweep net (1 male).

Month: July (1 male).

Habitat: sweeping brackish marsh (1 male).

Regional Distribution: ME (Emerton 1884, as *Epeira juniperi* Emerton); NH, MA, NY (Levi 1973); CT (Kaston 1981); QC (Paquin and Dupérré 2003).

Araneus marmoreus Clerck, 1757

Taxonomy: Levi (1971); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (11 males, 37 females); M04 (2 females); M05 (1 female); M06 (5 females); M12 (1 female); M13 (2 females); M18 (1 female); M22 (1 female); M29 (1 female); M38 (1 male); M47 (1 female); M48 (2 females); M56 (1 female). *N* = 67 adults; 12 males, 55 females.

Methods: beating cloth (1 female); brushing tree-bole bark (2 females); pitfall trap (1 female); search (11 males, 44 females); sweep net (1 male, 5 females); n. d. (2 females).

Months: July (1 male, 1 female); August (11 males, 30 females); September (22 females); October (2 females).

Habitats: in folded leaf retreats, over webs in blackberry shrubs (3 females); in folded red maple leaves, over orb webs (2 females); in folded leaf retreats, over webs in alder (2 females); in dome (retreat) among alder leaves, over orb web (1 female); in folded leaf over web between two small alders, old field edge (1 female); in folded leaf retreat above web among aster and *Amelanchier* sp. (1 female); in retreat above web on white (paper) birch, seashore-backshore (1 female); in folded leaf,

small pin cherry above orb web (1 female); in retreat above web, small wild cherry shrubs, old field edge (2 females); in rolled aster leaf over orb web, old field (1 female); in rolled raspberry leaf over orb web (1 female); in folded spruce (*Picea* sp.) at seashore (1 female); in leaf retreat, gray birch, *Betula-Acer* stand (1 female); in dome (retreat) among *Amelanchier* leaves (1 female); in retreat on meadowsweet, old field (1 female); in cone-shaped retreat of leaves, old field (1 female); in wild blackberry (1 male); in retreat on roadside chokecherry, mixed hardwood-conifer (1 female); in retreat above orb web, roadside northern red oak (1 female); in retreat above web, roadside *Juncus* sp., mixed conifer (1 female); in web on red spruce, near seaside causeway (1 female); in orb web between goldenrod and fern, old field (1 female); in center of web among goldenrod, old field (1 female); in web, granite cliff face, seashore (1 female); in alder, freshwater marsh edge (1 female); in web, saltmarsh (2 females); in web, tall grass, saltmarsh (1 female); in web, n. d. (1 female); among tall weeds, saltmarsh (1 female); on trunk of white (paper) birch, *Betula-Acer* stand (1 female); on apple tree ascending dragline (1 male); on goldenrod, old field (1 male); on potato plants, vegetable garden (1 female); on underside of blackberry leaf below agelenid web, old field edge (1 male); beating foliage in alder thicket (1 female); brushing bark of white (paper) birch, *Betula-Acer* stand (2 females); sweeping vegetation of old field (2 females); sweeping vegetation, old field edge (1 female); sweeping young alders, roadside (1 female); sweeping *Sphagnum*-cranberry-bog (1 male); sweeping grasses and seaside goldenrod, salt meadow (1 female); litter, bigtooth aspen stand (1 female); in retreat above web, boat (1 female); in orb web on house (1 female); in retreat above orb web, house porch (1 female); in retreat inside lamp cover, shingled house wall (1 female); in folded patio umbrella (1 male); in web under bridge, freshwater stream (1 female); on side of house (2 males,1 female); on mailbox, roadside (1 female); on dragline, house exterior (1 male); on porch floor, house (1 male); on foliage in garden, no web (1 male); on lawn chair (1 male); alder, seashore-backshore (1 female); old field (1 female); n. d. (1 female).

Regional Distribution: ME (Bryant 1908, as *Araneus marmoreus* Fabricius); NH, VT, MA, CT, RI, NY, ON, QC, NB, NS (Levi 1971).

Araneus nordmanni (Thorell, 1870)

Taxonomy: Levi (1971); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (2 females); M04 (1 male, 1 female); M05 (1 female); M06 (1 female); M08 (2 females); M54 (1 female). *N* = 9 adults; 1 male, 8 females.

Methods: search (1 male, 6 females); sweep net (1 female); n. d. (1 female).

Months: August (1 male, 4 females); September (4 females).

Habitats: in orb webs, roadside shrubs (2 females); in web, small balsam fir, seaside (1 female); in web, saltmarsh (1 female); in web on red spruce, old field edge (1 female); under loose bark of white (paper) birch, mixed conifer-hardwood (1 male); sweeping plants, coastal red spruce-mixed hardwoods (1 female); old field-brackish marsh (1 female); in web on side of shed (1 female).

Regional Distribution: ME (Emerton 1884, as *Epeira nordmanni* Thorell); NH, VT, MA, RI, NY, ON, QC, NB, NS (Levi 1971).

Araneus pratensis (Emerton, 1884)

Taxonomy: Levi (1973); Kaston (1981); Dondale et al. (2003).

Records: M01 (2 males); M07 (1 female). *N* = 3 adults; 2 males, 1 female.

Methods: sweep net (2 males); unsifted litter-Berlese funnel (1 female).

Months: June (2 males); August (1 female).

Habitats: sweeping grasses, forbs, and shrubs, old field (2 males); litter, *Kalmia-Vaccinium* heath.

Regional Distribution: ME (Procter 1946, as *Singa pratensis* Emerton); NH, VT, MA, CT, NY (Levi 1973); ON (Levi 1975a).

Araneus saevus (L. Koch, 1872)

Taxonomy: Levi (1971); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (4 males). *N* = 4 adult males.

Method: search (4 males).

Months: September (1 male); October (3 males).

Habitats: on lilac leaf (1 male); walking across porch, house (1 male); on outside wall of house (1 male); on outside of front door, house (1 male).

Regional Distribution: ME (Procter 1938, as *Aranea solitaria* (Emerton); NH, VT, NY, ON, QC, NB, NS, NF (Levi 1971).

Araneus trifolium (Hentz, 1847)

Taxonomy: Levi (1971); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (3 males, 10 females); M05 (3 males, 1 female); M06 (4 males, 4 females); M38 (1 female); M56 (1 female). *N* = 27 adults; 10 males, 17 females.

Methods: search (3 males, 11 females); sweep net (7 males, 6 females).

Months: July (1 male, 1 female); August (9 males, 11 females); September (5 females).

Habitats: sweeping vegetation of old fields (3 males, 3 females); sweeping grasses, saltmarsh (4 males, 2 females); sweeping grasses and seaside goldenrod, salt meadow (1 female); in rolled leaf over web, seaside goldenrod, saltmarsh (1 female); in folded leaf retreat, ornamental cinquefoil (1 female); in folded leaf (*Spiraea* sp.) retreat, old field (1 female); in folded leaf over orb web, old field (1 male); in retreat, *Juncus* sp. seedhead, *Sphagnum*-cranberry-rush bog (1 female); in vegetation of old field

(4 females); in orb web with prey, flower garden (1 female); under leaf near web, saltmarsh (1 female); on lily in garden (1 female); on automobile door (1 male); on outside wall of house (1 male).

Regional Distribution: ME (Hentz 1875, as *Epeira trifolium*); NH, VT, MA, CT, RI, NY, ON, QC, NB, NS, NF, LB (Levi 1971).

Araniella displicata (Hentz, 1847)

Taxonomy: Levi (1974); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (9 males, 13 females); M12 (1 male, 1 female); M14 (1 female); M23 (1 female); M35 (1 female); M51 (1 male, 2 females). *N* = 30 adults; 11 males, 19 females.

Methods: beating cloth (1 male, 2 females); pitfall trap (1 male); search (5 males, 12 females); sweep net (4 males, 4 females); shake-sweep net (1 female).

Months: May (2 females); June (8 males, 7 females); July (3 males, 9 females); August (1 female).

Habitats: beating red spruce foliage, old field edge (1 female); beating red spruce foliage, mixed conifer (1 male, 1 female); sweeping vegetation, old field (1 male, 1 female); sweeping vegetation, old field edge (1 male); sweeping *Vaccinium* and *Myrica* near woods (1 female); sweeping low vegetation, deciduous-coniferous woodland (1 male); sweeping grasses on shore, seashore (1 male); sweeping grasses, brackish marsh (1 female); sweeping grasses and *Kalmia*, mixed conifer opening, island (1 female); shaking speckled alder bushes over sweep net, mixed conifer opening (1 female); in small web on mountain-ash, with prey (1 female); in web on wild cherry leaf, along lane (1 female); in shrubbery (1 male, 1 female); in alder thicket (1 female); in webs on blackberry leaves, old field (3 females); in web, top of alder leaf, along lane (1 female); in web, garden (1 male); in web along trail, mixed hardwood-conifer understory (1 female); on willow shrub leaf, freshwater pond edge (1 male); on willow shrub leaf, freshwater marsh edge (1 female); litter, freshwater marsh edge (1 male); in shed (1 male); on side of house wall (1 female); on bedroom wall, house (1 male); on bedroom ceiling, house (1 female).

Regional Distribution: ME (Bryant 1908, as *Araneus displicatus* (Hentz) Simon); NH, VT, MA, CT, RI, NY, ON, QC, NS, NF, LB (Levi 1974).

Argiope aurantia (Lucas, 1833)

Taxonomy: Levi (1968); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (7 females); M05 (2 females); M06 (2 males, 3 females); M18 (1 female); M21 (1 female); M38 (1 female); M56 (1 female). *N* = 18 adults; 2 males, 16 females.

Methods: search (8 females); sweep net (2 males, 6 females); n. d. (2 females).

Months: August (2 males, 8 females); September (4 females); October (4 females).

Habitats: sweeping saltmarsh vegetation (2 males, 1 female); sweeping old field vegetation (3 females); sweeping *Sphagnum*-cranberry-rush bog (1 female); sweeping grasses and seaside goldenrod,

salt meadow (1 female); in web among low forbs, old field (1 female); in web with wrapped prey, old field (1 female); among tall weeds, saltmarsh (1 female); in orb web, roadside goldenrod (1 female); in web, vegetable garden (1 female); on and under bark of dead tree, mixed hardwood-conifer (1 female); in window, house (1 female); in storage cabinet, Refuge headquarters building (1 female); n. d. (2 females).

Regional Distribution: ME (Bryant 1908); NH, MA, CT, RI, NY, ON, NS (Levi 1968); QC (Bélanger and Hutchinson 1992).

Argiope trifasciata (Forskål, 1775)

Taxonomy: Levi (1968); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (4 males, 9 females); M05 (23 males, 5 females); M06 (13 males, 3 females); M13 (4 males); M21 (1 male); M38 (9 males, 5 females); M56 (8 males, 5 females). *N* = 89 adults; 62 males, 27 females.

Methods: search (5 males, 2 females); sweep net (50 males, 23 females); n. d. (7 males, 2 females).

Months: August (50 males, 14 females); September (11 males, 11 females); October (2 females); n. d. (1 male).

Habitats: sweeping grasses, forbs, shrubs, small trees, old field (2 males, 3 females); sweeping old fields (13 males, 6 females); sweeping aster, goldenrod, and small alders, old field (1 female); n. d., old field (7 males, 2 females); sweeping grasses and other vegetation, saltmarsh (12 males, 3 females); sweeping *Sphagnum*-cranberry-rush bog (9 males, 5 females); sweeping grasses and forbs, including seaside goldenrod, salt meadow (8 males, 5 females); sweeping brackish marsh near river (4 males); sweeping low foliage, freshwater streamside (4 males); among tall weeds near female, saltmarsh (1 male); in center of web, old field (2 females); in shrubs, old field (1 male); on truck fender, Refuge headquarters (1 male).

Regional Distribution: ME (Emerton 1894, as *Argiope transversa* Emerton); NH, VT, MA, CT, RI, NY, ON, QC, NS (Levi 1968)

Cyclosa conica (Pallas, 1772)

Taxonomy: Levi (1977); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M04 (2 females); M23 (1 female); M35 (1 male); M49 (1 female). *N* = 7 adults; 2 males, 5 females.

Methods: beating cloth (1 female); search (1 male, 1 female); sweep net (1 male, 1 female); n. d. (2 females).

Months: June (1 male, 1 female); July (1 male, 3 females); August (1 female).

Habitats: beating red spruce foliage, seashore-backshore (1 female); sweeping grasses, forbs, and shrubs, roadside-red spruce forest (1 female); sweeping marsh grasses and rushes, brackish marsh

(1 male); red spruce, *Sphagnum* moss, island (1 female); in center of orb web, *Betula-Acer* stand (1 female); on side of shed (1 male); n. d. (1 female).

Regional Distribution: ME (Emerton 1884); NH, VT, MA, CT, NY, ON, QC, NB, NS, NF, LB (Levi 1977).

Eustala anastera (Walckenaer, 1842)

Taxonomy: Levi (1977); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (1 female); M51 (1 male). *N* = 2 adults; 1 male, 1 female.

Method: sweep net (1 male, 1 female).

Months: June (1 male); July (1 female).

Habitats: sweeping rhodora and *Spiraea*, mixed conifer opening (1 male); sweeping grasses along saltwater creek (1 female).

Regional Distribution: ME, NH, MA, CT, RI, NY, ON, QC, NB, NS (Levi 1977).

**Eustala cepina* (Walckenaer, 1842)

Taxonomy: Levi (1977); Dondale et al. (2003).

Record: M55 (1 female). *N* = 1 adult female.

Method: sweep net (1 female).

Month: June (1 female).

Habitat: sweeping grasses and forbs, edge of school playground-disturbed area (1 female).

Regional Distribution: ME (this study); MA, CT, NY, ON (Levi 1977); NS (Dondale et al. (2003).

Hypsosinga funebris (Keyserling, 1892)

Taxonomy: Levi (1972, as *Hypsosinga singaeformis* (Scheffer, 1904)); Levi (1975a); Dondale et al. (2003).

Records: M01 (1 male); M04 (1 female). *N* = 2 adults; 1 male, 1 female.

Methods: search (1 male); sweep net (1 female).

Month: June (1 male, 1 female).

Habitats: sweeping shrubbery vegetation, coastal mixed conifer (1 female); on wall of house (1 male).

Regional Distribution: ME, NH, VT, MA, CT, NY (Levi 1972); ON (Dondale et al. 2003).

Hypsosinga pygmaea (Sundevall, 1831)

Taxonomy: Levi (1972, as *Hypsosinga variabilis* (Emerton, 1884); Levi (1975a); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M05 (3 females); M06 (26 females); M12 (4 females); M33 (1 female); M47 (2 females); M55 (4 females); M57 (7 females); M58 (7 females). *N* = 54 adult females.

Method: sweep net (54 females).

Months: May (9 females); June (43 females); July (2 females).

Habitats: sweeping vegetation (*Juncus-Spartina*), saltmarsh (26 females); sweeping rushes (*Juncus* sp.), brackish marsh (7 females); sweeping marsh vegetation near brackish pond, brackish marsh-seashore (7 females); sweeping marsh grasses and shrubs (*Spiraea-Kalmia*), freshwater marshes (5 females); sweeping grasses and forbs, edge of playground (3 females); sweeping grasses along freshwater streams (3 females); sweeping wet meadow, wet meadow-brackish marsh (2 females); sweeping grasses and forbs, old field (1 female).

Regional Distribution: ME (Emerton 1884, as *Singa variabilis* Emerton); NH, VT, MA, CT, NY, ON, QC, LB (Levi 1972); NS (Levi 1975a); RI, NB, NF (Dondale et al. 2003).

Hypsosinga rubens (Hentz, 1847)

Taxonomy: Levi (1972); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Record: M32 (1 female). *N* = 1 adult female.

Method: beating cloth (1 female).

Month: July (1 female).

Habitat: beating balsam fir foliage, mixed hardwood-conifer (1 female).

Regional Distribution: ME (Sferra et al., unpubl.); NH, MA, CT, RI, NY, ON, NS (Levi 1972); QC (Bélanger and Hutchinson 1992); NB, NF (Dondale et al. 2003).

Larinioides cornutus (Clerck, 1757)

Taxonomy: Levi (1974, as *Nuctenea cornuta* (Clerck)); Kaston (1981, as *Nuctenea cornuta* (Clerck)); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (1 female); M12 (1 female); M14 (1 male); M33 (1 female). *N* = 4 adults; 1 male, 3 females.

Methods: search (1 female); sweep net (1 male, 2 females).

Months: June (2 females); August (1 male, 1 female).

Habitats: sweeping grasses and sedges, freshwater marsh (1 male, 1 female); sweeping vegetation, old field (1 female); in silk-tied retreat, blue-joint grass seedhead, freshwater marsh (1 female).

Regional Distribution: ME (Hentz 1875, as *Epeira strix*); NH, VT, MA, CT, RI, NY, ON, QC, NB, NS, NF, LB (Levi 1974; Dondale et al. 2003).

Larinioides patagiatus (Clerck, 1757)

Taxonomy: Levi (1974, as *Nuctenea patagiata* (Clerck)); Kaston (1981, as *Nuctenea patagiata* (Clerck)); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (1 male, 3 females); M30 (1 female). *N* = 5 adults; 1 male, 4 females.

Method: search (1 male, 4 females).

Months: June (1 male, 1 female); July (2 females); August (1 female).

Habitats: in retreat, rolled alder leaf, balsam fir-red spruce stand (1 female); dropping from dead branch of *Amelanchier* sp., riparian (1 female); in rural mailbox, roadside (1 male, 2 females).

Regional Distribution: ME (Emerton 1884, as *Epeira patagiata* (Clerck)); NH, VT, MA, CT, RI, NY, ON, QC, NB, NS, NF, LB (Levi 1974, Dondale et al. 2003).

Mangora placida (Hentz, 1847)

Taxonomy: Levi (1975b); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (5 females); M04 (1 female); M10 (2 females); M25 (5 females). *N* = 13 adult females.

Methods: beating cloth (2 females); search (3 females); sweep net (8 males).

Months: May (2 females); June (10 females); July (1 female).

Habitats: sweeping understory vegetation, white (paper) birch stand (5 females); sweeping vegetation, freshwater pond edge (2 females); sweeping grasses, forbs, and shrubs, roadside, red spruce forest (1 female); beating red spruce foliage (saplings), conifer-mixed hardwood (2 females); in alder (1 female); in web on small quaking aspen (1 female); under cardboard, *Amelanchier-Rubus* stand (1 female).

Regional Distribution: ME (Bryant 1908, as *Mangora placida* (Hentz) Simon); NH, MA, CT, RI, NY, ON, QC (Levi 1975b); VT, NB, NS (Dondale et al. 2003).

Metepeira palustris Chamberlin & Ivie, 1942

Taxonomy: Levi (1977, as *Metepeira grandiosa palustris* Chamberlin & Ivie); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (2 males, 6 females); M06 (1 female). *N* = 9 adults; 2 males, 7 females.

Methods: search (2 males, 6 females); sweep net (1 female).

Months: August (2 males, 6 females); September (1 female).

Habitats: in composite webs, low shrubs (1 male, 2 females); in web on small trees and shrubs, ledge, mixed hardwood conifer (1 female); in silk debris hung from marsh grasses, saltmarsh (1 female); in old field (1 female); sweeping old field (1 female); on aster, old field (1 female); on rural mailbox, roadside (1 male).

Regional Distribution: ME (Emerton 1915, as *Epeira labyrinthea* Hentz); NY, ON, QC, NS (Levi 1977, Dondale et al. 2003).

Note: Levi (1977) indicated that Emerton's "bog variety" of *Epeira labyrinthea* was a junior synonym of *Metepeira grandiosa* Chamberlin & Ivie, 1941, and assigned this variety to one of three subspecies, i.e., *M. grandiosa palustris*. However, Dondale et al. (2003) elevated *M. palustris* to full species rank.

Neoscona arabesca (Walckenaer, 1842)

Taxonomy: Berman and Levi (1971); Kaston (1981); Dondale et al. (2003); Paquin and Dupérré (2003).

Records: M01 (6 males, 37 females); M02 (1 male); M04 (3 males, 6 females); M05 (5 males, 15 females); M06 (14 males, 24 females); M07 (4 males, 1 female); M12 (1 male, 3 females); M17 (1 female); M23 (1 male, 1 female); M28 (1 male); M29 (1 male); M30 (1 male); M34 (1 male); M35 (1 male); M38 (4 males, 3 females); M47 (11 males, 2 females); M48 (1 female); M55 (1 male, 1 female); M56 (5 females). *N* = 156 adults; 56 males, 100 females.

Methods: beating cloth (4 males, 1 female); pitfall traps (1 male, 1 female); search (3 males, 32 females); sweep net (44 males, 61 females); n. d. (4 males, 5 females).
Months: June (1 male, 1 female): July (8 males, 10 females); August (47 males, 70 females); September (19 females).

Habitats: sweeping old fields (8 males, 15 females); sweeping saltmarshes (12 males, 24 females); sweeping grasses and other marsh vegetation near freshwater stream, riparian (11 males, 2 females); sweeping *Sphagnum*-cranberry-rush bog (4 males, 3 females); sweeping grasses and seaside goldenrod, salt meadow (5 females); sweeping brackish marsh-old field near river (1 male, 4 females); sweeping grasses along saltwater creek (1 male, 3 females); sweeping vegetation in low marshy area, coastal spruce-mixed hardwoods (1 male, 2 females); sweeping freshwater marsh (3 females); sweeping *Kalmia-Vaccinium* heath (2 males); sweeping grasses and forbs, playground edge (1 male, 1 female); sweeping white and yellow clover, roadside disturbed area (1 male); sweeping grasses, forbs, ferns, and rushes, roadside alder-aspen edge (1 male); sweeping grasses, sedges, and forbs, dry streambed, mixed hardwood-conifer (1 male); sweeping brackish marsh, inland (1 male); beating red spruce foliage, mixed conifer (1 male, 1 female); beating red spruce, roadside (1 male); beating eastern larch foliage, mixed conifer (1 male); beating spruce foliage, seashore-backshore (1 male); litter, saltmarsh

(1 female); in saltmarsh (2 males); litter, freshwater marsh edge (1 male); in webs, on foliage, on zucchini, and running on ground, vegetable garden (4 females); in orb webs among goldenrod, in old field (4 females); in orb webs on *Amelanchier* sp. (2 females); in web, old field (1 female); in shrubs, old field (1 female); in flower garden (1 female); in retreat above web on *Spiraea* and timothy grass, old field (1 female); climbing on timothy grass, old field (1 female); in center of orb web on barberry shrub (1 female); in center of orb web on red spruce (1 female); in center of orb web, n. d. (1 female); in orb web among alders (1 female); in web, small trees and shrubs on ledge, mixed hardwood-conifer (1 female); in low plants, edge of lawn (1 female); in orb web, dining room wall, house (1 female); in center of orb web, house window (1 female); in web on side of house (1 female); on collector's pants, old field (1 female); on flower head of *Helianthus* sp., flower garden (1 female); on foliage, freshwater pond edge (1 female); on patio, house (1 female); on screen door, house (1 female); on side of house (1 male); on cobblestone beach, seashore (1 female); under bark of dead red maple, mixed hardwood-conifer (1 female); on heath plants, *Kalmia-Vaccinium* heath (2 males, 1 female); in web on shore ledge, seashore (1 female); n. d. (1 male, 3 females).

Regional Distribution: ME (Bryant 1908, as *Araneus trivittatus* (Keyserling) Comstock); NH, VT, MA, CT, RI, NY, ON, QC, NB, NS (Berman and Levi 1971, Dondale et al. 2003).

Note: During outbreaks of the spruce budworm, this spider captures and feeds on budworm moths entangled in its web (Jennings and Houseweart 1988).

Zygiella atrica (C. Koch, 1845)

Taxonomy: Gertsch (1964); Levi (1974); Kaston (1981); Paquin and Dupérré (2003).

Records: M04 (1 male, 1 female); M21 (1 male, 2 females). *N* = 5 adults; 2 males, 3 females.

Methods: beating cloth (1 male, 1 female); search (1 male, 2 females).

Months: August (1 male, 1 female); September (1 male, 2 females).

Habitats: beating red spruce foliage, seashore-backshore (1 male, 1 female); lumber pile near Refuge headquarters building (1 male, 2 females).

Regional Distribution: ME (Emerton 1914); MA, RI, NY, ON (Gertsch 1964); NS (Levi 1974); QC (Bélanger and Hutchinson 1992); NF (Dondale et al. 2003).

Note: This is an introduced Palearctic species in North America (Dondale et al. 2003) that, according to Gertsch (1964), was first noticed by H. C. McCook at Annisquam, MA in about 1885.

FAMILY AGELENIDAE

The agelenids or funnel-web weavers spin sheet or platform webs with a tube or funnel leading off one edge. Several strands of silk are spun above the sheet, which serve as barriers to flying insects. Insects that encounter these upward strands may fall to the sheet below and become potential prey for the resident spider, which usually hides in the tube or funnel. If potential prey is perceived, the spider rushes out of its retreat and inflicts one or more bites. Once the prey is subdued, the spider seizes it and returns to the funnel to feed.

Some agelenids resemble lycosids or wolf spiders; however, the eyes of agelenids are arranged in two rows, not three as in the Lycosidae. The spinnerets also project posteriorly and consist of longer segments than lycosid spinnerets. The tarsi bear three claws but lack scopulae. Other characters of the family Agelenidae are described by Bennett and Ubick (2005), who also provide notes on natural history and a key to the genera of North America.

Several genera formerly assigned to the Agelenidae have been removed and assigned to other families. For example, *Cicurina* now belongs to the Dictynidae; *Coras* and *Wadotes* are now considered members of the Amaurobiidae. With these changes, the agelenid fauna of Maine now consists of only two genera and seven species; both genera and four species have been found in Milbridge.

Agelenopsis actuosa (Gertsch & Ivie, 1936)

Taxonomy: Chamberlin and Ivie (1941); Roth and Brown (1986); Paquin and Dupérré (2003).

Records: M01 (2 males, 3 females); M04 (3 males, 3 females); M05 (1 male, 4 females); M06 (3 males, 3 females); M07 (1 female); M13 (6 females); M38 (3 females); M39 (1 female). *N* = 33 adults; 9 males, 24 females.

Methods: pitfall traps (4 males, 1 female); search (4 males, 14 females); sweep net (7 females); n. d. (1 male, 2 females).

Months: July (1 female); July-August (1 male); August (7 males, 23 females); August-September (1 male).

Habitats: in funnel webs, roadside, mixed conifer-hardwood (6 females); in funnel webs, old field (1 male, 2 females); in funnel webs, upper beach, seashore (2 females); in funnel webs, among rocks, coastal spruce-mixed hardwood (2 males); in webbed conical retreat on blackberry (*Rubus* sp.) (1 male, 1 female); in web, saltmarsh (1 female); litter, saltmarsh (3 males); litter, seashore-backshore (1 male); litter, *Kalmia-Vaccinium* heath (1 female); sweeping saltmarsh (1 female); sweeping *Sphagnum*-cranberry-rush bog (3 females); sweeping old field (2 females); sweeping understory shrubs and ferns, red maple stand (1 female); in low plants, edge of lawn (1 female); in mailbox (1 female); n. d., coastal spruce-mixed hardwood (1 male, 1 female); n. d., saltmarsh (1 female).

Regional Distribution: ME (Collins et al. 1996); ON (Chamberlin and Ivie 1941); QC (Paquin and Dupérré 2003).

Agelenopsis potteri (Blackwall, 1846)

Taxonomy: Chamberlin and Ivie (1941); Kaston (1981); Roth and Brown (1986); Paquin and Dupérré (2003).

Records: M01 (1 male, 20 females); M06 (1 male, 1 female); M21 (3 females). *N* = 26 adults, 2 males, 24 females.

Methods: pitfall traps (1 male, 1 female); search (1 male, 20 females); sweep net (3 females).

Months: August (2 females); September (2 males, 16 females); October (6 females).

Habitats: in funnel webs on meadowsweet, old field (2 females); in folded blackberry leaf, old field (1 female); in funnel web on blackberry bush, old field (1 female); in funnel web spun between goldenrod and blackberry bush, old field (1 female); in vegetable garden (1 female); in web, low grass at lawn edge, old field (1 female); in funnel web, base of crabapple tree trunk (1 female); on and under bark of dead tree, mixed hardwood-conifer (1 female); sweeping old field (2 females); sweeping aster, goldenrod, small alders, old field (1 female); litter, saltmarsh (1 male, 1 female); in mailbox (3 females); in web inside bedroom window, house (1 female); in corner, house wall (1 female); in silk retreat, split log in woodbin (1 female); inside window, house (1 male); on side of house (2 females); in lumber pile (3 females).

Regional Distribution: ME (Procter 1938); NH, MA, QC, NS (Chamberlin and Ivie 1941); CT (Kaston 1981).

Agelenopsis utahana (Chamberlin & Ivie, 1933)

Taxonomy: Chamberlin and Ivie (1941); Kaston (1981); Roth and Brown (1986); Paquin and Dupérré (2003).

Records: M01 (46 males, 23 females); M04 (2 males, 4 females); M06 (2 males, 1 female); M12 (1 male, 1 female); M13 (1 female); M18 (1 female); M22 (4 males, 3 females); M29 (1 female); M34 (2 females). *N* = 92 adults; 55 males, 37 females.

Methods: beating cloth (1 female); pitfall traps (40 males, 7 females); search (11 males, 23 females); sweep net (3 males, 5 females); n. d. (1 male, 1 female).

Months: July (13 males); July-August (6 males, 2 females); August (28 males, 30 females); August-September (1 male); September (7 males, 2 females); October (1 female); November (2 females).

Habitats: litter, *Betula-Acer* stand (30 males, 4 females); litter, bigtooth aspen stand (4 males, 3 females); litter, saltmarsh (2 males); litter, seashore-backshore (2 males); litter, edge of old field and alder swamp (1 male); litter, coastal red spruce stand (1 male); sweeping foliage, freshwater pond edge (2 males); sweeping vegetation, old field (1 female); sweeping vegetation, saltmarsh (1 female); sweeping vegetation, freshwater marsh (1 male, 1 female); sweeping grasses, sedges, forbs, dry streambed (2 females); beating hardwoods (1 female); in webs on aster, old field (2 females); in web, rolled aster leaf, old field (1 male); in web on aster, roadside, mixed conifer-hardwood (1 female);

in web, folded blackberry leaves (2 females); in funnel web on sarsparilla sp., coastal spruce-mixed hardwood (1 female); in folded sarsparilla leaf, roadside, mixed conifer (1 female); in funnel webs, understory spruce-mixed hardwood (2 females); in web, folded alder leaf (1 female); in nests, rolled alder leaves (2 females); in folded wild cherry leaf (1 female); in web, wild rose (*Rosa* sp.) leaf (1 female); in webs, folded (rolled) leaves of bush- honeysuckle (2 males); in web, between leaves of small shrub (1 male); in web, among woodland foliage (1 female); in grasses, old field edge (1 male); under bark of white (paper) birch (2 males); on foliage, green bean plant, garden (1 female); running on ground, vegetable garden (1 male, 1 female); in funnel webs on potato plants, garden (2 females); in web, overturned canoe (1 female); in garage (1 female); in shed (1 male); in bathroom, house (1 male); on bathroom ceiling (1 female); on porch (1 male); on outside wall of house (1 female); n. d. (1 male, 1 female).

Regional Distribution: ME, NH, MA, RI, NY (Chamberlin and Ivie 1941); CT (Kaston 1981); QC (Bélanger and Hutchinson 1992).

Tegenaria domestica (Clerck, 1757)

Taxonomy: Roth (1968); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (12 males, 3 females); M52 (2 females). *N* = 17 adults; 12 males, 5 females.

Method: search (12 males, 5 females).

Months: May (2 males); June (4 males, 3 females); July (1 male); August (1 male); September (1 male, 2 females); October (3 males).

Habitats: in bathtub, house (8 males, 1 female); in bathroom basin, house (1 male); in funnel webs, house cellars (1 male, 2 females); in stored storm door, house basement (1 male); in garage, house (1 male, 1 female); in folded blackberry leaf, old field (1 female).

Regional Distribution: ME (Procter 1946, as *Tegenaria derhami* (Scopoli, 1763)); CT (Kaston 1981); NY (Crosby and Bishop 1928); QC (Bélanger and Hutchinson 1992).

FAMILY HAHNIIDAE

The hahniids spin small delicate sheet webs near the ground; the webs are difficult to see unless covered by dew or mist from fog. The webs of some species remain to be discovered (Opell and Beatty 1976). Some authors indicate that hahniid webs lack a retreat; however, Dondale et al. (1997) noted that, in some instances, a funnel retreat may be present.

The hahniids are three-clawed spiders with leg spines and trichobothria similar to the Agelenidae; in fact, hahniids were formerly regarded as a subfamily of the Agelenidae (Comstock 1948, Kaston 1981). Most hahniids are easily recognized and distinguished from other spiders by their transverse arrangement of the spinnerets. The three pairs of spinnerets are arranged with their basal segments nearly in a straight line. The anterior eyes are arranged in two slightly procured rows; sometimes the anterior median eyes are minute, e.g., species of *Hahnia*. Other family characters, notes on natural history, and a key to genera in North America north of Mexico are provided by Bennett (2005b).

Opell and Beatty (1976) revised the Nearctic Hahniidae, including 3 genera and 28 species. Since their revision, additional genera and species have been added to the Hahniidae; see Bennett (2005b) and Platnick (2007). Descriptions of *Cryphoeca montana* Emerton 1909, a New England to midwestern species, are given by Levi and Field (1954), Kaston (1981), and Roth (1994). Currently, the hahniid fauna in Maine consists of four genera and five species; three genera and four species have been found in Milbridge.

Antistea brunnea (Emerton, 1909)

Taxonomy: Gertsch (1934); Opell and Beatty (1976); Paquin and Dupérré (2003).

Records: M12 (23 males, 4 females). *N* = 27 adults; 23 males, 4 females.

Method: pitfall traps (23 males, 4 females).

Months: June (1 female); June-July (1 female); July (2 females); August (1 male); August-September (13 males); September (9 males).

Habitat: freshwater marsh edge (23 males, 4 females).

Regional Distribution: ME (Emerton 1915, as *Hahnia burnnea* Emerton); CT, NY, ON, QC, NS (Opell and Beatty 1976).

Cryphoeca montana Emerton, 1909

Taxonomy: Levi and Field (1954); Kaston (1981); Roth (1994); Paquin and Dupérré (2003).

Records: M01 (3 males, 1 female); M04 (70 males); M07 (1 male); M27 (1 male). *N* = 76 adults; 75 males, 1 female.

Methods: beating cloth (1 female); pitfall traps (75 males).

Months: May-June (48 males); June (27 males); October (1 female).

Habitats: beating alders, old field edge (1 female); litter, deciduous-coniferous woodland (3 males); litter, coastal red spruce stand (70 males); litter, *Kalmia-Vaccinium* heath (1 male); litter, red maple-white (paper) birch stand (1 male).

Regional Distribution: ME, NH, VT, MA, NF (Emerton 1914); NY (Crosby and Bishop 1928); CT (Kaston 1981); QC (Bélanger and Hutchinson 1992).

Hahnia cinerea Emerton, 1890

Taxonomy: Gertsch (1934); Opell and Beatty (1976); Kaston (1981); Paquin and Dupérré (2003).

Records: M24 (3 males, 1 female); M25 (5 males); M26 (1 male); M27 (1 male). *N* = 11 adults; 10 males, 1 female.

Method: pitfall traps (10 males, 1 female).

Months: May (7 males); May-June (2 males, 1 female); June (1 male).

Habitats: forest-floor litter, red maple sapling stand (3 males, 1 female); forest-floor litter, white (paper) birch stand (5 males); marsh litter, saltmarsh edge (1 male); forest-floor litter, red maple-white birch stand (1 male).

Regional Distribution: ME (Procter 1933); NH, MA, CT, NY, ON, QC, NS (Opell and Beatty 1976).

Neoantistea agilis (Keyserling, 1887)

Taxonomy: Gertsch (1934); Opell and Beatty (1976); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (2 males); M06 (4 males, 9 females); M07 (6 females); M11 (1 male, 1 female); M22 (2 females); M25 (1 male, 3 females); M26 (2 males). *N* = 31 adults; 10 males, 21 females.

Methods: pitfall traps (10 males, 20 females); sifted litter-hand sorted (1 female).

Months: May (2 males, 4 females); May-June (2 females); June (1 male, 4 females); June-July (1 female); July (1 male, 7 females); August (4 males, 1 female); August-September (1 male); September (1 male, 2 females).

Habitats: litter, old field-alder swamp edge (2 males); litter, saltmarsh (4 males, 9 females); litter, *Kalmia-Vaccinium* heath (5 females); sifted heath litter, *Kalmia-Vaccinium* heath (1 female); ground, gravel pit, conifer-mixed hardwood opening (1 male, 1 female); forest-floor litter, bigtooth aspen stand (2 females); forest-floor litter, white (paper) birch stand (1 male, 3 females); litter, saltmarsh edge (2 males).

Regional Distribution: ME (Bryant 1908, as *Hahnia agilis* Keyserling); NH, VT, MA, CT, RI, NY, ON, QC, NS (Opell and Beatty 1976).

Neoantistea magna (Keyserling 1887)

Taxonomy: Gertsch (1934); Opell and Beatty (1976); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (227 males, 8 females); M04 (13 males, 22 females); M06 (6 males); M12 (1 female); M24 (1 female); M27 (1 male, 4 females). *N* = 283 adults; 247 males, 36 females.

Method: pitfall traps (247 males, 36 females).

Months: May (1 female); May-June (1 female); June (12 females); June-July (4 females); July (46 males, 12 females); July-August (50 males); August (116 males, 6 females); August-September (22 males); September (13 males).

Habitats: forest-floor litter, *Betula-Acer* stand (226 males, 7 females); litter, deciduous-coniferous woodland (1 male, 1 female); forest-floor litter, coastal red spruce stand (13 males, 22 females); litter, saltmarsh (6 males); litter, freshwater marsh edge (1 female); forest-floor litter, red maple sapling stand (1 female); forest-floor litter, red maple-white birch stand (1 male, 4 females).

Regional Distribution: ME (Bryant 1908, as *Hahnia radula* Emerton); NH, VT, MA, CT, NY, ON, QC, NS, NF (Opell and Beatty 1976).

FAMILY DICTYNIDAE

Most members of this family are small spiders that spin aerial webs in forbs, shrubs, and trees; a few live in leaf debris on the ground. They are among the hackle-band weavers or cribellate spiders that spin dense meshes of silk. A series of curved bristles on metatarsus IV, called the calamistrum, is used to card silk from a special spinning plate, the cribellum, which lies anterior to the spinnerets. Species of *Cicurina* lack a cribellum and calamistrum.

Webs of some dictynids are sheet-like and can be found on walls of buildings, fences, and tree bark; others spin tangle-like webs near the apices of grasses, forbs, and dead twigs. Female dictynids generally produce more than one egg sac, which are hung within the confines of their webs. After mating, male dictynids are often seen cohabiting with the females in their web.

Dictynid spiders generally have eight eyes arranged in two rows, or six eyes in two triads, with the anterior median eyes missing. The number of eyes may be further reduced or completely absent in cave-dwelling *Cicurina*, a genus formerly assigned to the Agelenidae. Unlike most aerial-spinning dictynids, species of *Cicurina* generally live under rocks or in litter; little is known about their web-spinning habits. Additional information on dictynid character descriptors, natural history, and key to the genera of North America can be found in Bennett (2005a).

Earlier, Chamberlin and Gertsch (1958) provided keys, illustrations, and descriptions for most species of Dictynidae found in North America north of Mexico. However, numerous name changes have taken place since this earlier revision; see Bennett (2005a) for a review of taxonomic history. For example, the subgenus *Emblyna* has been elevated to full generic level, with the resultant shift in numerous species. Platnick (2007) should be consulted for the latest placement of genera and species.

Pierre Paquin and James C. Cokendolpher are currently revising the genus *Cicurina*, including species found in Maine. Until this revision appears, earlier descriptions and illustrations of *Cicurina* species can be found in Chamberlin and Ivie (1940). Currently, the dictynid fauna of Maine comprises 7 genera and 22 species; 5 genera and 13 species have been found in Milbridge.

Argenna obesa Emerton, 1911

Taxonomy: Chamberlin and Gertsch (1958); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M56 (1 female). $N = 3$ adults; 1 male, 2 females.

Method: litter condenser-Berlese funnel (1 male, 2 females).

Months: June (1 male, 1 female); September (1 female).

Habitats: sifted rockweed debris, seashore (1 male, 1 female); sifted litter (grasses, forbs, tidal debris), salt meadow (1 female).

Regional Distribution: ME (Emerton 1914); NH, MA, CT, NY, ON, NF (Chamberlin and Gertsch 1958); QC (Bélanger and Hutchinson 1992).

Cicurina arcuata Keyserling, 1887

Taxonomy: Chamberlin and Ivie (1940); Paquin and Dupérré (2003).

Records: M01 (2 males).

Method: pitfall traps (2 males).

Months: May-June (1 male); June (1 male).

Habitat: litter, deciduous-coniferous woodland (2 males).

Regional Distribution: ME (Procter 1933); MA, NY, QC (Chamberlin and Ivie 1940).

Cicurina brevis (Emerton, 1890)

Taxonomy: Chamberlin and Ivie (1940); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M04 (3 females); M07 (1 female); M22 (1 male, 1 female); M24 (3 females); M25 (1 female); M27 (1 female). *N* = 13 adults; 2 males, 11 females.

Methods: pitfall traps (1 male, 11 females); search (1 male).

Months: March (1 male); May (1 female); May-June (2 females); June (2 females); July (2 females); July-August (2 females); August (2 females); September (1 male).

Habitats: litter, coastal red spruce stand (3 females); litter, red maple sapling stand (3 females); litter, bigtooth aspen stand (1 male, 1 female); litter, white (paper) birch stand (1 female); litter, red maple-white (paper) birch stand (1 female); litter, *Kalmia-Vaccinium* heath (1 female); on ground, *Betula-Acer* stand (1 female); in container of water (alive) (1 male).

Regional Distribution: ME (Procter 1933); NH, MA, CT, NY (Chamberlin and Ivie 1940); QC (Bélanger and Hutchinson 1992).

Cicurina pallida Keyserling, 1887

Taxonomy: Chamberlin and Ivie (1940); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M04 (1 male, 1 female); M22 (1 female). *N* = 5 adults; 2 males, 3 females.

Methods: pitfall traps (1 male, 3 females); search (1 male).

Months: May (1 male); May-June (1 male); June (1 female); August-September (1 female); October (1 female).

Habitats: litter, coastal red spruce stand (1 male, 1 female); litter, bigtooth aspen stand (1 female); litter, edge of old field and alder swamp (1 female); in wood pile (1 male).

Regional Distribution: ME (Procter 1946); NH, MA, NY (Chamberlin and Ivie 1940); CT (Kaston 1981); QC (Bélanger and Hutchinson 1992).

Cicurina placida Banks, 1892

Taxonomy: Chamberlin and Ivie (1940).

Record: M01 (1 male). *N* = 1 adult male.

Method: pitfall trap (1 male).

Month: June (1 male).

Habitat: litter, deciduous-coniferous woodland (1 male).

Regional Distribution: ME (Jennings et al. 1988); NH, NY (Chamberlin and Ivie 1940); CT (Kaston 1981).

Dictyna brevitarsa Emerton, 1915

Taxonomy: Chamberlin and Gertsch (1958, as *Dictyna brevitarsus* Emerton); Kaston (1981, as *Dictyna brevitarsus* Emerton); Paquin and Dupérré (2003, as *Dictyna brevitarsus* Emerton).

Records: M01 (1 male, 2 females); M04 (1 female); M06 (2 males, 2 females); M10 (1 male); M15 (7 males). *N* = 16 adults; 11 males, 5 females.

Method: beating cloth (11 males, 5 females).

Months: May (4 males); June (7 males, 1 female); July (2 females); August (1 female); October (1 female).

Habitats: beating red spruce foliage, near saltmarsh (7 males); beating red spruce foliage, old field edge (1 male, 1 female); beating red spruce foliage, seashore-backshore (1 female); beating red spruce foliage, saplings, conifer-mixed hardwood (1 male); beating white spruce foliage, saltmarsh edge (2 males, 2 females); beating spruces, old field edge (1 female).

Regional Distribution: ME, NH, VT, MA, CT, NY, ON, QC, NS, NF (Chamberlin and Gertsch 1958, as *Dictyna brevitarsus* Emerton).

Dictyna coloradensis Chamberlin, 1919

Taxonomy: Chamberlin and Gertsch (1958); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (1 male, 15 females); M06 (1 female); M35 (2 females); M51 (1 female). *N* = 20 adults; 1 male, 19 females.

Methods: search (1 male, 15 females); sweep net (3 females); n. d. (1 female).

Months: June (1 female); July (1 male, 5 females); August (8 females); September (4 females); October (1 female).

Habitats: in webs on dry seedheads of meadowsweet (1 male, 2 females); in webs on meadowsweet, old field (2 females); in nest, top of *Spiraea* twig (1 female); in web, dried seedhead of *Hieracium* sp. (1 female); in webs, grass seedheads, old field and n. d. (2 females); in silken retreat, folded *Vaccinium* leaf, old field (1 female); in web, flat-topped goldenrod, old field (1 female); in web, dead *Amelanchier* seedling (1 female); in web, apex of dry forb, old field (1 female); in shrubs, old field (1 female); in webs, dry rush (*Juncus* sp.) seedheads, brackish marsh (2 females); sweeping vegetation of old field (2 females); sweeping meadowsweet, mixed conifer opening (1 female); n. d., saltmarsh (1 female).

Regional Distribution: ME, NH, VT, MA, CT, RI, NY, ON, QC (Chamberlin and Gertsch 1958).

Dictyna minuta Emerton, 1888

Taxonomy: Chamberlin and Gertsch (1958); Kaston (1981); Paquin and Dupérré (2003).

Record: M06 (1 female). *N* = 1 adult female.

Method: sweep net (1 female).

Month: August (1 female).

Habitat: sweeping saltmarsh vegetation (1 female).

Regional Distribution: ME (Jennings et al.1990); NH, MA, CT, RI, NY (Chamberlin and Gertsch 1958); QC (Bélanger and Hutchinson 1992).

****Emblyna manitoba* (Ivie, 1947)**

Taxonomy: Chamberlin and Gertsch (1958); Paquin and Dupérré (2003).

Records: M06 (4 females). *N* = 4 adult females.

Method: sweep net (4 females).

Month: June (4 females).

Habitat: sweeping saltmarsh vegetation (4 females).

Regional Distribution: ME (this study); ON (Chamberlin and Gertsch 1958); QC (Bélanger and Hutchinson 1992).

Emblyna maxima (Banks, 1892)

Taxonomy: Chamberlin and Gertsch (1958); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (4 females); M14 (1 male). *N* = 5 adults; 1 male, 4 females.

Methods: search (1 male); sweep net (4 females).

Months: June (2 females); July (1 male, 1 female); August (1 female).

Habitats: sweeping grasses and forbs, mixed hardwood-conifer (1 male); sweeping low vegetation, deciduous-coniferous woodland (1 female); sweeping *Vaccinium* and small shrubs, old field (1 female); sweeping low shrubs, *Betula-Acer* understory (1 female); in web on alder twig (1 female).

Regional Distribution: ME (Procter 1946, as *Dictyna maxima* Banks); NH, VT, MA, CT, NY, ON, QC (Chamberlin and Gertsch 1958, as *Dictyna maxima* Banks).

Emblyna phylax (Gertsch & Ivie, 1936)

Taxonomy: Chamberlin and Gertsch (1958); Paquin and Dupérré (2003).

Records: M01 (12 males, 2 females); M05 (1 male); M06 (5 males, 2 females); M10 (1 male); M13 (1 female); M15 (5 males); M31 (1 female); M32 (2 females); M51 (2 females). *N* = 34 adults; 24 males, 10 females.

Methods: beating cloth (22 males, 10 females); search (1 male); sweep net (1 male).

Months: May (17 males); June (7 males, 5 females); July (4 females); August (1 female).

Habitats: beating red spruce foliage, old field edge (11 males, 2 females); beating red spruce foliage, mixed hardwood-conifer (2 females); beating red spruce foliage, near saltmarsh (5 males); beating red spruce foliage, mixed conifer (2 females); beating red spruce foliage, white pine-red spruce (1 female); beating white spruce foliage, saltmarsh edge (5 males, 2 females); beating eastern larch sapling foliage, mixed conifer-hardwood (1 male); beating balsam fir foliage, mixed hardwood-conifer (1 female); sweeping wet meadow, old field-brackish marsh edge (1 male); in box, carpenter's debris (1 male).

Regional Distribution: ME (Procter 1946, as *Dictyna phylax* Gertsch & Ivie); NH, NY, ON, NF (Chamberlin and Gertsch 1958, as *Dictyna phylax* Gertsch & Ivie); QC (Bélanger and Hutchinson 1992).

Emblyna sublata (Hentz, 1850)

Taxonomy: Chamberlin and Gertsch (1958); Kaston (1981); Paquin and Dupérré (2003).

Record: M35 (1 female). *N* = 1 adult female.

Method: sweep net (1 female).

Month: June (1 female).

Habitat: sweeping grasses and rushes, brackish marsh (1 female).

Regional Distribution: ME (Procter 1933, as *Dictyna sublata* (Hentz)); NH, VT, MA, CT, NY, ON (Chamberlin and Gertsch 1958, as *Dictyna sublata* (Hentz)); QC (Bélanger and Hutchinson 1992, as *Dictyna sublata* (Hentz)).

Lathys pallida (Marx, 1891)

Taxonomy: Chamberlin and Gertsch (1958); Kaston (1981); Paquin and Dupérré (2003).

Records: M24 (1 male); M25 (5 males, 5 females); M27 (5 males, 1 female); M53 (3 females). *N* = 20 adults; 11 males, 9 females.

Methods: litter condenser-Berlese funnel (3 females); pitfall traps (11 males, 6 females).

Months: May (3 males, 4 females); May-June (5 males); June (1 male, 2 females); June-July (1 male); July (1 male, 3 females).

Habitats: litter, white (paper) birch stand (5 males, 5 females); litter, red maple-white birch stand (5 males, 1 female); litter, red maple sapling stand (1 male); sifted aspen-maple litter, mixed hardwoods (3 females).

Regional Distribution: ME (Procter 1946, as *Scotolathys pallida* (Marx); NH, VT, MA, CT, NY, ON (Chamberlin and Gertsch 1958); QC (Bélanger and Hutchinson 1992).

FAMILY AMAUROBIIDAE

The amaurobiids common to New England and the northern region are cribellate, or hackle-band weavers, that spin dense mesh webs on and under loose bark of trees and fallen logs. Rock fissures, crevices, woodpiles, caves, and cellars are also favored habitats of amaurobiids. In Maine, these spiders are frequently brought indoors on firewood; however, they are non-aggressive and pose no known medical problems.

Amaurobiids have three tarsal claws, eyes arranged in two rows of four each, and robust chelicerae. Like most dictynids, our northern amaurobiids have a cribellum and calamistrum; the cribellum is divided into two halves. Ubick (2005a) describes other characters of this family and provides notes on natural history. He also gives a key to the genera of Amaurobiidae found in North America north of Mexico.

Two genera, *Coras* and *Wadotes*, formerly assigned to the Agelenidae, have been shifted to the Amaurobiidae, and one amaurobiid subfamily has been elevated to full family status, the Titanoecidae. With these recent taxonomic changes, the Maine amaurobiid fauna is now represented by 5 genera and 10 species. The Milbridge amaurobiid fauna consists of five genera, each represented by only one species.

Amaurobius borealis Emerton, 1909

Taxonomy: Leech (1972); Kaston (1981); Paquin and Dupérré (2003).

Records: M07 (1 male); M24 (2 males); M25 (19 males, 3 females); M27 (13 males, 1 female). *N* = 39 adults; 35 males, 4 females.

Method: pitfall traps (35 males, 4 females).

Months: May (22 males, 3 females); May-June (10 males); June (3 males); June-July (1 female).

Habitats: litter, *Kalmia-Vaccinium* heath (1 male); forest-floor litter, red maple sapling stand (2 males); forest-floor litter, white (paper) birch stand (19 males, 3 females); forest-floor litter, red maple-white birch stand (13 males, 1 female).

Regional Distribution: ME (Emerton 1914, as *Walmus borealis* (Emerton)); MA, NH, VT, ON, QC, NB, NF, LB (Leech 1972).

Callobius bennetti (Blackwall, 1846)

Taxonomy: Leech (1972); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (5 males, 8 females); M04 (15 males, 14 females); M07 (2 males); M10 (1 male); M13 (1 male); M22 (1 female); M23 (9 females); M24 (1 female); M25 (7 males, 5 females); M27 (11 males, 3 females). *N* = 83 adults; 42 males, 41 females.

Methods: beating cloth (1 female); pitfall traps (35 males, 20 females); search (7 males, 19 females); sweep net (1 female).

Months: March (1 female); May (20 males); May-June (9 males, 2 females); June (12 males, 10 females); June-July (7 females); July (1 male, 14 females); August (5 females); September (1 female); October (1 female).

Habitats: beating foliage, hardwoods (1 female); forest-floor litter, *Betula-Acer* stand (1 female); forest-floor litter, coastal red spruce stand (15 males, 9 females); litter, *Kalmia-Vaccinium* heath (2 males); forest-floor litter, bigtooth aspen stand (1 female); forest-floor litter, red maple sapling stand (1 female); forest-floor litter, white (paper) birch stand (7 males, 5 females); forest-floor litter, red maple-white birch stand (11 males, 3 females); sweeping vegetation, old field (1 female); in birch, coastal spruce-mixed hardwood (1 female); under loose bark, white (paper) birch, mixed conifer-hardwood (2 females); under bark, dead white (paper) birch, coastal spruce-mixed hardwood (1 female); under bark, dead tree (n. d.), coastal red spruce stand (1 female); under rocks on ledge, mixed conifer-hardwood (1 male); in web, bridge guardrail, prey of *Achaearanea tabulata* female, roadside-riparian (1 male); under rocks, mixed conifer, island (7 females); under bark, white (paper) birch, island (1 female); under loose bark, dead birch, island (1 female); under bark, dead tree, mixed hardwood-conifer (1 female); under log, deciduous-coniferous woodland (1 female); in bathtub, house (3 males); in bathroom basin, house (1 male, 1 female); in kitchen sink, house (1 female); on rug, house bedroom (1 female); on living room wall, house (1 male).

Regional Distribution: ME (Bishop 1923); NH, VT, CT, NY, VT, NB, NF, NS, ON, QC (Leech 1972).

Coras montanus (Emerton, 1890)

Taxonomy: Muma (1946); Kaston (1981); Roth (1994); Paquin and Dupérré (2003).

Records: M01 (2 males, 1 female); M04 (2 males); M22 (1 male); M24 (1 male); M27 (1 male); M34 (1 female). *N* = 9 adults; 7 males, 2 females.

Methods: pitfall traps (3 males); search (4 males, 2 females).

Months: April (1 male); May-June (1 male); June (2 males, 1 female); July (1 male); August (1 male, 1 female); September (1 male).

Habitats: forest-floor litter, bigtooth aspen stand (1 male); forest-floor litter, red maple sapling stand (1 male); forest-floor litter, red maple-white birch stand (1 male); under loose bark, white (paper) birch (1 male); under curled bark, white (paper) birch, mixed conifer-hardwood (1 female); under bark, dead spruce, seashore (1 male); in kitchen sink (dead), house (1 male); in Jacuzzi filter (dead) (1 male); in tarpaulin, screen house (1 female).

Regional Distribution: ME (Procter 1938); NH, CT, NY, ON, QC, NF, NS (Muma 1946).

Cybaeopsis euopla (Bishop & Crosby, 1935)

Taxonomy: Bishop and Crosby (1935, as *Callioplus euoplus*, n. sp.); Leech (1972, as *Callioplus euoplus* Bishop and Crosby); Paquin and Dupérré (2003). This species was formerly assigned to the Dictynidae by Bishop and Crosby (1935).

Records: M12 (2 males, 1 female). *N* = 3 adults; 2 males, 1 female.

Method: pitfall traps (2 males, 1 female).

Months: June (2 males); September (1 female).

Habitat: litter, freshwater marsh edge (2 males, 1 female).

Regional Distribution: ME (Bishop and Crosby 1935); ON, QC, NF, NS (Leech 1972).

Wadotes calcaratus (Keyserling, 1887)

Taxonomy: Muma (1947); Kaston (1981); Bennett (1987); Paquin and Dupérré (2003). Muma (1947), Kaston (1981), and others formerly assigned this species to the Agelenidae.

Records: M04 (9 males); M24 (1 male, 1 female); M27 (2 males). *N* = 13 adults; 12 males, 1 female.

Method: pitfall traps (12 males, 1 female).

Months: May-June (4 males, 1 female); June (4 males); August (4 males).

Habitats: forest-floor litter, coastal red spruce stand (9 males); forest-floor litter, red maple sapling stand (1 male, 1 female); forest-floor litter, red maple-white (paper) birch stand (2 males).

Regional Distribution: ME (Chamberlin 1925); NH, VT, MA, CT, NY, ON, QC, NB, NS (Roth and Brown 1986; Bennett 1987).

FAMILY TITANOECIDAE

The titanoecids were formerly included as a subfamily, the Titanoecinae, of the family Amaurobiidae. They share many characters in common with amaurobiids; however, the leg trichobothria are short and thick and do not increase in length distally. Their habitats are similar to those of amaurobiids, but chiefly under rocks, logs, and bark on the ground. Cutler (2005) provides additional character descriptors and brief notes on the natural history of this small family. A key to the North American species is found in Leech (1972), who treated the Titanoecidae as a subfamily of the Amaurobiidae.

Thus far, the Maine titanoecid fauna is represented by only one species, *Titanoeca americana* Emerton 1888. However, one additional species, *Titanoeca brunnea* Emerton 1888, possibly occurs in the State; it has been taken in Connecticut, Massachusetts, New Hampshire, New York, and Ontario. Descriptions and illustrations of both species can be found in Leech (1972).

Titanoeca americana Emerton, 1888

Taxonomy: Lehtinen (1967); Leech (1972); Paquin and Dupérré (2003).

Record: M04 (1 female). *N* = 1 adult female.

Method: search (1 female).

Month: August (1 female).

Habitat: under rock, upper shore ledges, seashore (1 female).

Regional Distribution: ME (Procter 1933, as *Amaurobius americanus* (Emerton)); MA, CT, NH, NY, ON (Leech 1972); QC (Bélanger and Hutchinson 1992).

Note: The only other known locality for this species in Maine is Mount Desert Island, Hancock County. On Mount Desert Island, Procter (1933) noted that this species was taken under stones in a very hot, dry area (i.e., "The Hop"); Leech (1972) recorded it from Champlain Mountain at an altitude of 330 m.

ANNOTATED FAUNAL LIST:
HUNTER FAMILIES

FAMILY LYCOSIDAE

The lycosids or wolf spiders are among the most commonly observed spiders in Maine. They are usually seen running through grass of old fields, or among dead leaves on the forest floor, or over sandy and stony places along streams, lakes, and cobble beaches. Most are cursorial hunters that detect and capture prey by "sit and wait" tactics. With few exceptions, snares and retreats are not made; however, species of *Geolycosa* line their tubular tunnels with silk.

In this family the eyes are unequal in size and appear to be arranged in three rows. The anterior eyes are the smallest and are aligned in a row of four above the clypeus. The posterior row is strongly recurved, thus forming two rows of two eyes each. The posterior median eyes (i.e., the second row) are the largest by far. Many lycosids are active at night as well as during daylight hours. The females characteristically carry their egg sacs attached to the spinnerets. Dondale (2005a) provides additional information on family-character descriptors, natural and taxonomic histories, and a key to the lycosid genera of North America north of Mexico.

Most of the lycosid species found in the northern region can be identified using the identification keys, descriptions, and illustrations provided by Dondale and Redner 1990. Earlier revisionary works by these same authors are also helpful; see Dondale and Redner (1990) for citations. The lycosid fauna in Maine is represented by 10 genera and 48 species; 8 genera and 25 species, including a new species of *Pirata*, make up the lycosid fauna in Milbridge.

Alopecosa aculeata (Clerck, 1757)

Taxonomy: Dondale and Redner (1979, 1990); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (8 males, 2 females); M04 (1 female); M06 (1 female); M07 (2 males); M14 (1 male); M22 (1 male, 6 females); M23 (1 female); M24 (3 males); M25 (11 males, 1 female); M26 (5 males); M27 (12 males, 1 female); M58 (1 male, 1 female). *N* = 58 adults; 44 males, 14 females.

Methods: pitfall traps (39 males, 9 females); search (5 males, 5 females).

Months: May (7 males, 2 females); May-June (13 males); June (23 males, 2 females); July (1 male, 4 females); July-August (2 females); August (3 females); September (1 female).

Habitats: litter, seashore-backshore (4 males); litter, deciduous-coniferous woodland (1 male); litter, saltmarsh (1 female); litter, *Kalmia-Vaccinium* heath (2 males); litter, bigtooth aspen stand (1 male, 6 females); litter, red maple sapling stand (3 males); litter, white (paper) birch stand (11 males, 1 female); litter, saltmarsh edge (5 males); litter, red maple-white birch stand (12 males, 1 female); in grass near shore, seashore (1 male); on ground, coastal red spruce-mixed hardwoods (1 female); on ground among leaves and grass, mixed hardwood-conifer (1 male); on ledge under flaked stone, mixed conifer, island (1 female); on ground among grass and matted straw, seashore-brackish marsh (1 male, 1 female); running in vegetable garden (1 female); running in compost pile (1 male); on outside wall of house (1 male); on bathroom floor, house (1 female).

Regional Distribution: ME (Emerton 1914, as *Lycosa beanii* Emerton); NH, CT, NY, QC, NB, NS, NF (Dondale and Redner 1979).

Arctosa emertoni Gertsch, 1934

Taxonomy: Dondale and Redner (1983, 1990); Kaston (1981); Paquin and Dupérré (2003).

Records: M05 (1 female); M06 (11 males, 9 females); M23 (1 female); M26 (32 males, 16 females). *N* = 70 adults; 43 males, 27 females.

Methods: pitfall traps (43 males, 25 females); search (2 females).

Months: May (3 males, 4 females); May-June (11 males, 4 females); June (20 males, 8 females); June-July (1 male); July (7 males, 6 females); July-August (3 females); August (1 male, 1 female); September (1 female).

Habitats: litter, saltmarsh (11 males, 9 females); litter, saltmarsh edge (32 males, 16 females); burrowed under board, old field-brackish marsh margin (1 female); on sand-rock beach below wrack line, seashore, island (1 female).

Regional Distribution: ME, NH, VT, MA, NY, QC, NB, NS (Dondale and Redner 1983); CT (Kaston 1981); ON (Dondale and Redner 1990).

Arctosa rubicunda (Keyserling, 1877)

Taxonomy: Dondale and Redner (1983, 1990); Kaston (1981); Paquin and Dupérré (2003).

Records: M06 (10 males, 8 females). *N* = 18 adults; 10 males, 8 females.

Method: pitfall traps (10 males, 8 females).

Months: May (4 males), June (3 males); July (3 males, 6 females); August (2 females).

Habitat: litter, saltmarsh (10 males, 8 females).

Regional Distribution: ME (Bryant 1908, as *Lycosa rubicunda* (Keyserling) Montgomery); NY, ON, QC, NB, NS (Dondale and Redner 1983); CT (Kaston 1981); MA (Dondale and Redner 1990).

Hogna frondicola (Emerton, 1885)

Taxonomy: Dondale and Redner (1990); Kaston (1981, as *Lycosa frondicola* (Emerton)); Paquin and Dupérré (2003).

Records: M01 (4 males, 16 females); M05 (1 female); M07 (2 males); M10 (1 female); M14 (1 female); M15 (1 female); M22 (1 male, 5 females); M25 (3 males); M26 (1 male); M27 (1 male). *N* = 37 adults; 12 males, 25 females.

Methods: pitfall traps (9 males, 6 females); search (3 males, 19 females).

Months: April (1 male); May (9 males, 8 females); July (11 females); August (3 females); August-September (1 female); September (2 males, 2 females).

Habitats: litter, edge of old field and alder swamp (1 male, 1 female); litter, *Kalmia-Vaccinium* heath (2 males); litter, bigtooth aspen stand (1 male, 5 females); litter, white (paper) birch stand (3 males); litter, saltmarsh edge (1 male); litter, red maple-white (paper) birch stand (1 male); in soil, vegetable garden (1 female); in soil under mulch, vegetable garden (1 female); in vegetable garden (2 females); running over soil, vegetable garden (1 female); running through grass, lawn (1 male, 1 female); running in or through grass (1 male, 2 females); running at edge of old field (1 female); old field (1 female); running across forest path, mixed conifer-hardwood (1 female); running across stone terrace (1 female); on ground in garden (2 females); on ground in grass (1 female); on ground in mowed field (1 female); under rock on ledge, mixed conifer-hardwood (1 female); under litter, upper wrack line, saltmarsh (1 female); moribund on terrace, house (1 female); on floor of sunroom, house (1 male).

Regional Distribution: ME (Bryant 1908, as *Lycosa frondicola* Emerton); NH, VT, MA, NY, ON, QC, NB, NS, NF (Dondale and Redner 1990); CT (Kaston 1981, as *Lycosa frondicola* (Emerton)).

Pardosa distincta (Blackwall, 1846)

Taxonomy: Vogel (1964, 2004); Kaston (1981); Dondale and Redner (1990); Paquin and Dupérré (2003).

Records: M01 (7 males, 14 females); M05 (1 female); M06 (2 males, 6 females); M07 (38 males, 22 females); M11 (1 male, 6 females); M26 (2 males, 1 female); M31 (1 female); M50 (1 female); M51 (1 male). *N* = 103 adults; 51 males, 52 females.

Methods: pitfall traps (44 males, 37 females); search (6 males, 15 females); sweep net (1 male).

Months: May (2 males, 1 female); May-June (4 males); June (23 males, 13 females); June-July (4 males, 6 females); July (18 males, 25 females); August (6 females); September (1 female).

Habitats: litter, *Amelanchier-Rubus* stand (1 male, 1 female); litter, edge of old field and alder swamp (1 female); litter, saltmarsh (2 males, 6 females); litter, *Kalmia-Vaccinium* heath (38 females, 22 females); ground, gravel pit, conifer-mixed hardwood (1 male, 6 females); litter, saltmarsh edge (2 males, 1 female); in reindeer lichen (1 female); in old field (1 male); in garden (1 male); on reindeer moss, mixed hardwood-conifer (3 females); on ground in mowed field (1 female); on lawn (1 male); on ground in conifer clearing (1 female); on ground, cobble beach, seashore (1 female); on woods road, mixed conifer opening (1 male); running on ground, vegetable garden (1 female); running through straw, vegetable garden (1 male); running in compost pile (1 male); running on reindeer lichen, ledges, mixed conifer-hardwoods (1 female); running through grass (1 female); running in old field (2 females); running on rock in old field (1 female); among reindeer lichen on ledges, mixed hardwood-conifer (2 females); sweeping vegetation, old field (1 male).

Regional Distribution: ME (Bryant 1908, as *Pardosa pallida* Emerton); NH, VT, ON, QC, NB, NS (Dondale and Redner 1990); CT (Kaston 1981).

Pardosa fuscula (Thorell, 1875)

Taxonomy: Dondale and Redner (1987, 1990); Paquin and Dupérré (2003); Vogel (2004).

Records: M12 (5 females). *N* = 5 adult females.

Method: search (5 females).

Month: June (5 females).

Habitat: on ground, dry matted grasses, freshwater marsh (5 females).

Regional Distribution: ME (Bryant 1908, as *Pardosa glacialis* (Thorell)); VT, NY, QC, NB, NS, NF, LB (Dondale and Redner 1987); ON (Dondale and Redner 1990).

Note: According to J. H. Redner (pers. comm.), early Maine records of *Pardosa glacialis* (Thorell, 1872) probably refer to *Pardosa fuscula* (Thorell, 1875).

Pardosa groenlandica (Thorell, 1872)

Taxonomy: Kronestedt (1975); Dondale and Redner (1990); Paquin and Dupérré (2003); Vogel (2004).

Records: M01 (4 males, 28 females); M08 (3 females); M23 (1 male); M50 (1 female).

Methods: pitfall trap (1 female); search (9 males, 27 females). *N* = 37 adults; 9 males, 28 females.

Months: April (5 males); May (2 males, 6 females); June (1 male, 7 females); July (1 male, 12 females); August (3 females).

Habitats: among rocks on cobble beach, seashore (3 females); among pebbles and dead rockweed, seashore (4 males); among pebbles and grasses on shore, seashore (1 female); on pebbly beach in grasses and dead rockweed, seashore (5 females); on rocks at shore, seashore (2 females); on beach rocks, seashore, island (1 male); on gravel-pebble beach, seashore (1 male); on pebbled beach, seashore (1 female); on rocky shore, seashore (1 female); on bay rocks, seashore (1 female); on large rock, bay shore, seashore (1 female); on cobble beach under stone, seashore (1 female); on ground, intertidal zone, seashore (1 female); on shingle beach along river, riparian (1 male); running on grass and pebbles, cobble beach, seashore (2 females); running on cobble beach, seashore (1 female); running through grass and pebbles at shore, seashore (1 female); running on beach, seashore (1 female); running on sea grasses (rockweed) at edge, seashore (1 male); running on rocks at shore, seashore (1 male, 1 female); under small rock at shore, seashore (1 female); under rocks along shore, seashore (2 females); under rock, cobble beach, seashore (1 female); litter, seashore-backshore (1 female).

Regional Distribution: ME (Bryant 1908); ON, QC, NS, NF, LB (Dondale and Redner 1990).

Pardosa hyperborea (Thorell, 1872)

Taxonomy: Dondale and Redner (1987, 1990); Paquin and Dupérré (2003); Vogel (2004).

Records: M04 (2 females); M23 (2 females); M25 (1 male); M42 (1 female); M49 (3 females). *N* = 9 adults; 1 male, 8 females.

Methods: pitfall trap (1 male); search (7 females); sweep net (1 female).

Months: June (1 male); July (6 females); August (2 females).

Habitats: litter, white (paper) birch stand (1 male); sweeping *Vaccinium* sp., island (1 female); on ground vegetation near rocky shore, seashore (1 female); on reindeer lichen, ledge near seashore (1 female); on *Sphagnum* moss, island (1 female); running on reindeer lichen, ledges, mixed conifer, island (1 female); on reindeer moss, coastal red spruce, upper shore, seashore (1 female); on ground, upper shore, seashore-backshore (2 females).

Regional Distribution: ME (Bryant 1908, as *Pardosa luteola* Emerton); NH, VT, NY, QC, NB, NS, NF, LB (Dondale and Redner 1987); ON (Dondale and Redner 1990).

Pardosa lapidicina Emerton, 1885

Taxonomy: Barnes (1959); Kaston (1981); Dondale and Redner (1990); Paquin and Dupérré (2003); Vogel (2004).

Records: M01 (1 female); M04 (5 males, 3 females); M49 (4 males, 1 female). *N* = 14 adults; 9 males, 5 females.

Methods: search (9 males, 5 females).

Months: May (4 males, 3 females); June (1 male); July (4 males, 1 female); August (1 female).

Habitats: on rocks, cobble beach, seashore (4 males, 1 female); on cobblestone beach and ledge, seashore (3 males, 1 female); on rocks at shore, seashore (1 male, 1 female); on ledges, seashore (1 male); on pebbly beach in grasses and dead rockweed, seashore (1 female); among rocks on shore, seashore (1 female).

Regional Distribution: ME (Bryant 1908); CT (Kaston 1981); NY, ON, QC, NB, NS, NF (Dondale and Redner 1990).

Pardosa mackenziana (Keyserling, 1877)

Taxonomy: Lowrie and Dondale (1981); Dondale and Redner (1990); Paquin and Dupérré (2003); Vogel (2004).

Records: M01 (3 males, 5 females); M04 (1 male, 2 females); M07 (2 males); M22 (2 males); M24 (2 males, 1 female); M25 (2 males, 2 females); M27 (1 male, 1 female). *N* = 24 adults; 13 males, 11 females.

Methods: pitfall traps (13 males, 5 females); search (4 females); sweep net (1 female); n. d. (1 female).

Months: May (2 females); May-June (1 male); June (6 males, 6 females); June-July (2 males); July (4 males, 1 female); August (2 females).

Habitats: litter, *Amelanchier-Rubus* stand (1 male, 1 female); litter, deciduous-coniferous woodland (2 males); litter, coastal red spruce stand (1 male); litter, *Kalmia-Vaccinium* heath (2 males); litter, bigtooth aspen stand (2 males); litter, red maple sapling stand (2 males, 1 female); litter, white (paper) birch stand (2 males, 2 females); litter, red maple-white birch stand (1 male, 1 female); sweeping shrubby vegetation, coastal spruce-mixed hardwood (1 female); on ground, old field (1 female); new shore, seashore (1 female); on compost pile, garden (1 female); in cellar bulkhead, house (1 female); on outside wall of house (1 female).

Regional Distribution: ME (Bryant 1908, as *Pardosa uncata* (Thorell)); MA, NH, ON, QC, NB, NS, NF (Dondale and Redner 1990).

Note: Early records of *Pardosa uncata* (Thorell, 1877) in Maine (e.g., Bryant 1908, Emerton 1914, and others) most likely refer to *Pardosa mackenziana* (Keyserling, 1877), a structurally similar but widely distributed species. According to Lowrie and Dondale (1981), *P. uncata* is a western species found chiefly in moist coniferous forests of ID, UT, CO, and NM. More recent, definitive records of *P. mackenziana* in Maine include Jennings et al. (1988) and Hilburn and Jennings (1988).

Pardosa modica (Blackwall, 1846)

Taxonomy: Kronestedt (1981); Kaston (1981); Dondale and Redner (1990); Paquin and Dupérré (2003); Vogel (2004).

Records: M01 (1 male, 2 females); M06 (105 males, 177 females); M08 (2 females); M17 (2 males, 1 female); M26 (6 males, 26 females); M58 (3 females). *N* = 326 adults; 114 males, 212 females.

Methods: pitfall traps (112 males, 198 females); search (11 females); sweep net (2 males, 3 females).

Months: April (1 male, 1 female); May (109 males, 78 females); May-June (1 male, 8 females); June (2 males, 54 females); June-July (1 male, 1 female); July (62 females); July-August (3 females); August (4 females); August-September (1 female).

Habitats: litter, saltmarsh (105 males, 174 females); litter, saltmarsh edge (6 males, 24 females); sweeping grasses, saltmarshes (2 males, 2 females); sweeping vegetation, saltmarsh edge (1 female); on ground among marsh vegetation and litter, saltmarsh (2 females); on ground, saltmarsh edge (1 female); on ground, brackish marsh (1 female); on ground, seashore-brackish marsh (3 females); on rocky beach, seashore (1 female); among shore grasses, seashore (2 females); among pebbles and dead rockweed (1 male, 1 female).

Regional Distribution: ME (Procter 1933, as *Pardosa brunnea* Emerton); CT (Kaston 1981); NY (Crosby and Bishop 1928); ON, QC, NB, NS (Dondale and Redner 1990).

Note: Later, Procter (1938, 1946) listed this species as *Pardosa modica* (Blackwall) (*brunnea* Emerton).

Pardosa moesta Banks, 1892

Taxonomy: Dondale and Redner (1987, 1990); Kaston (1981); Paquin and Dupérré (2003); Vogel (2004).

Records: M01 (56 males, 68 females); M05 (1 male, 4 females); M06 (12 males, 21 females); M07 (22 males, 9 females); M08 (1 female); M12 (34 males, 65 females); M14 (3 males, 4 females); M21 (1 male); M23 (3 females); M24 (3 males); M25 (2 males, 1 female); M26 (82 males, 54 females); M28 (1 female); M35 (3 females); M38 (1 female); M47 (1 female); M49 (1 female); M50 (1 female); M51 (4 females); M55 (2 males, 2 females); M58 (1 male, 7 females). *N* = 470 adults; 219 males, 251 females.

Methods: pitfall traps (190 males, 172 females); search (27 males, 67 females); sweep net (2 males, 11 females); n. d. (1 female).

Months: May (31 males, 25 females); May-June (17 males, 1 female); June (124 males, 52 females); June-July (26 males, 13 females); July (18 males, 73 females); July-August (3 males, 13 females); August (58 females); August-September (12 females); September (4 females).

Habitats: litter, *Betula-Acer* stand near seashore (1 female); litter, edge of old field and alder swamp (19 females); litter, seashore-backshore (35 males, 12 females); litter, saltmarsh (12 males, 13 females); litter, *Kalmia-Vaccinium* heath (22 males, 9 females); litter, freshwater marsh edge (34 males, 63 females); litter, red maple sapling stand (3 males); litter, white (paper) birch stand (2 males, 1 female); litter, saltmarsh edge (82 males, 54 females); sweeping *Vaccinium* sp. and sweet gale, old field (2 females); sweeping vegetation, old field (2 females); sweeping wet meadow along river, old field-brackish marsh (1 male); sweeping shrubs and grasses, freshwater marsh (1 female); sweeping grasses on river shore, riparian (1 female); sweeping grassy area near cabin, mixed conifer opening, island (2 females); sweeping roadside disturbed area, mixed hardwood-conifer (1 female); sweeping vegetation along freshwater stream, riparian (1 female); sweeping grasses and forbs, edge of playground, disturbed area (1 male, 1 female); in old field (1 male); in grasses, old field edge (1 female); in grass (1 female); in grass with egg sac (1 female); in garden (1 male, 5 females); in vegetable garden (1 female); in compost pile (1 male, 2 females); in bathtub, house (1 male); around foundation, house (1 male); on ground, grass and matted straw, seashore-brackish marsh (3 females); on ground near marsh, seashore-brackish marsh (1 female); on ground among litter, old field (1 female); on ground in open field, old field (2 females); on ground, saltmarsh (2 females); on ground among marsh vegetation and litter, saltmarsh (4 females); on pebbles along beach, seashore (1 female); among shore grasses, seashore (1 female); on ground, dry matted vegetation, freshwater marsh (1 female); along forest trail, mixed hardwood-conifer (2 males, 1 female); on ground among leaves and grass, mixed hardwood-conifer (1 male, 3 females); on ground, *Sphagnum* wetland near beach, wetland (1 female); on ground among dry grass stems, brackish marsh (3 females); on ground, *Sphagnum*-cranberry-rush bog (1 female); on ground, upper shore, seashore-backshore (1 female); on rock, seashore (1 male); on woods road, mixed conifer opening (4 females); on ground near freshwater stream, riparian (1 male); on ground among dried marsh vegetation, seashore-brackish marsh (1 male, 3 females); on ground, old field edge (1 male); on rock, old field (2 females); on soil in vegetable garden (1 male); on ground in garden (3 females); on ground and boards in garden (1 female); on garage floor, house (1 male); on side of house (1 male); on outside shingled wall, house (2 males); on outside wall, shed (1 male);

on exterior vinyl siding, building (1 male); running on cobblestone beach, seashore (1 male); running on flattened dead grass, saltmarsh (2 females); running through grasses, old field (2 females); running on rock, old field (2 females); running in grass (2 females); running through reindeer lichen (1 male); running through grass near vegetable garden (4 males, 3 females); running in vegetable garden (1 female); running on soil, vegetable garden (1 male); running on lawn (1 female); running on lawn with egg sac (1 female); running on lawn (1 male); running on brick walk (1 female); under rock, cobble beach, seashore (1 female); n. d., old field (2 females).

Regional Distribution: ME (Emerton 1909, as *Pardosa diffusa* Emerton); NH, VT, MA, CT, QC, NB, NS, NF, LB (Dondale and Redner 1987, 1990).

Pardosa saxatilis (Hentz, 1844)

Taxonomy: Dondale and Redner (1984, 1990); Kaston (1981); Paquin and Dupérré (2003); Vogel (2004).

Record: M01 (1 male). *N* = 1 adult male.

Method: search (1 male).

Month: June (1 male).

Habitat: on wall of house (1 male).

Regional Distribution: ME (Bryant 1908, as *Pardosa minima* (Keyserling) Montgomery); NH, VT, MA, CT, RI, NY, ON, QC, NS, PE (Dondale and Redner 1984, 1990).

Pardosa xerampelina (Keyserling, 1877)

Taxonomy: Dondale and Redner (1986, 1990); Kaston (1981); Paquin and Dupérré (2003); Vogel (2004).

Records: M01 (40 males, 74 females); M06 (1 female); M07 (3 males, 4 females); M11 (3 females); M12 (2 females); M14 (2 males, 10 females); M16 (1 male); M22 (18 females); M24 (1 male, 1 female); M25 (2 females); M26 (5 females); M47 (1 female); M51 (2 females). *N* = 170 adults; 47 males, 123 females.

Methods: pitfall traps (17 males, 41 females); search (30 males, 81 females); sweep net (1 female).

Months: April (5 males, 1 female); May (24 males, 13 females); May-June (3 males, 2 females); June (15 males, 61 females); June-July (6 females); July (28 females); July-August (3 females); August (5 females); September (4 females).

Habitats: litter, *Amelanchier-Rubus* stand (7 males, 1 female); litter, seashore-backshore (6 males, 3 females); litter, deciduous-coniferous woodland (2 females); litter, saltmarsh (1 female); litter, *Kalmia-Vaccinium* heath (3 males, 4 females); ground, gravel pit, conifer-mixed hardwood (2 females); litter, freshwater marsh edge (2 females); litter, bigtooth aspen stand (18 females); litter, red maple

sapling stand (1 male, 1 female); litter, white (paper) birch stand (2 females); litter, saltmarsh edge (5 females); sweeping grasses along freshwater stream, riparian (1 female); in or on compost pile (crib) (9 females); running in compost pile (2 females); in woodpile (1 male, 5 females); in flower garden with egg sac (1 female); in vegetable garden (2 males, 2 females); on ground in vegetable garden (4 females); on ground and boards in vegetable garden (2 males, 3 females); on lettuce leaf in vegetable garden (1 female); running on soil or straw in vegetable garden (7 males, 6 females); in and around beds in vegetable garden (2 males); running on pile of agricultural peat (1 female); running through grass near vegetable garden (1 female); on ground, old field (1 male); running through grass, old field (2 females); on lawn (1 female); running on lawn (1 male); running on or across gravel lane, mixed hardwood-conifer (1 male, 2 females); among hot rocks, seashore (1 female); on cobble beach, seashore (1 female); on pebbly beach in grasses and dead rockweed, seashore (1 male, 1 female); running on beach, seashore (1 female); under rock with egg sac, seashore (1 female); on seashore ledges (1 male); on ground in sand-rock pit, mixed hardwood-conifer (6 females); on ground along forest trail, mixed hardwood-conifer (2 males, 3 females); on ground, vernal pool, mixed hardwood-conifer (1 female); on woods road, mixed conifer opening (2 females); on ground in gravel pit, mixed conifer-hardwood (1 female); on ground, freshwater pond edge (1 female); on grass, freshwater pond edge (1 female); on ground, old field edge (2 males); in garage, house (1 female); in cellar entryway, house (1 female); on cellar door with egg sac, house (1 female); on cellar window, house (1 male); on outside walls (shingled) of house (2 males, 6 females); on porch, house (1 female); on outside of screened window, house (1 female); at base of house foundation (2 females); around house foundation (1 female); on house foundation (1 female); on patio, house (1 male); running on stone patio (1 female); under umbrella base on patio, house (1 female); on deck, house (1 male); running across deck (1 male); fell, dropped, or drowned in outdoor hot tub (Jacuzzi) (3 females); drowned in water bucket (1 female); under old board, prey of *Xysticus emertoni* (1 male).

Regional Distribution: ME (Bryant 1908, as *Pardosa tachypoda* (Thorell) Emerton); ON, QC, NB, NS, NF, LB (Dondale and Redner 1990); CT (Kaston 1981); NY (Crosby and Bishop 1928).

Pirata cantralli Wallace & Exline, 1978

Taxonomy: Wallace and Exline (1978); Dondale and Redner (1990); Paquin and Dupérré (2003).

Records: M06 (3 females); M12 (3 females); M55 (1 female); M56 (4 females). *N* = 11 adult females.

Methods: litter condenser-Berlese funnels (3 females); litter condenser-hand sorted (2 females); pitfall traps (6 females).

Months: June (1 female); August (1 female); August-September (1 female); September (8 females).

Habitats: litter, saltmarsh (3 females); litter, freshwater marsh edge (3 females); litter, freshwater streamside (1 female); litter, salt meadow (4 females).

Regional Distribution: ME (Jennings et al. 1988); ON (Wallace and Exline 1978); QC (Bélanger and Hutchinson 1992); NB (Dondale and Redner 1990).

Note: Females of *Pirata cantralli* can be distinguished from those of *P. insularis* Emerton, 1885 by differences in carapace width-length ratios and coloration pattern (Jennings, unpubl.).

Pirata insularis Emerton, 1885

Taxonomy: Wallace and Exline (1978); Kaston (1981); Dondale and Redner (1990); Paquin and Dupérré (2003).

Records: M06 (3 males, 1 female); M12 (14 males, 7 females). *N* = 25 adults; 17 males, 8 females.

Method: pitfall traps (17 males, 8 females).

Months: June (14 males, 3 females); June-July (2 males); July-August (1 male, 1 female); August (3 females); August-September (1 female).

Habitats: litter, saltmarsh (3 males, 1 female); freshwater marsh edge (14 males, 7 females).

Regional Distribution: ME, NH, VT, MA, CT, NY, ON, QC (Wallace and Exline 1978); NB, NS, NF (Dondale and Redner 1990).

Note: Emerton (1920) included a record of this species from Kettle Rapids, Maine which, most likely, is an error. Elsewhere in the same publication he refers to Kettle Rapids, Manitoba.

Pirata minutus Emerton, 1885

Taxonomy: Wallace and Exline (1978); Kaston (1981); Dondale and Redner (1990); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M05 (1 female); M06 (2 males, 8 females); M07 (2 males); M24 (1 male). *N* = 16 adults; 6 males, 10 females.

Methods: pitfall traps (6 males, 9 females); sweep net (1 female).

Months: June (2 males); July (4 males, 3 females); August (6 females); September (1 female).

Habitats: litter, edge of old field and alder swamp (1 female); litter, seashore-backshore (1 male); litter, saltmarsh (2 males, 8 females); litter, *Kalmia-Vaccinium* heath (2 males); litter, red maple sapling stand (1 male); sweeping vegetation, old field (1 female).

Regional Distribution: ME, NH, VT, MA, CT, NY, ON, NB, NS (Wallace and Exline 1978); QC (Bélanger and Hutchinson 1992); NF (Dondale and Redner 1990).

Pirata piraticus (Clerck, 1757)

Taxonomy: Wallace and Exline (1978); Kaston (1981, as *Pirata piratica* (Olivier)); Dondale and Redner (1990); Paquin and Dupérré (2003).

Records: M01 (2 males, 1 female); M06 (10 males, 9 females); M12 (1 male, 1 female); M26 (2 males); M33 (4 males, 1 female). *N* = 31 adults; 19 males, 12 females.

Methods: aquatic pitfall traps (7 males, 3 females); pitfall traps (12 males, 9 females).

Months: May (4 males, 6 females); June (7 males, 1 female); July (8 males, 4 females); August (1 female).

Habitats: water surface, freshwater pond near shore (2 males, 1 female); water surface, beaver pond (1 male, 1 female); water surface, freshwater marsh (4 males, 1 female); litter, saltmarsh (10 males, 9 females); litter, saltmarsh edge (2 males).

Regional Distribution: ME (Procter 1938, as *Pardosa prodigiosa* Keyserling (*febriculosa* Becker)); MA, CT, NY, ON, NB, QC (Wallace and Exline 1978); NS, NF (Dondale and Redner 1990).

**Pirata* sp. (nr. *montanus* Emerton, 1885)

Taxonomy: New species.

Records: M01 (11 males); M07 (2 males); M24 (1 male); M25 (1 male); M27 (1 male). *N* = 16 adult males.

Method: pitfall traps (16 males).

Months: June (5 males); June-July (8 males); July (3 males).

Habitats: litter, mixed deciduous-coniferous woodland (7 males); litter, seashore-backshore (4 males); litter, *Kalmia-Vaccinium* heath (2 males); litter, red maple sapling stand (1 male); litter, white (paper) birch stand (1 male); litter, red maple-white birch stand (1 male).

Regional Distribution: ME (this study); NY (Cokendolpher, unpubl.).

Note: This species resembles *Pirata montanus* Emerton, 1885 but differs morphologically in structures of the adult genitalia and phenotypically in coloration pattern. Specimens collected in Maine were forwarded to James C. Cokendolpher for further study and analysis.

Schizocosa communis (Emerton, 1885)

Taxonomy: Dondale and Redner (1978a, 1990); Kaston (1981); Paquin and Dupérré (2003).

Records: M40 (2 females). *N* = 2 adult females.

Method: search (2 females).

Month: July (2 females).

Habitat: under rocks, lowbush blueberry field (2 females).

Regional Distribution: ME, NH, VT, MA, CT, NY, ON, QC, NS (Dondale and Redner 1978a, 1990).

Schizocosa crassipalpata Roewer, 1951

Taxonomy: Dondale and Redner (1978a, 1990); Kaston (1981); Paquin and Dupérré (2003).

Record: M26 (1 male). *N* = 1 adult male.

Method: pitfall trap (1 male).

Month: June (1 male).

Habitat: litter, saltmarsh edge (1 male).

Regional Distribution: ME (Emerton 1909, as *Lycosa crassipalpis* Emerton); NH, VT, MA, NY, ON, QC, NB, NS (Dondale and Redner 1978a, 1990).

Schizocosa saltatrix (Hentz, 1844)

Taxonomy: Dondale and Redner (1978a, 1990); Kaston (1981); Paquin and Dupérré (2003).

Records: M06 (1 female); M12 (1 female); M22 (6 females); M25 (1 male, 2 females); M26 (1 female); M27 (1 male). *N* = 13 adults; 2 males, 11 females.

Method: pitfall traps (2 males, 11 females).

Months: May (1 male); May-June (1 male); June (2 females); June-July (3 females); July (5 females); July-August (1 female).

Habitats: litter, saltmarsh (1 female); litter, freshwater marsh edge (1 female); litter, bigtooth aspen stand (6 females); litter, white (paper) birch stand (1 male, 2 females); litter, saltmarsh edge (1 female); litter, red maple-white (paper) birch stand (1 male).

Regional Distribution: ME, NH, VT, MA, CT, NY, ON, QC, NS (Dondale and Redner 1978a, 1990).

Trabeops aurantiacus (Emerton, 1885)

Taxonomy: Russell-Smith (1982); Kaston (1981, as *Trabea aurantiaca* (Emerton)); Dondale and Redner (1990).

Records: M12 (2 males); M22 (1 male); M25 (6 males); M26 (2 males); M27 (1 female). *N* = 12 adults; 11 males, 1 female.

Method: pitfall traps (11 males, 1 female).

Months: June (7 males, 1 female); June-July (1 male); July (3 males).

Habitats: litter, freshwater marsh edge (2 males); litter, bigtooth aspen stand (1 male); litter, white (paper) birch stand (6 males); litter, saltmarsh edge (2 males); litter, red maple-white (paper) birch stand (1 female).

Regional Distribution: ME, MA, CT, NY, NS (Dondale and Redner 1990).

Trochosa ruricola (De Geer, 1778)

Taxonomy: Roberts (1985); Paquin and Dupérré (2003).

Records: M01 (36 males, 16 females); M04 (1 female); M06 (2 males); M11 (1 female); M15 (1 female); M26 (7 males, 2 females). *N* = 66 adults; 45 males, 21 females.

Methods: pitfall traps (33 males, 8 females); search (12 males, 12 females); sweep net (1 female).

Months: February (1 male); April (2 males); May (2 males, 3 females); May-June (1 male); June (18 males, 4 females); June-July (3 males); July (14 males, 8 females); July-August (1 male); August (1 male, 3 females); September (1 male, 2 females); October (1 male, 1 female).

Habitats: litter, seashore-backshore (24 males, 4 females); litter, coastal red spruce stand (1 female); litter, saltmarsh (2 males); ground, gravel pit in conifer-mixed hardwood (1 female); litter, saltmarsh edge (7 males, 2 females); sweeping grasses, saltmarsh (1 female); running through, on, or at edge of lawn (1 male, 3 females); running in grass (1 male, 1 female); in grass on lawn (1 male); in or on compost pile (bin) (1 male, 1 female); running across garden (1 female); under wood chips in garden (1 female); in flower garden (1 male); under boards in old field, with prey (1 female); on rock in old field (1 female); on wall or side of house (2 males); around foundation, house (1 female); in kitchen sink, house (1 male, 1 female); in bathtub, house (2 males); on bedroom window ledge, house (1 male); on porch (dead), house (1 female); in bucket of water, dead (1 male).

Regional Distribution: ME (Jennings, unpubl.); MA (Edwards 1993); QC (Paquin and Dupérré 2003).

Note: This invasive species was first reported in New England by Edwards (1993). It has since been found as far west as Illinois (Prentice 2001).

Trochosa terricola Thorell, 1856

Taxonomy: Brady (1979); Kaston (1981); Dondale and Redner (1990); Paquin and Dupérré (2003).

Records: M01 (20 males, 19 females); M04 (3 males, 5 females); M06 (11 males, 9 females); M07 (4 males, 4 females); M12 (1 female); M15 (1 female); M24 (8 males, 4 females); M25 (4 males, 6 females); M26 (25 males, 25 females); M27 (2 males, 3 females); M35 (1 female); M54 (1 male). *N* = 156 adults; 78 males, 78 females.

Methods: litter condenser-Berlese funnel (1 male); pitfall traps (72 males, 63 females); search (4 males, 15 females); sweep net (1 male).

Months: April (2 males); May (37 males, 16 females); May-June (14 males, 6 females); June (12 males, 5 females); June-July (2 males, 6 females); July (2 males, 23 females); July-August (10 females); August (5 males, 5 females); August-September (1 male, 3 females); September (3 males, 4 females).

Habitats: litter, *Betula-Acer* stand (2 males, 5 females); litter, *Amelanchier-Rubus* stand (3 males); litter, edge of old field and alder swamp (4 males, 2 females); litter, seashore-backshore (7 males); litter, coastal red spruce stand (3 males, 5 females); litter, saltmarsh (10 males, 9 females); litter, *Kalmia-Vaccinium* heath (4 males, 4 females); litter, freshwater marsh edge (1 female); litter, red maple sapling stand (8 males, 4 females); litter, white (paper) birch stand (4 males, 6 females); litter, saltmarsh edge (25 males, 24 females); litter, red maple-white birch stand (2 males, 3 females); sifted litter, coastal red spruce stand (1 male); sweeping grasses, saltmarsh (1 male); in high saltgrass at shore, seashore-backshore (1 female); in vegetable garden (1 male, 1 female); in compost pile (2 females); in low plants, lawn edge (1 female); on ground, old field (1 female); on ground, saltmarsh edge (1 female); on ground in small burrow among marsh debris, brackish marsh (1 female); on house foundation (1 male); running on cobble beach, seashore (1 female); running on gravel lane (1 female); running through leaves, gravel lane edge (1 male); running on stone path (1 male); running in flower garden (1 female); running across bedroom floor, house (1 female); under bark of *Betula papyrifera* (1 female); under litter, upper wrack line, saltmarsh (1 female); under chipped bark in garden (1 female).

Regional Distribution: ME (Bryant 1908, as *Lycosa pratensis* Emerton); NH, VT, MA, RI, CT, NY, ON, QC, NB, NS, PE, NF, LB (Brady 1979; Dondale and Redner 1990).

FAMILY PISAURIDAE

The pisaurids or nursery-web spiders are among the largest spiders in Maine. Some pisaurids are semiaquatic, living on or near bodies of water. They can pursue and capture prey, including small minnows and tadpoles, among submerged vegetation of ponds, lakes, and rivers (Gertsch 1979), but also forage among rocks and vegetation along shorelines. Many kinds of aquatic insects are included among the prey captured and eaten by these large spiders. Unlike female lycosids that transport their egg sacs attached to the spinnerets, female pisaurids carry their egg sacs slung beneath their bodies. The sacs are held in place by the female's chelicerae and pedipalps. Before the young spiderlings emerge, the female spins a tent-like web in which the egg sac is enclosed. The female remains nearby until the young spiderlings emerge and disperse; hence, the common name "nursery-web spiders."

Although closely related to the Lycosidae, there are distinct morphological differences. The eyes are arranged in two rows, not three; the posterior row of eyes is strongly recurved and well separated from the anterior row. None of the eyes are conspicuously enlarged; the carapace is somewhat flattened. Carico (2005) provides additional information on family characteristics, natural and taxonomic histories, and a key to the genera of North America north of Mexico.

Carico (1972, 1973) revised the Nearctic species of *Pisaurina* and *Dolomedes*, the two genera most likely to be encountered in Maine. Dondale and Redner (1990) also provide identification keys, descriptions, and illustrations for pisaurids of the northern region. The Pisauridae in Maine are represented by two genera and five species; in Milbridge, this family is represented by only one genus and species. Most likely additional species of *Dolomedes* and at least one species of *Pisaurina* inhabit this coastal region, but remain to be detected and specimens collected.

Dolomedes striatus Giebel, 1869

Taxonomy: Carico (1973); Dondale and Redner (1990); Paquin and Dupérré (2003).

Record: M01 (1 male). *N* = 1 adult male.

Method: pitfall trap (1 male).

Month: June (1 male).

Habitat: litter, seashore-backshore (1 male).

Regional Distribution: ME (Dondale and Redner 1990); MA, CT, NY, ON, PQ, NS, LB (Carico 1973); NB (Dondale and Redner 1990).

FAMILY LIOCRANIDAE

The liocranids were formerly assigned to the subfamily Liocraninae of the family Clubionidae. Lehtinen (1967) elevated this subfamily to full family status and transferred some of the genera to other families. Like the clubionids, liocranids are hunters that do not rely on webs for prey capture. Species of *Agroeca* inhabit moist litter of fields, meadows, bogs, and forests (Dondale and Redner 1982). Unlike the Clubionidae, the liocranids do not spin a retreat.

Structurally, members of this family differ from clubionids by having the palp-coxal lobes straight or convex along their lateral margins. The metatarsi of legs I and II have long, paired ventral spines. Three dorsal macroseta are present on femur I of *Agroeca*; species of this genus also have a dense cluster of long setae on the anterior margin of the abdomen. Ubick and Richman (2005b) provide additional family-character descriptors, notes on natural and taxonomic histories, and a key to the liocranid genera of North America.

With the recent removal of *Phrurotimpus* and *Scotinella* to the family Corinnidae by Bosselaers and Jocqué 2002, the liocranid fauna in Maine is now represented by only one genus (*Agroeca*) and two species. This genus and both species have been found in Milbridge.

Agroeca ornata Banks, 1892

Taxonomy: Kaston (1938a, 1981); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M01 (2 males, 2 females); M04 (7 males); M22 (2 females); M24 (8 males, 1 female); M25 (6 males); M27 (8 males, 2 females). *N* = 38 adults; 31 males, 7 females.

Method: pitfall traps (31 males, 7 females).

Months: May (12 males, 1 female); May-June (8 males); June (10 males, 3 females); June-July (1 male, 1 female); July-August (1 female); August (1 female).

Habitats: forest-floor litter, *Betula-Acer* stand (1 female); litter, deciduous-coniferous woodland (2 males, 1 female); forest-floor litter, coastal red spruce stand (7 males); forest-floor litter, bigtooth aspen stand (2 females); forest-floor litter, red maple sapling stand (8 males, 1 female); forest-floor litter, white (paper) birch stand (6 males); forest-floor litter, mixed red maple-white birch stand (8 males, 2 females).

Regional Distribution: ME, MA, CT, NH, VT, NY, ON, QC, NB, NS (Dondale and Redner 1982).

Agroeca pratensis Emerton, 1890

Taxonomy: Kaston (1938a, 1981); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M01 (1 male); M22 (2 males); M25 (1 male); M26 (5 females). *N* = 9 adults, 4 males, 5 females.

Methods: pitfall traps (3 males, 5 females); search (1 male).

Months: May (1 male, 1 female); June-July (1 female); July (3 females); August-September (1 male); September (1 male); November (1 male).
Habitats: forest-floor litter, bigtooth aspen stand (2 males); forest-floor litter, white (paper) birch stand (1 male); litter, saltmarsh edge (5 females); on patio edge near flower garden (1 male).

Regional Distribution: ME (Kaston 1938a); NH, VT, MA, CT, RI, NY, ON, QC, NB, NS (Dondale and Redner 1982).

FAMILY CLUBIONIDAE

The clubionids or sac spiders are small tubular-shaped spiders whose bodies are sparsely covered with setae. They are usually creamy yellow, but may have brown markings on the abdomen. They are nocturnal hunters and spend the day in tubular retreats or sacs; hence, the common name. In addition to temporary retreats, these sacs also serve as pre-nuptial chambers and nests for egg-laying. The female usually remains in the nest until the young spiderlings emerge.

Most clubionids are swift runners that move rapidly when disturbed. They seize their prey with stout, toothed chelicerae. Some species inhabit grasses and shrubs; others are found in bogs or on foliage of trees. Some of the tree-inhabiting species can be collected by jarring limbs and foliage over a beating cloth.

Members of the Clubionidae are two-clawed spiders with a dense brush of setae or claw tuft on the pretarsus. Ventrally, the distal leg segments bear a brush of setae called scopulae. From one to three macrosetae are present on the prolateral surface of femur I. The eyes are arranged in two transverse rows near the anterior margin of the carapace. The eye rows may be straight, recurved, or procurved. The anterior spinnerets are close together and not heavily sclerotized; the palp-coxal lobes lack a depression on the ventral surface. Additional character descriptors, notes on natural history, and a key to North American genera of Clubionidae are provided by Richman and Ubick (2005). Descriptions and illustrations of Nearctic species of Clubionidae are provided by Edwards (1958), Dondale and Redner (1982), and Paquin and Dupérré (2003).

In Maine, the Clubionidae are represented by 2 genera and 20 species. Thirteen species of the genus *Clubiona* are found in Milbridge.

Clubiona bishopi Edwards, 1958

Taxonomy: Edwards (1958); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M06 (1 male); M23 (3 males, 1 female). *N* = 7 adults; 5 males, 2 females.

Methods: pitfall trap (1 male); sweep net (4 males, 2 females).

Months: June (1 male, 1 female); July (3 males, 1 female); September (1 male).

Habitats: sweeping vegetation, freshwater pond edge (1 male, 1 female); sweeping *Vaccinium* sp., mixed conifer-hardwood, island (1 male, 1 female); sweeping grassy area near cabin, mixed conifer opening, island (2 males); litter, saltmarsh (1 male).

Regional Distribution: ME (Edwards 1958); NY, ON, QC, NB, NS (Dondale and Redner 1982).

Clubiona bryantae Gertsch, 1941

Taxonomy: Edwards (1958); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M01 (1 female); M12 (2 females); M33 (1 female). *N* = 4 adult females.

Methods: pitfall trap (1 female); search (1 female); sweep net (2 females).

Months: June (1 female); July (2 females); August (1 female).

Habitats: sweeping old field vegetation (1 female); sweeping grasses, freshwater marsh edge (1 female); litter, freshwater marsh edge (1 female); in folded leaf of leatherleaf, freshwater marsh (1 female).

Regional Distribution: ME, MA, NY (Edwards 1958); ON, QC, NB, NS, NF (Dondale and Redner 1982).

Clubiona canadensis Emerton, 1890

Taxonomy: Edwards (1958); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M01 (3 males, 10 females); M04 (2 males, 3 females); M06 (1 female); M15 (1 female); M23 (2 females); M29 (1 female); M30 (1 female); M42 (1 female); M55 (1 female). *N* = 26 adults; 5 males, 21 females.

Methods: beating cloth (1 female); brush-tree bole net (1 female); pitfall traps (5 males, 4 females); search (10 females); sweep net (3 females); n. d. (2 females).

Months: June (1 male, 5 females); July (3 males, 9 females); July-August (1 male); August (5 females); September (2 females).

Habitats: litter, *Betula-Acer* stand (3 males); litter, coastal red spruce stand (2 males, 1 female); litter, deciduous-coniferous woodland (2 females); litter, *Amelanchier-Rubus* stand (1 female); sweeping shrubby vegetation, coastal spruce-mixed hardwood (1 female); sweeping understory, spruce-mixed hardwood (1 female); sweeping grasses, forbs, ferns, and rushes, roadside alder-aspen edge (1 female); brushing white (paper) birch bark (1 female); beating red spruce foliage, near freshwater stream (1 female); in silk retreat, folded wild-raisin leaf (1 female); in silk retreat, folded goldenrod leaf, freshwater pond (1 female); in silk retreat between *Amelanchier* leaves, *Amelanchier-Rubus* stand (1 female); in silk retreat under dead bark of apple (1 female); in silk retreat, meadowsweet leaf, old field (1 female); in silk retreat with egg sac, folded aster leaf, old field (1 female); on balsam fir snag (1 female); under rocks in silk retreat, open ledges-mixed conifer, island (1 female); n. d., cedar,

mixed conifer-hardwood, island (1 female); n. d., cherry sp., mixed conifer-hardwood, island (1 female); in silk retreat, mailbox (1 female); in mailbox (1 female).

Regional Distribution: ME (Emerton 1914); NH, VT, CT, NY, ON, QC, NB, NS, NF, LB (Edwards 1958).

Clubiona johnsoni Gertsch, 1941

Taxonomy: Edwards (1958); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M05 (1 male); M12 (1 female); M26 (2 males, 3 females); M35 (1 female); M56 (2 males, 7 females). *N* = 17 adults; 5 males, 12 females.

Methods: litter condenser-Berlese funnel (1 male, 3 females); litter condenser-hand sorted (1 male, 4 females); pitfall traps (2 males, 3 females); search (1 female); sweep net (1 female); n. d. (1 male).

Months: June (1 female); July (1 male, 2 females); July-August (1 male, 2 females); August (1 male); September (2 males, 7 females).

Habitats: sifted litter (grasses, forbs, tidal debris), salt meadow (2 males, 7 females); litter, saltmarsh edge (2 males, 3 females); sweeping shrubs and grasses, freshwater marsh (1 female); in silk retreat, dry forb stem, brackish marsh (1 female); old field (1 male).

Regional Distribution: ME (Collins et al. 1996); NH, VT, MA, CT, RI, NY, ON, NS (Edwards 1958); QC, NB (Dondale and Redner 1982).

Clubiona kastoni Gertsch, 1941

Taxonomy: Edwards (1958); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M06 (1 male); M12 (3 males, 6 females); M14 (2 females). *N* = 12 adults; 4 males, 8 females.

Methods: pitfall traps (4 males, 6 females); sweep net (2 females).

Months: July (2 females); August (4 males, 5 females); September (1 female).

Habitats: litter, freshwater marsh edge (3 males, 6 females); litter, saltmarsh (1 male); sweeping grasses and forbs, mixed hardwood-conifer (2 females).

Regional Distribution: ME (Gertsch 1941); NH, VT, MA, CT, NY, ON, NB (Edwards 1958); QC, NS (Dondale and Redner 1982).

**Clubiona littoralis* Banks, 1895

Taxonomy: Edwards (1958); Dondale and Redner (1982).

Records: M05 (2 males, 2 females); M15 (1 female). *N* = 5 adults; 2 males, 3 females.

Methods: sifted litter-hand sorted (2 males, 2 females); sweep net (1 female)

Months: July (1 female); August (2 males, 2 females).

Habitats: sifted dried seaweed, old field-brackish marsh edge (2 males, 2 females); sweeping grasses and sedges, saltmarsh (1 female).

Regional Distribution: ME (this study); MA, NY, ON (Edwards 1958); NS (Dondale and Redner 1982).

**Clubiona maritima* L. Koch, 1867

Taxonomy: Edwards (1958); Dondale and Redner (1982); Paquin and Dupérré (2003).

Record: M12 (1 female). *N* = 1 adult female.

Method: search (1 female).

Month: August (1 female).

Habitat: in silk retreat (with spiderlings), folded grass stem, freshwater marsh (1 female).

Regional Distribution: ME (this study); MA, CT, NY, ON (Edwards 1958); QC (Bélanger and Hutchinson 1992).

Clubiona moesta Banks, 1896

Taxonomy: Edwards (1958); Dondale and Redner (1982); Paquin and Dupérré (2003).

Record: M01 (1 female). *N* = 1 adult female.

Method: search (1 female).

Month: July (1 female).

Habitat: in alders along seashore, seashore-backshore (1 female).

Regional Distribution: ME (Procter 1938, as *Clubiona emertoni* Petrunkevitch (*pusilla* Emerton)); NH, MA, NY, ON (Edwards 1958); VT, QC, NB, NS (Dondale and Redner 1982).

Clubiona norvegica Strand, 1900

Taxonomy: Edwards (1958); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M12 (3 females); M15 (2 females); M33 (5 males, 5 females). *N* = 15 adults; 5 males, 10 females.

Method: sweep net (5 males, 10 females).

Months: June (2 males, 5 females); July (3 males, 5 females).

Habitats: sweeping grasses and shrubs (*Spiraea-Kalmia*), freshwater marsh (3 females); sweeping grasses and sedges, freshwater marsh (5 males, 5 females); sweeping grasses, saltmarsh (2 females).

Regional Distribution: ME (Longcore et al., unpubl.); NY, ON, NF, LB (Edwards 1958); QC (Dondale and Redner 1982).

Clubiona obesa Hentz, 1847

Taxonomy: Edwards (1958); Dondale and Redner (1982); Paquin and Dupérré (2003).

Record: M01 (1 female). *N* = 1 adult female.

Method: search (1 female).

Month: June (1 female).

Habitat: in silk retreat on willow leaf, freshwater pond edge (1 female).

Regional Distribution: ME, NH, VT, MA, CT, RI, NY, ON (Edwards 1958); QC, NS, NF (Dondale and Redner 1982).

Clubiona pygmaea Banks, 1892

Taxonomy: Edwards (1958); Dondale and Redner (1982); Paquin and Dupérré (2003).

Record: M35 (1 male). *N* = 1 adult male.

Method: sweep net (1 male).

Month: June (1 male).

Habitat: sweeping grasses and sedges, brackish marsh (1 male).

Regional Distribution: ME (Bryant 1908, as *Clubiona minuta* Emerton); MA, CT, NY, ON, QC (Edwards 1958).

Clubiona riparia L. Koch, 1866

Taxonomy: Edwards (1958); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M01 (4 females); M05 (3 males, 3 females); M06 (3 males, 26 females); M08 (2 males); M12 (11 males, 18 females); M17 (8 females); M23 (1 male, 4 females); M33 (9 males, 15 females); M34 (1 female); M35 (2 males, 8 females); M47 (1 female); M58 (1 male, 3 females). *N* = 123 adults; 32 males, 91 females.

Methods: pitfall trap (1 female); search (26 females); sweep net (32 males, 63 females); n. d. (1 female).

Months: May (5 males, 2 females); June (8 males, 28 females); July (19 males, 30 females); August (30 females); September (1 female).

Habitats: sweeping vegetation (*Juncus-Spartina*-shrubs), saltmarshes (3 males, 27 females); sweeping grasses, sedges, shrubs (*Spiraea-Kalmia*), freshwater marshes (20 males, 16 females); sweeping grasses, forbs, rushes (*Juncus*), seashore brackish marsh (3 males, 10 females); sweeping grasses and forbs, old field (3 males, 4 females); sweeping blue-joint grass, seashore-backshore (1 male, 4 females); sweeping upper beach grasses, forbs, seaside-pea, and shrubs, seashore-backshore (2 males); sweeping vegetation, dry stream bed (1 female); sweeping marsh vegetation near freshwater stream (1 female); in silk retreats, folded marsh grasses (*Spartina* sp.), freshwater marsh (13 females); in silk retreat, folded marsh grass, brackish marsh (1 female); in silk retreats, folded *Spiraea* leaves, freshwater marsh (6 females); in silk retreats, folded saltmarsh grasses, saltmarshes (3 females); in silk retreats, folded stems of timothy grass (2 females); in silk retreat, folded *Spiraea* leaf, old field (1 female); litter, saltmarsh (1 female); n. d., saltmarsh (1 female).

Regional Distribution: ME (Bryant 1908); NH, MA, CT, NY, ON, QC, NB, NS (Edwards 1958); NF (Dondale and Redner 1982).

Clubiona trivialis C. L. Koch, 1843

Taxonomy: Edwards (1958); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M01 (4 males, 10 females); M02 (1 female); M04 (1 male, 1 female); M06 (2 males); M10 (1 male, 3 females); M15 (1 male, 2 females); M29 (1 male); M48 (6 males, 1 female); M49 (1 male). *N* = 35 adults; 17 males, 18 females.

Method: beating cloth (17 males, 18 females).

Months: May (3 males, 11 females); June (1 male, 4 females); July (3 males); August (4 males, 2 females); September (6 males, 1 female).

Habitats: beating red spruce foliage, seashore-backshore (8 males, 3 females); beating red spruce foliage (saplings), conifer-mixed hardwood (1 male, 3 females); beating red spruce foliage, saltmarsh edge (1 male, 2 females); beating red spruce foliage, old field edge (1 female); beating red spruce foliage, roadside (1 male); beating white spruce foliage, saltmarsh edge (2 males); beating young balsam fir foliage, mixed conifer (1 female); beating spruces, old field edge (4 males, 7 females); beating spruce, seashore (1 female).

Regional Distribution: ME (Procter 1946, as *Clubiona obtusa* Emerton); NY, ON, LB, NF (Edwards 1958); QC, NB, NS (Dondale and Redner 1982).

FAMILY CORINNIDAE

Formerly a subfamily of the Clubionidae, this family has now been elevated to full family status. It contains genera previously assigned to one or more subfamilies of Clubionidae and subsequently to other spider families such as the Gnaphosidae and Liocranidae. The genera and species in our region are generally antlike in habitus and movements and are usually associated with ground litter of old fields, meadows, bogs, and forests. Species of *Scotinella* have been found in ant nests (Dondale and Redner 1982). Some members have iridescent scales; others are patterned with bands of white scale-like setae on their abdomens. Most members are fast runners and swiftly regain cover when disturbed, or become motionless (*Phrurotimpus*) with their legs flexed above an iridescent carapace, thus aiding in concealment. Unlike the clubionids (*sensu stricto*), the corinnids do not spin sacs or retreats, and the females abandon their egg sacs after egg-laying.

In general, the members of this family have the eyes arranged in two transverse rows; the lateral margins of the palp-coxal lobes lack constrictions; the legs are usually slender, with or without scopulae and claw tufts; femur I with or without a macroseta; and anterior abdominal margins lacking strong, erect setae. Ubick and Richman (2005a) provide additional family character descriptors, notes on natural history, and a key to the genera of Corinnidae in North America.

Reiskind (1969) revised the North and Central American species of *Castianeira*; the genus *Phrurotimpus* is currently under revision by colleagues at the American Museum of Natural History. With the recent transfer of *Phrurotimpus* and *Scotinella* from the Liocranidae to the Corinnidae (see Bosselaers and Jocqué 2002), the Maine fauna now consists of 4 genera and 14 species; 3 genera and 8 species are represented in the Milbridge fauna. Dondale and Redner (1982) provide identification keys and illustrations for the genera and species found in Maine.

Castianeira cingulata (C. L. Koch, 1841)

Taxonomy: Reiskind (1969); Kaston (1981); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M01 (7 females); M22 (3 males, 1 female); M24 (6 females); M25 (6 females); M27 (6 females). *N* = 29 adults; 3 males, 26 females.

Methods: pitfall traps (3 males, 25 females); search (1 female).

Months: May (1 female); June (4 females); June-July (4 females); July (13 females); July-August (1 female); August (3 males, 3 females).

Habitats: litter, red maple sapling stand (6 females); litter, white (paper) birch stand (6 females); litter, red maple-white birch stand (6 females); litter, mature *Betula-Acer* stand (5 females); litter, bigtooth aspen stand (3 males, 1 female); litter, *Kalmia-Vaccinium* heath (1 female); under small rock (1 female).

Regional Distribution: ME (Bryant 1908, as *Castaneira* [sic] *bivittata* Keyserling); NH, MA, CT, NY, ON (Reiskind 1969); QC, NB, NS (Dondale and Redner 1982).

Castianeira descripta (Hentz, 1847)

Taxonomy: Reiskind (1969); Kaston (1981); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M06 (3 males, 4 females); M07 (1 male); M11 (1 female). *N* = 9 adults; 4 males, 5 females.

Method: pitfall traps (4 males, 5 females).

Months: July (2 males, 1 female); July-August (2 males); August (4 females).

Habitats: litter, saltmarshes (3 males, 4 females); litter, *Kalmia-Vaccinium* heath (1 male); gravel pit, conifer-mixed hardwood (1 female).

Regional Distribution: ME (Bryant 1908, as *Castaneira* [sic] *crocata* Hentz); NH, VT, MA, NY (Reiskind 1969); CT (Kaston 1981); ON, QC, NB, NS (Dondale and Redner 1982).

Castianeira gertschi Kaston, 1945

Taxonomy: Reiskind (1969); Kaston (1945, 1981); Dondale and Redner (1982).

Records: M06 (2 males). *N* = 2 adult males.

Method: pitfall traps (2 males).

Months: August-September (2 males).

Habitat: litter, saltmarsh (2 males).

Regional Distribution: ME (Jaros-Su et al., unpubl.); MA, CT, NY (Reiskind 1969); VT, ON (Dondale and Redner 1982).

Castianeira longipalpa (Hentz, 1847)

Taxonomy: Reiskind (1969); Kaston (1981); Dondale and Redner (1982); Paquin and Dupérré (2003).

Records: M06 (1 male); M07 (1 male). *N* = 2 adult males.

Method: pitfall traps (2 males).

Months: August (1 male); September (1 male).

Habitats: litter, *Kalmia-Vaccinium* heath (1 male); litter, saltmarsh (1 male).

Regional Distribution: ME (Bryant 1908, as *Castaneira* [sic] *pinnata* (Emerton)); NH, VT, MA, CT, NY, ON, NS (Reiskind 1969); QC, NB (Dondale and Redner 1982).

Phrurotimpus alarius (Hentz, 1847)

Taxonomy: Kaston (1981); Dondale and Redner (1982); Bosselaers and Jocquè (2002); Paquin and Dupérré (2003).

Records: M01 (6 males, 8 females); M22 (1 male, 13 females); M24 (10 males, 4 females); M25 (10 males, 6 females); M26 (3 males, 1 female); M27 (9 males, 5 females); M53 (1 female). *N* = 77 adults; 39 males, 38 females.

Methods: litter condenser-Berlese funnel (1 female); pitfall traps (39 males, 33 females); search (2 females); sifted litter-hand sorted (2 females).

Months: May-June (5 males); June (18 males, 10 females); June-July (5 males, 9 females); July (10 males, 14 females); July-August (2 females); August (3 females); August-September (1 male).

Habitats: litter, white (paper) birch stand (10 males, 6 females); litter, bigtooth aspen stand (1 male, 13 females); litter, red maple sapling stand (10 males, 4 females); litter, red maple-white birch stand (9 males, 5 females); litter, saltmarsh edge (3 males, 1 female); litter, deciduous-coniferous woodland (2 males, 5 females); litter, *Amelanchier-Rubus* stand (2 males); litter, *Kalmia-Vaccinium* heath (1 male); litter, *Betula-Acer* stand (1 male); litter-seashore (1 female); litter, aspen-maple stand (1 female); in low plants at edge of lawn (1 female); drowned in bucket of water (1 female).

Regional Distribution: ME (Bryant 1908, as *Micariosoma alarium* (Hentz) Simon); CT (Kaston 1981); ON, QC, NS (Dondale and Redner 1982).

Phrurotimpus borealis (Emerton, 1911)

Taxonomy: Kaston (1981); Dondale and Redner (1982); Bosselaers and Jocquè (2002); Paquin and Dupérré (2003).

Records: M01 (4 males, 4 females); M07 (2 females); M12 (2 females); M22 (1 male, 1 female); M24 (4 males, 1 female); M25 (1 male); M26 (5 males, 7 females); M27 (1 female); M28 (1 female) M42 (1 female). *N* = 35 adults; 15 males, 20 females.

Methods: litter condenser-Berlese funnel (1 female); pitfall traps (11 males, 14 females); search (4 males, 5 females).

Months: May (1 female); June (8 males, 1 female); June-July (3 males, 3 females); July (3 males, 11 females); July-August (1 male, 3 females); August (1 female).

Habitats: litter, saltmarsh edge (5 males, 7 females); litter, red maple sapling stand (4 males, 1 female); litter, bigtooth aspen stand (1 male, 1 female); litter, *Kalmia-Vaccinium* heath (2 females); litter, freshwater pond edge (2 females); litter, white (paper) birch stand (1 male); litter, red maple-white birch stand (1 female); sifted rockweed debris, seashore (1 female); under rocks on ledges, red spruce-mixed conifer, island (1 female); on rock, roadside disturbed area (1 female); on floor in house (1 female), on bathroom wall (1 male), on bedroom wall (1 female); in bathtub (2 males), in bathroom (1 male); in tall grass under canoe, old field (1 female).

Regional Distribution: ME, MA, NY (Kaston 1945); CT (Kaston 1981); ON, QC, NB, NS (Dondale and Redner 1982).

Scotinella divesta (Gertsch, 1941)

Taxonomy: Dondale and Redner (1982); Bosselaers and Jocquè (2002); Paquin and Dupérré (2003).

Records: M12 (1 female); M15 (2 females); M22 (1 female); M24 (1 female); M25 (1 female); M26 (1 female); M27 (1 male); M42 (1 female). *N* = 9 adults; 1 male, 8 females.

Methods: litter condenser-Berlese funnel (1 female); pitfall traps (1 male, 5 females); search (1 female); sweep net (1 female).

Months: May (2 females); May-June (1 male, 1 female); June (2 females); June-July (1 female); July (2 females).

Habitats: sifted litter, saltmarsh (1 female); litter, saltmarsh edge (1 female); grasses, saltmarsh edge (1 female); litter, freshwater pond edge (1 female); litter, bigtooth aspen stand (1 female); litter, red maple sapling stand (1 female); litter, white (paper) birch stand (1 female); litter, red maple-white birch stand (1 male); under rock, mixed conifer, island (1 female).

Regional Distribution: ME (Gertsch 1941); NH, MA, NY, NB, NS (Dondale and Redner 1982).

Scotinella pugnata (Emerton, 1890)

Taxonomy: Dondale and Redner (1982); Bosselaers and Jocquè (2002); Paquin and Dupérré (2003).

Records: M12 (1 male, 1 female). *N* = 2 adults; 1 male, 1 female.

Method: pitfall traps (1 male, 1 female).

Month: August (1 male, 1 female).

Habitat: litter, freshwater pond edge (1 male, 1 female).

Regional Distribution: ME (Bryant 1908, as *Micariosoma pugnatum* (Emerton) Simon); CT (Kaston 1981); NY, ON, QC, NB, NS (Dondale and Redner 1982).

FAMILY GNAPHOSIDAE

The gnaphosids or ground spiders are hunters that capture their prey by stealth. As their common name implies, they live in leaf litter on the ground, and under rocks, logs, and loose bark of standing trees and stumps. Most are nocturnal hunters that spend the daylight hours in silken retreats; others hunt during the day, with some specializing on ants as food. After mating, the females lay their eggs in masses that are enclosed in silken sacs. The egg sacs vary in size, color, and shape; depending on species, the female may remain on guard with her egg sac or leave it exposed. Some species camouflage their egg sacs with bits of sand, soil, or plant debris. Females of *Drassodes* deposit their egg sacs in flimsy retreats spun under rocks and loose bark of trees and stumps; the females remain with the eggs until the young spiderlings emerge.

Although the gnaphosids share many characters in common with clubionids and related families of hunters, they can be distinguished by an oblique depression on the ventral surface of each palp-coxal lobe; anterior spinnerets cylindrical, elongate, and well sclerotized, and with their bases well separated; many species with irregularly shaped secondary (anterior lateral, and posterior lateral) eyes. Ubick (2005b) provides additional information on family-character descriptors, notes on natural history, and a key to the genera found in North America.

The North American species of Gnaphosidae are well known and described following the excellent generic revisions of Norman I. Platnick and associates at The American Museum of Natural History, New York. See Platnick (2007) for a list of these revisionary works published chiefly between 1975 and 1988. Platnick and Dondale (1992) provide descriptions, illustrations, and identification keys for gnaphosids most apt to be found in the northeastern region. The gnaphosid fauna in Maine currently comprises 10 genera and 33 species; 9 genera and 17 species are represented in Milbridge.

Callilepis pluto Banks, 1896

Taxonomy: Platnick (1975); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M04 (2 females); M06 (1 female); M25 (3 males; 1 female); M40 (1 female); M42 (4 females). *N* = 12 adults; 3 males, 9 females.

Methods: pitfall traps (3 males, 2 females); search (6 females); n. d. (1 female).

Months: June (2 males, 1 female); July (1 male, 6 females); August (2 females).

Habitats: litter, white (paper) birch (*Betula papyrifera* Marsh.) stand (3 males, 1 female); litter, saltmarsh (1 female); under rock near driveway, coastal spruce-mixed hardwood (1 female); under rock in silk retreat, open ledges in mixed conifer, island (1 female); under rock, mixed conifer, island (1 female); under ledge rock with egg sac, mixed conifer-reindeer moss, island (1 female); on ledge, mixed conifer, island (1 female); on ground, blueberry field edge (1 female); n. d. (1 female).

Regional Distribution: ME, MA, NH, VT, CT, NY, ON, QC (Platnick 1975); NS, PE (Platnick and Dondale 1992).

Drassodes neglectus (Keyserling, 1887)

Taxonomy: Platnick and Shadab (1976); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M04 (1 female); M10 (1 male); M11 (1 male); M39 (6 females); M40 (1 female). *N* = 10 adults; 2 males, 8 females.

Method: pitfall trap (1 male); search (1 male, 8 females).

Months: May (1 male); July (1 male, 1 female); August (7 females).

Habitats: in silk retreats under ledge rocks, maple-oak (*Acer-Quercus*) stand (6 females); under rock in silk retreat with egg sac, coastal spruce-mixed hardwood (1 female); under rocks on ledge, mixed conifer-hardwood (1 male); on ground, edge of blueberry field (1 female); on ground in gravel pit, conifer-mixed hardwood (1 male).

Regional Distribution: ME (Bryant 1908); MA, NH, VT, CT, NY, ON, QC, NS (Platnick and Shadab 1976); NB, PE (Platnick and Dondale 1992).

Note: Emerton (1907) recorded *Drassus saccatus* Emerton from Long Island, Cumberland County, ME; however, Kaston (1981) listed Emerton's *Drassus saccatus* as a junior synonym of *Drassodes neglectus* Keyserling. Platnick and Dondale (1992) list *Drassus saccatus* as a junior synonym of *Drassodes saccatus* (Emerton, 1890); hence, Emerton's early record from Maine probably refers to *saccatus* instead of *neglectus*.

Drassyllus niger (Banks, 1896)

Taxonomy: Platnick and Shadab (1982); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M01 (2 females): M07 (1 male, 1 female); M12 (1 male); M22 (4 males); M25 (3 males); M26 (4 males, 4 females); M27 (1 male). *N* = 21 adults; 14 males, 7 females.

Methods: pitfall traps (14 males, 6 females); search (1 female).

Months: May-June (3 males); June (6 males, 3 females); June-July (2 males, 1 female); July (3 males, 3 females).

Habitats: litter, saltmarsh edge (4 males, 4 females); litter, bigtooth aspen stand (4 males); litter, white (paper) birch stand (3 males); litter, *Kalmia-Vaccinium* heath (1 male, 1 female); litter, *Amelanchier-Rubus* stand (1 female); litter, freshwater marsh edge (1 male); litter, red maple-white (paper) birch stand (1 male); on wall of house (1 female).

Regional Distribution: ME, MA, CT, VT, ON, QC, NS (Platnick and Shadab 1982); NH (Platnick and Dondale 1992).

Drassyllus socius Chamberlin, 1922

Taxonomy: Platnick and Shadab (1982); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M01 (1 male); M07 (1 male); M26 (3 males, 1 female); M42 (1 female). *N* = 7 adults; 5 males, 2 females.

Methods: pitfall traps (5 males, 1 female); search (1 female).

Months: May (3 males); June (1 male, 1 female); June-July (1 male); July (1 female).

Habitats: litter, saltmarsh edge (3 males, 1 female); litter, seashore-backshore (1 male); litter, *Kalmia-Vaccinium* heath (1 male); on ledge, mixed conifer, island (1 female).

Regional Distribution: ME (Collins et al. 1996); MA, NH, ON, QC, NB, NS (Platnick and Shadab 1982).

Gnaphosa muscorum (L. Koch, 1866)

Taxonomy: Platnick and Shadab (1975a); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M04 (1 female); M24 (1 male). *N* = 4 adults; 2 males, 2 females.

Methods: pitfall trap (1 male); search (1 male, 1 female); sweep net (1 female).

Months: May (2 males); June (1 female); July (1 female).

Habitats: under stone, old field (1 male); swept from shrubby vegetation, coastal spruce-mixed hardwood (1 female); litter, red maple sapling stand (1 male); in bed, house (1 female).

Regional Distribution: ME (Bishop 1923, as *Gnaphosa gigantes* (sic.) Keyserling); MA,CT, NH, VT, NY, ON, QC, NS, LB (Platnick and Shadad 1975); NB, PE (Platnick and Dondale 1992).

Gnaphosa parvula Banks, 1896

Taxonomy: Platnick and Shadab (1975a); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female); M06 (6 males, 3 females); M07 (1 male); M12 (3 males, 7 females); M25 (2 males, 2 females); M26 (1 male); M27 (2 females). *N* = 29 adults; 14 males, 15 females.

Methods: pitfall traps (13 males, 14 females); search (1 male, 1 female).

Months: May (2 males); May-June (2 females); June (6 males, 5 females); June-July (1 male, 1 female); July (5 males, 3 females); August (2 females); August-September (1 female); September (1 female).

Habitats: litter, freshwater marsh edge (3 males, 7 females); litter, saltmarsh (6 males, 3 females); litter, saltmarsh edge (1 male); litter, white (paper) birch (*Betula papyrifera* Marsh.) stand (2 males,

2 females); litter, red maple-white (paper) birch stand (2 females); litter, *Kalmia-Vaccinium* heath (1 male); in dead rockweed on gravel beach, seashore (1 male); in grass under base of lawn umbrella (1 female).

Regional Distribution: ME, NH, MA, CT, NY, ON, QC, NB, NS (Platnick and Shadab 1975a); NF (Platnick and Dondale 1992).

Haplodrassus bicornis (Emerton, 1909)

Taxonomy: Platnick and Shadab (1975b); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M07 (5 males, 1 female). *N* = 6 adults; 5 males, 1 female.

Method: pitfall traps (5 males, 1 female).

Months: May (4 males); June (1 male); July (1 female).

Habitat: litter, *Kalmia-Vaccinium* heath (5 males, 1 female).

Regional Distribution: ME (Collins et al. 1996); NH, MA, CT, NY, ON, QC (Platnick and Shadab 1975b); NB, NS (Platnick and Dondale 1992).

Haplodrassus hiemalis (Emerton, 1909)

Taxonomy: Platnick and Shadab (1975b); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M01 (2 males, 3 females); M25 (1 female); M35 (1 female). *N* = 7 adults; 2 males, 5 females.

Methods: pitfall traps (1 male, 3 females); search (1 male, 1 female); sweep net (1 female).

Months: June (2 females); July (2 males, 2 females); September (1 female).

Habitats: litter, *Betula-Acer* stand (1 male, 1 female); litter, *Amelanchier-Rubus* stand (1 female); litter, white (paper) birch stand (1 female); swept from brackish marsh (1 female); under plastic bag, outdoor woodbin (1 female); in bathtub, house (1 male).

Regional Distribution: ME, NH, VT, MA, CT, NY, ON, QC, NS, NF (Platnick and Shadab 1975b); NB, PE (Platnick and Dondale 1992).

Haplodrassus signifer (C. L. Koch, 1839)

Taxonomy: Platnick and Shadab (1975b); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M04 (1 female); M07 (3 males, 1 female); M40 (1 female). *N* = 6 adults; 3 males, 3 females.

Methods: pitfall traps (3 males, 1 female); search (2 females).

Months: May (2 males, 1 female); June (1 male); July (1 female); August (1 female).

Habitats: litter, *Kalmia-Vaccinium* heath (3 males, 1 female); under rocks near park drive, coastal spruce-mixed hardwood (1 female); under rock, blueberry field (1 female).

Regional Distribution: ME (Procter 1946); NH, VT, MA, CT, NY, ON, QC, NS (Platnick and Shadab 1975b); PE (Platnick and Dondale 1992).

Herpyllus ecclesiasticus Hentz, 1832

Taxonomy: Platnick and Shadab (1977); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M01 (2 males, 1 female). *N* = 3 adults; 2 males, 1 female.

Method: search (2 males, 1 female).

Months: August (2 males); September (1 female).

Habitats: on screen door, house (1 male); in kitchen sink, house (1 female); in grass, lawn (1 male).

Regional Distribution: ME (Bryant 1908); MA, CT, NH, VT, NY, ON, QC, NS (Platnick and Shadab 1977); PE (Platnick and Dondale 1992).

**Micaria elizabethae* Gertsch, 1942

Taxonomy: Platnick and Shadab (1988); Platnick and Dondale (1992).

Records: M26 (2 males). *N* = 2 adult males.

Method: pitfall traps (2 males).

Months: May (1 male); July-August (1 male).

Habitat: litter, saltmarsh edge (2 males).

Regional Distribution: ME (this study); MA, CT, NY, RI, ON (Platnick and Shadab 1988).

Micaria gertschi Barrows & Ivie, 1942

Taxonomy: Platnick and Shadab (1988); Platnick and Dondale (1992).

Records: M06 (1 male, 1 female). *N* = 2 adults; 1 male, 1 female.

Method: pitfall traps (1 male, 1 female).

Months: June (1 male); July-August (1 female).

Habitat: litter, saltmarsh (1 male, 1 female).

Regional Distribution: ME, MA, CT, NH, VT, NY, ON, NB, NS (Platnick and Shadab 1988).

Micaria pulicaria (Sundevall, 1831)

Taxonomy: Platnick and Shadab (1988); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M01 (2 males, 4 females); M06 (1 male); M12 (2 males, 1 female); M55 (1 female). *N* = 11 adults; 5 males, 6 females.

Methods: litter condenser-Berlese funnel (1 female); pitfall traps (4 males, 3 females); search (1 male, 2 females).

Habitats: litter, freshwater marsh edge (2 males, 1 female); litter, seashore (1 male, 1 female); litter, deciduous-coniferous woodland (1 female); litter, saltmarsh (1 male); sifted grass litter near freshwater stream (1 female); running on soil in vegetable garden (1 female); in shed (1 female); on wall, house (1 male).

Regional Distribution: ME (Emerton 1909, as *Micaria gentiles* Banks); NH, CT, NY, ON, QC, NS (Platnick and Shadab 1988); NB, NF (Platnick and Dondale 1992).

Sergiolus ocellatus (Walckenaer, 1837)

Taxonomy: Platnick and Shadab (1981); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M06 (7 males, 3 females); M07 (1 male); M12 (1 male); M26 (1 male, 2 females); M35 (1 male). *N* = 16 adults; 11 males, 5 females.

Methods: litter condenser-Berlese funnel (1 male); pitfall traps (9 males, 5 females); sweep net (1 male).

Months: June (2 males); July (9 males, 2 females); July-August (2 females); August (1 female).

Habitats: litter, saltmarsh (7 males, 3 females); litter, saltmarsh edge (1 male, 2 females); litter, *Kalmia-Vaccinium* heath (1 male); sifted marsh litter (grasses, rushes), brackish marsh (1 male); swept from marsh grasses and shrubs (*Spiraea-Kalmia*), freshwater marsh (1 male).

Regional Distribution: ME (Sferra et al., unpubl.); MA, NY, ON, NB, NS (Platnick and Shadab 1981).

Zelotes exiguoides Platnick & Shadab, 1983

Taxonomy: Platnick and Shadab (1983); Platnick and Dondale (1992).

Records: M01 (2 females); M07 (6 males, 7 females). *N* = 15 adults; 6 males, 9 females.

Method: pitfall traps (6 males, 9 females).

Months: June (2 males, 4 females); June-July (2 females); July (4 males, 3 females).

Habitats: litter, *Kalmia-Vaccinium* heath (6 males, 7 females); litter, *Betula-Acer* stand (1 female); litter, *Amelanchier-Rubus* stand (1 female).

Regional Distribution: ME (Sferra et al., unpubl.); NH, ON (Platnick and Shadab 1983).

Zelotes fratris Chamberlin, 1920

Taxonomy: Platnick and Shadab (1983); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M01 (11 males, 10 females); M04 (2 females); M05 (1 female); M06 (22 males, 22 females); M07 (10 males, 4 females); M12 (5 males, 3 females); M15 (1 female); M19 (1 female); M22 (11 males, 2 females); M24 (4 males, 1 female); M25 (8 males, 8 females); M26 (12 males, 18 females); M27 (7 males, 5 females); M42 (2 males, 1 female); M56 (1 female). *N* = 172 adults; 92 males, 80 females.

Methods: litter condenser-Berlese funnel (1 female); litter condenser-hand sorted (1 female); pitfall traps (82 males, 69 females); search (9 males, 8 females); unsifted litter-Berlese funnel (1 male); n. d. (1 female).

Months: May (12 males, 3 females); May-June (2 males, 9 females); June (22 males, 13 females); June-July (3 males, 2 females); July (22 males, 24 females); July-August (7 males, 7 females); August (19 males, 18 females); August-September (5 males, 1 female); September (3 females).

Habitats: litter, saltmarsh (22 males, 22 females); litter, saltmarsh edge (12 males, 18 females); litter, white (paper) birch stand (8 males, 8 females); litter, *Kalmia-Vaccinium* heath (9 males, 4 females); litter, bigtooth aspen stand (11 males, 2 females); litter, red maple-white (paper) birch stand (7 males, 5 females); litter, freshwater marsh edge (5 males, 3 females); litter, red maple sapling stand (4 males, 1 female); litter, *Betula-Acer* stand (3 males, 1 female); litter, edge of old field and alder swamp (1 male, 3 females); litter, seashore-backshore (2 females); unsifted litter, *Kalmia-Vaccinium* heath (1 male); sifted litter, saltmarsh wrack line (1 female); sifted litter-hand sorted, salt meadow (1 female); under rocks near park drive, coastal spruce-mixed hardwood (2 females); under rock in silk retreat, open ledges in mixed conifer, island (1 female); under rock on ledges, red spruce-mixed conifer, island (1 male); on ledge under beating cloth, mixed conifer, island (1 male); old field (1 female); running across gravel lane (1 female); "dead" carried by ant, road (1 female); in bathtub, house (4 males, 1 female); in garage, house (1 male); on cellar door, house (1 female); on floor, house (1 male); in sun room, house (1 male); under tarps in screen house (1 female).

Regional Distribution: ME (Bishop 1923, as *Zelotes ater* (Hentz)); MA, CT, NH, VT, NY, ON, QC, NB, NS, PE (Platnick and Shadab 1983); NF (Platnick and Dondale 1992).

Zelotes hentzi Barrows, 1945

Taxonomy: Platnick and Shadab (1983); Platnick and Dondale (1992); Paquin and Dupérré (2003).

Records: M06 (4 females); M07 (2 males, 2 females); M10 (1 female); M26 (6 males, 1 female). N = 16 adults; 8 males, 8 females.

Methods: pitfall traps (8 males, 7 females); search (1 female).

Months: May (3 males, 2 females); May-June (1 male); June (3 males, 2 females); July (1 male, 4 females).

Habitats: litter, saltmarsh edge (6 males, 1 female); litter, saltmarsh (4 females); litter, *Kalmia-Vaccinium* heath (2 males, 2 females); under rocks on ledge; mixed conifer-hardwood (1 female).

Regional Distribution: ME (Collins et al. 1996); MA, CT, NH, NY, ON, NB, NS (Platnick and Shadab 1983); QC (Platnick and Dondale 1992).

Note: Emerton's (1890) record of *Prosthesima atra* (sic.) from Washington County, ME may refer to either *Zelotes fratris* Chamberlin, 1920 (males) or *Zelotes hentzi* Barrows, 1945 (females), or to both species; see Kaston's (1981) comments under *Zelotes subterraneus* (C. L. Koch, 1839), a European species. Likewise, Bryant's (1908) records of *Melanophora atra* (sic.) (Hentz) Simon from Lincoln, Piscataquis, and Washington Counties may refer to either *Z. fratris* or *Z. hentzi*, or to both species.

FAMILY PHILODROMIDAE

The philodromids or running crab spiders are swift runners over and among vegetation and other surfaces where they hunt their prey by active pursuit or ambush. They typically have flattened bodies, and their laterigrade legs are nearly equal in length and thickness. The legs are equipped with claw tufts and scopulae that allow quick, erratic movements on slippery and precipitous surfaces of plants, rocks, and ledges. The females spin silken egg sacs among needles of conifers or in folds of hardwood leaves; the females generally remain with their egg sacs until the spiderlings emerge. Most philodromids overwinter in the penultimate stage, sometimes in loose aggregations or "pseudoflocks." They generally reach maturity in early spring.

Formerly considered as the subfamily Philodrominae of the family Thomisidae, the philodromids are easily distinguished by their somewhat elongate flattened bodies; long slender scopulate legs, with legs I, III, and IV nearly equal in length; eyes usually uniform in size and without prominent eye tubercles and arranged in two recurved rows, with the posterior row more recurved than the anterior; body with soft, recumbent setae. Additional defining characters, notes on natural and taxonomic histories, and a key to the genera of North America are given by Dondale (2005b).

C. D. Dondale and J. H. Redner, formerly of the Biosystematics Research Institute, Ottawa, revised most of the genera and species of Philodromidae found in North America. Sauer and Platnick (1972) revised the genus *Ebo*. These revisions were published during 1961-1976; see Dondale and Redner 1978b for a listing of citations. Dondale and Redner (1978b) also provide identification keys, descriptions, and illustrations of the genera and species found, or likely to be found, in the northeastern region. The philodromid fauna in Maine consists of 4 genera and 20 species; 3 genera and 13 species are found in Milbridge. Thus far, species of *Ebo* remain to be found in Milbridge; *E. iviei* Sauer & Platnick 1972 has been taken in nearby Jonesboro (Collins et al. 1996).

Philodromus cespitum (Walckenaer, 1802)

Taxonomy: Dondale (1961); Dondale and Redner (1976a); Dondale and Redner (1978b); Paquin and Dupérré (2003).

Records: M01 (1 female); M51 (2 females). *N* = 3 adult females.

Methods: beating cloth (1 female); search (1 female); shake-sweep net (1 female).

Months: June (2 females); July (1 female).

Habitats: on poplar leaf, seashore (1 female); shaking speckled alder bushes, mixed conifer opening (1 female); beating eastern larch foliage, mixed conifer (1 female).

Regional Distribution: ME (Dondale 1961, as *Philodromus cespiticolis* Walckenaer); NH, VT, MA, NY, ON, QC, NB, NS (Dondale and Redner 1976a).

Philodromus exilis Banks, 1892

Taxonomy: Dondale and Redner (1968); Dondale and Redner (1978b); Paquin and Dupérré (2003).

Records: M01 (2 males, 1 female); M06 (1 male, 1 female); M10 (1 male); M23 (2 females); M38 (1 female); M51 (1 female); M55 (1 male). *N* = 11 adults; 5 males, 6 females.

Methods: beating cloth (5 males, 4 females); search (1 female); sweep net (1 female).

Months: May (4 males); June (1 male, 1 female); July (3 females); August (2 females).

Habitats: beating red spruce foliage, mixed conifer, island (2 females); beating red spruce saplings, conifer-mixed hardwood (1 male); beating red spruce, near stream (1 male); beating white spruce foliage, edge of saltmarsh (1 male, 1 female); beating spruces, old field edge (2 males); beating eastern larch, mixed conifer (1 female); sweeping *Sphagnum* bog (1 female); on rolled, dead alder leaf (1 female).

Regional Distribution: ME, NH, VT, NY, ON, QC, NB, NS (Dondale and Redner 1968).

Philodromus imbecillus Keyserling, 1880

Taxonomy: Dondale and Redner (1968, 1976a); Paquin and Dupérré (2003).

Records: M06 (1 female); M28 (1 male); M35 (1 male). *N* = 3 adults; 2 males, 1 female.

Method: sweep net (2 males, 1 female).

Months: June (1 male, 1 female); July (1 male).

Habitats: sweeping herbaceous vegetation, saltmarsh (1 female); sweeping roadside disturbed area (1 male); sweeping grasses and rushes, brackish marsh (1 male).

Regional Distribution: ME (Bryant 1908, as *Philodromus lineatus* Emerton, 1892); NH, VT, MA, CT, NY, ON, QC, NS, LB (Dondale and Redner 1968).

**Philodromus peninsulanus* Gertsch, 1934

Taxonomy: Dondale and Redner (1968, 1976a); Paquin and Dupérré (2003).

Records: M12 (6 females); M33 (3 males, 4 females); M55 (1 female). *N* = 14 adults; 3 males, 11 females.

Method: sweep net (3 males, 11 females).

Months: June (2 males, 2 females); July (1 male, 8 females); August (1 female).

Habitats: sweeping grasses and shrubs (*Spiraea* sp.), freshwater marsh (6 females); sweeping grasses and sedges, freshwater marsh (3 males, 4 females); sweeping grasses, streamside (1 female).

Regional Distribution: ME (this study); NY, ON (Dondale and Redner 1968, 1978b); QC (Bélanger and Hutchinson 1992).

Philodromus placidus Banks, 1892

Taxonomy: Dondale and Redner (1968, 1976a); Paquin and Dupérré (2003).

Records: M01 (1 male, 3 females); M02 (1 female); M49 (1 male); M51 (1 female). *N* = 7 adults; 2 males, 5 females.

Methods: beating cloth (1 male, 5 females); sweep net (1 male).

Months: June (1 male, 4 females); July (1 male); August (1 female).

Habitats: beating red spruce foliage (3 females); beating red spruce, seashore-backshore (1 male); beating red spruce, mixed conifer (1 female); beating young balsam fir foliage, mixed conifer (1 female); sweeping old field (1 male).

Regional Distribution: ME (Bryant 1908, as *Philodromus bidentatus* Emerton); NH, VT, MA, CT, ON, QC, NB, NS, LB (Dondale and Redner 1968).

Philodromus praelustris Keyserling, 1880

Taxonomy: Dondale (1961); Dondale and Redner (1976a); Paquin and Dupérré (2003).

Records: M01 (1 male, 1 female). *N* = 2 adults; 1 male, 1 female.

Method: search (1 male, 1 female).

Months: May (1 male); June (1 female).

Habitats: outside wall of house (1 female); in shed (1 male).

Regional Distribution: ME (Procter 1946); NH, MA, CT, NY, ON, QC, NB, NS (Dondale and Redner 1976a).

Philodromus rufus vibrans Dondale, 1964

Taxonomy: Dondale and Redner (1968, 1976a); Paquin and Dupérré (2003).

Records: M01 (16 males, 14 females); M10 (1 female); M12 (1 female); M23 (1 female); M35 (2 females); M50 (1 female); M51 (2 females). *N* = 38 adults; 16 males, 22 females.

Methods: beating cloth (8 males, 6 females); search (6 males, 3 females); sweep net (2 males, 13 females).

Months: March (1 male); May (13 males, 6 females); June (2 males, 7 females); July (7 females); August (2 females).

Habitats: beating red spruce foliage, old field edge (1 male, 5 females); beating red spruce, conifer-mixed hardwood (1 female); beating spruces, old field edge (7 males); sweeping old field, inland

(2 males, 5 females); sweeping old field (*Kalmia* sp.), abandoned farm on island (1 female); sweeping low vegetation, deciduous-coniferous woodland (1 female); sweeping grasses and shrubs, freshwater marsh (1 female); sweeping brackish marsh (2 females); sweeping grasses, forbs, and shrubs, seashore-backshore (1 female); sweeping meadowsweet, mixed conifer opening (2 females); on bedroom ceiling (1 female), terrace (1 female); boat (1 female); house walls (2 males); office desk (1 male), lawn chair (1 male); in woodpile (1 male), old field (1 male).

Regional Distribution: ME (Bryant 1908); NH, VT, MA, CT, RI, ON, QC, NB, NS (Dondale and Redner 1968).

Note: Bryant (1908) recorded *Philodromus pictus* Emerton from Maine; however, Dondale and Redner (1976a) list Emerton's *P. pictus* as a synonym of *Philodromus rufus vibrans* Dondale, 1964.

Philodromus vulgaris (Hentz, 1847)

Taxonomy: Dondale (1961); Dondale and Redner (1976a); Paquin and Dupérré (2003).

Record: M01 (1 female). *N* = 1 adult female.

Method: search (1 female).

Month: May (1 female).

Habitat: inside screen door (1 female).

Regional Distribution: ME (Bryant 1908, as *Philodromus vulgaris* (Hentz) Keyserling); MA, CT, RI, NY, ON, QC, NS (Dondale 1961).

Thanatus formicinus (Clerck, 1757)

Taxonomy: Dondale et al. (1964); Dondale and Redner (1978b); Paquin and Dupérré (2003).

Records: M01 (1 male); M05 (1 female); M06 (1 male); M07 (1 male, 2 females); M26 (2 females). *N* = 8 adults; 3 males, 5 females.

Methods: pitfall traps (3 males, 4 females); sweep net (1 female).

Months: May (1 male); June (2 females); July (2 females); August (1 female); September (2 males).

Habitats: *Kalmia-Vaccinium* heath, litter (1 male, 2 females); saltmarsh edge, litter (2 females); saltmarsh, litter (1 male); old field-alder swamp, litter (1 male); sweeping old field (1 female).

Regional Distribution: ME (Procter 1938, as *Thanatus formicinus* (Oliver) (*lycosoides* Emerton; not *coloradensis* Keyserling); NH, VT, MA, CT, NY, ON, NS, NF (Dondale et al. 1964); QC (Bélanger and Hutchinson 1992).

Thanatus rubicellus Mello-Leitão, 1929

Taxonomy: Dondale et al. (1964); Dondale and Redner (1978b); Paquin and Dupérré (2003).

Records: M06 (2 males); M07 (2 males). *N* = 4 adult males.

Method: pitfall traps (4 males).

Months: May (1 male); July (3 males).

Habitats: *Kalmia-Vaccinium* heath, litter (2 males); saltmarsh, litter (2 males).

Regional Distribution: ME (Bryant 1908, as *Thanatus rubicundus* Keyserling); NH, VT, MA, CT, NY, QC, LB (Dondale et al. 1964).

Thanatus striatus C. L. Koch, 1845

Taxonomy: Dondale et al. (1964); Dondale and Redner (1978b); Paquin and Dupérré (2003).

Records: M06 (2 females); M26 (1 female); M35 (1 female). *N* = 4 adult females.

Methods: pitfall traps (2 females); sweep net (2 females).

Months: May (1 female); June (2 females); July (1 female).

Habitats: saltmarsh, litter (2 females); sweeping saltmarsh edge (1 female); sweeping grasses and rushes, brackish marsh (1 female).

Regional Distribution: ME, NH, MA, CT, ON, NS (Dondale et al. 1964); QC (Bélanger and Hutchinson 1992).

Tibellus maritimus (Menge, 1875)

Taxonomy: Dondale and Redner (1978b); Kaston (1981); Paquin and Dupérré (2003).

Records: M04 (1 male); M05 (4 males, 3 females); M06 (1 male, 4 females); M12 (13 males, 7 females); M26 (2 males); M33 (2 males, 3 females); M35 (1 male); M47 (2 females); M55 (2 males). *N* = 45 adults; 26 males, 19 females.

Method: sweep net (26 males, 19 females).

Months: May (4 males, 2 females); June (21 males, 12 females); July (1 male, 2 females); August (3 females).

Habitats: sweeping grasses, sedges, and shrubs (*Spiraea*, *Kalmia*), freshwater marshes (15 males, 10 females); sweeping saltmarsh (*Juncus, Spartina*) (1 male, 5 females); sweeping saltmarsh edge (2 males); sweeping old field grasses and forbs (4 males, 1 female); sweeping low wet area, coastal spruce-mixed hardwood (1 male); sweeping wet meadow (1 female); sweeping grasses and forbs,

playground edge (2 males); sweeping vegetation, streamside (2 females); sweeping grasses and rushes, brackish marsh (1 male).

Regional Distribution: ME (Mairs and Jennings, unpubl.); CT (Kaston 1981); New England, ON, QC, NB, NS, NF, LB (Dondale and Redner 1978b).

Tibellus oblongus (Walckenaer, 1802)

Taxonomy: Dondale and Redner (1978b); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (10 males, 19 females); M06 (1 male, 5 females); M12 (1 male); M14 (1 male, 1 female); M17 (1 male); M23 (2 males, 6 females); M28 (2 females); M35 (1 male, 2 females); M55 (1 male). *N* = 53 adults; 18 males; 35 females.

Methods: search (6 males, 7 females); sweep net (12 males, 27 females); n. d. (1 female).

Months: May (2 males); June (5 males, 7 females); July (11 males, 17 females); August (11 females).

Habitats: sweeping old field (3 males, 11 females); sweeping saltmarsh (1 male, 4 females); sweeping grasses and rushes, brackish marsh (1 male, 2 females); sweeping freshwater pond edge (2 males, 1 female); sweeping blue-joint grass, seashore-backshore, island (3 females); sweeping sea oats, seashore-backshore, island (1 female); sweeping white and yellow clover, roadside disturbed area (2 females); sweeping mixed vegetation, school playground (1 male); sweeping bog near seashore, island (1 male, 1 female); sweeping grasses and forbs, mixed hardwood-conifer (1 male, 1 female); sweeping grasses and *Kalmia* sp., mixed conifer opening, island (1 male); sweeping grasses and meadowsweet, freshwater marsh (1 male); sweeping grass, island (1 female); on goldenrod, old field (1 female); on aster leaf, old field (1 female); on astilbe leaf, garden (1 female); on iris leaf (1 female); on lettuce, garden (1 female); running on ground, garden (1 male); in compost pile, garden (1 female); in crevice of boat trailer parked in old field (1 female); in old field (1 male); on backyard rock (1 male); on screen door, house (1 male); inside kitchen window, house (1 male); in grass on beach, seashore (1 male); saltmarsh (1 female).

Regional Distribution: ME (Bryant 1908); CT (Kaston 1981); ON, QC, NB, NS (Dondale and Redner 1978b).

FAMILY THOMISIDAE

The thomisids or crab spiders have stout, moderately flattened bodies, and strong laterigrade legs, especially legs I and II. Their movements are slow, deliberate, and crablike. They live in diverse habitats, including foliage of grasses, forbs, shrubs, and trees, and the litter of old fields, marshes, bogs, and forests. Some species are arboreal, inhabiting the mid- and upper-crowns of trees; others are strictly ground dwellers, or inhabitants of bark furrows and crevices. Brightly colored species of *Misumena*, *Misumenoides*, and *Misumenops* are frequently associated with flower blossoms where they capture prey by deception and ambush.

The thomisids can be distinguished from other crablike spiders by their stout bodies that are sparsely covered with simple, erect setae; their legs are devoid of scopulae and claw tufts; legs I and II are longer and more laterigrade than legs III and IV; and the lateral eyes are seated on prominent tubercles. Additional family character descriptors, notes on natural and taxonomic histories, and a key to the genera in North America are given by Dondale (2005c).

Species descriptions and generic revisions of North American Thomisidae are provided by Gertsch (1939, 1953), Schick (1965), and Turnbull et al. (1965). Dondale and Redner (1978b) provide identification keys, descriptions, and illustrations of thomisid taxa likely to be found in the northeastern region. The Maine thomisid fauna consists of 8 genera and 29 species; 6 genera and 19 species are found in Milbridge, including a new, undescribed or invasive species of *Ozyptila*.

Coriarachne utahensis (Gertsch, 1932)

Taxonomy: Gertsch (1939); Schick (1965); Bowling and Sauer (1975); Dondale and Redner (1978b); Kaston (1981); Paquin and Dupérré (2003, as *Bassaniana utahensis* (Gertsch, 1932)); Dondale (2005c).

Records: M01 (5 males, 4 females); M05 (1 male); M21 (1 male); M35 (1 male). *N* = 12 adults; 8 males, 4 females.

Methods: beating cloth (1 female); search (6 males, 2 females); sweep net (2 males, 1 female).

Months: April (1 female); May (2 males); June (3 males); July (2 males); October (1 male, 2 females); November (1 female).

Habitats: beating spruces (1 female); sweeping grasses and forbs in open field, old field (1 male); sweeping spruce foliage (1 female); sweeping vegetation, brackish marsh (1 male); in basement, house (1 male); in bathroom basin, house (1 male); in kitchen sink, house (1 female); in automobile (1 male); on bedroom ceiling, house (1 male); on wall, office (1 male); on cellar wall, house (1 female); on exterior white vinyl siding, building (1 male).

Regional Distribution: ME (Gertsch 1953); NH, VT, MA, NY, ON, QC, NB, NS, LB (Bowling and Sauer 1975).

Notes: Ono (1988) assigned three of the four North American species of *Coriarachne* to the genus *Bassaniana*, including *Coriarachne utahensis* (Gertsch 1932). However, Dondale (2005c) indicated

that numerous investigators have addressed this division and all agree that the four North American species are congeneric. The authors agree with Dondale's assessment and prefer the more familiar name *Coriarachne utahensis* (Gertsch, 1932).

Misumena vatia (Clerck, 1757)

Taxonomy: Gertsch (1939, as *Misumena calycina* (Linnaeus, 1758); Schick (1965); Kaston (1981); Dondale and Redner (1978b); Paquin and Dupérré (2003).

Records: M01 (13 males, 12 females); M04 (1 male, 2 females) M06 (1 male, 1 female); M12 (2 males); M28 (2 males, 1 female); M35 (1 male, 3 females); M51 (1 male); M55 (1 male). *N* = 41 adults; 22 males, 19 females.

Methods: beating cloth (1 male, 1 female); search (8 males, 8 females); sweep net (13 males, 10 females).

Months: May (1 male); June (10 males, 5 females); July (9 males, 10 females); August (2 males, 2 females); September (2 females).

Habitats: beating spruces, old field edge (1 male); beating spruce, saltmarsh edge (1 female); sweeping vegetation, old field (3 males, 2 females); sweeping vegetation, old field edge (1 male, 1 female); sweeping vegetation, freshwater pond edge (1 female); sweeping roadside grasses, forbs, and shrubs, red spruce forest (1 male, 1 female); sweeping shrubby vegetation, coastal spruce-mixed hardwood (1 female); sweeping vegetation (*Juncus-Spartina*), saltmarsh (1 male); sweeping grasses and meadowsweet, freshwater marsh (1 male); sweeping grasses and shrubs, freshwater marsh (1 male); sweeping white and yellow clover, roadside disturbed area (2 males, 1 female); sweeping marsh vegetation, brackish marsh (1 male, 3 females); sweeping rhodora and meadowsweet, mixed conifer opening (1 male); sweeping grasses and forbs, school playground edge, disturbed area (1 male); in low vegetation, freshwater pond edge (1 female); in folded quaking aspen leaf (1 female); in and on goldenrod, old field (1 male, 1 female); in rugosa rose flower (1 female); on aster leaves along lane, mixed hardwood-conifer (1 male, 1 female); dead, among grasses on incoming tide, seashore (1 female); on alder at shore, seashore-backshore (1 male); on marsh grasses, seashore (1 female); on raspberry cane, old field (1 male); on ox-eye daisy, old field (1 male); on ornamental daisy, flower garden (1 male); on foliage, flower garden (1 male); in kitchen, house (1 female); running on house deck, with prey (1 male).

Regional Distribution: ME (Packard 1905, as *Misumena vatia* Thorell); NH, VT, MA, NY, ON, QC, NS (Gertsch 1939, as *Misumena calycina* (Linnaeus)); CT (Kaston 1981); NB, NF, LB (Dondale and Redner 1978b).

Notes: The biology of *Misumena vatia* has been studied extensively by D. H. Morse and associates in Lincoln County, Maine. For example, see Morse (1985, 1986, 1991, 1992) and Morse and Fritz (1982).

Misumenops asperatus (Hentz, 1847)

Taxonomy: Gertsch (1939); Schick (1965); Dondale and Redner (1978b); Kaston (1981); Paquin and Dupérré (2003).

Record: M06 (1 female). *N* = 1 adult female.

Method: sweep net (1 female).

Month: July (1 female).

Habitat: sweeping vegetation, saltmarsh edge (1 female).

Regional Distribution: ME (Blake 1927, as *Misumena asperata* Emerton); NH, MA, CT, RI, NY, ON, QC (Gertsch 1939).

**Misumenops carletonicus* Dondale & Redner, 1976

Taxonomy: Dondale and Redner (1976b, 1978b); Paquin and Dupérré (2003).

Records: M01 (1 male); M09 (1 female). *N* = 2 adults; 1 male, 1 female.

Method: sweep net (1 male, 1 female).

Months: May (1 male); July (1 female).

Habitats: sweeping vegetation, old field (1 male); sweeping vegetation, including sheep laurel, old field-abandoned farm, island (1 female).

Regional Distribution: ME (this study); NY, ON (Dondale and Redner 1978b); QC (Hutchinson 1999).

Ozyptila distans Dondale & Redner, 1975

Taxonomy: Gertsch (1939, as *Ozyptila americana* Banks); Dondale and Redner (1975, 1978b); Paquin and Dupérré (2003).

Records: M01 (4 males); M07 (6 males); M12 (1 male, 1 female); M22 (1 male, 2 females); M24 (9 males, 2 females); M25 (9 males, 4 females); M26 (1 male); M27 (3 males). *N* = 43 adults; 34 males, 9 females.

Method: pitfall traps (34 males, 9 females).

Months: May (3 males); May-June (6 males, 1 female); June (20 males, 5 females); June-July (5 males, 1 female); August (2 females).

Habitats: litter, seashore-backshore (1 male); litter, deciduous-coniferous woodland (3 males); litter, *Kalmia-Vaccinium* heath (6 males); litter, freshwater marsh edge (1 male, 1 female); forest-floor litter, bigtooth aspen stand (1 male, 2 females); forest-floor litter, red maple sapling stand (9 males, 2 females); forest-floor litter, white (paper) birch stand (9 males, 4 females); litter, saltmarsh edge (1 male); forest-floor litter, red maple-white birch stand (3 males).

Regional Distribution: ME (Gertsch 1939, as *Ozyptila americana* Banks); NH, MA, CT, NY, ON, QC, NB, NS, PE, NF (Dondale and Redner 1978b).

****_Ozyptila_ sp. (near _distans_ Dondale & Redner, 1975)**

Taxonomy: New or introduced species?

Record: M26 (1 male). *N* = 1 adult male.

Method: pitfall trap (1 male).

Month: June (1 male).

Habitat: litter, saltmarsh edge (1 male).

Regional Distribution: ME (this study); otherwise, unknown.

Note: This male specimen was examined by C. D. Dondale who concluded that it might be a new species or possibly an introduced species not previously found in North America (pers. comm.). It belongs to the *brevipes* group as defined by Dondale and Redner (1975). Like *O. distans*, the retrolateral tibial apophysis is not bent ventrad and does not extend beyond the mid-length of the tegulum. Distally, the ventral tibial apophysis is knobbed-shaped. The embolus is more angular than that of *O. distans*. The basal tegular ridge is less broad and bears a rounded tooth distally. Additional specimens, including those of both sexes, are needed for comparison with the types of *Ozyptila distans* Dondale & Redner, 1975, and with related species. The specimen from Milbridge is in the Canadian National Collection, Ottawa.

Tmarus angulatus (Walckenaer, 1837)

Taxonomy: Gertsch (1939); Dondale and Redner (1978b); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (2 males, 4 females); M12 (1 female); M35 (1 male). *N* = 8 adults; 3 males, 5 females.

Methods: beating cloth (1 female); search (1 male, 1 female); sweep net (2 males, 3 females).

Months: May (1 male); June (2 males, 3 females); July (1 female); August (1 female).

Habitats: beating hardwoods, mixed hardwood-conifer (1 female); sweeping vegetation, freshwater pond edge (1 female); sweeping vegetation, old field (1 male, 1 female); sweeping shrubs, freshwater marsh (1 female); sweeping grasses, brackish marsh (1 male); on top of post (1 female); on exterior wall, house (1 male).

Regional Distribution: ME (Bryant 1908, as *Tmarus caudatus* (Hentz) Keyserling); NH, VT, MA, CT, NY (Gertsch 1939); ON, QC, NB, NS (Dondale and Redner 1978b).

Xysticus alboniger Turnbull et al., 1965

Taxonomy: Gertsch (1939, as *Synema alboniger* Keyserling, 1884); Turnbull et al. (1965); Dondale and Redner (1978b); Paquin and Dupérré (2003).

Records: M01 (2 males, 4 females); M07 (5 males); M26 (1 male). *N* = 12 adults; 8 males, 4 females.

Methods: pitfall traps (5 males); search (1 male, 1 female); sweep net (2 males, 3 females).

Months: May (2 males); May-June (1 male); June (5 males, 4 females).

Habitats: litter, *Kalmia-Vaccinium* heath (5 males); sweeping vegetation, old field (2 females); sweeping grasses, forbs, and shrubs, old field (1 male, 1 female); sweeping vegetation, saltmarsh edge (1 male); in vegetable garden (1 female); on foundation, house (1 male).

Regional Distribution: ME (Collins et al. 1996); NH, MA, CT, NY (Gertsch 1939, as *Synema bicolor* Keyserling); ON (Turnbull et al. 1965).

Xysticus ampullatus Turnbull et al., 1965

Taxonomy: Turnbull et al. (1965); Dondale and Redner (1978b); Paquin and Dupérré (2003).

Record: M07 (1 male). *N* = 1 adult male.

Method: pitfall trap (1 male).

Month: July (1 male).

Habitat: litter, *Kalmia-Vaccinium* heath (1 male).

Regional Distribution: ME (Collins *et al.* 1996); ON, NS, NB (Dondale and Redner 1978b); QC (Bélanger and Hutchinson 1992).

Xysticus chippewa Gertsch, 1953

Taxonomy: Gertsch (1953); Turnbull et al. (1965); Dondale and Redner (1978b); Paquin and Dupérré (2003).

Records: M12 (5 males, 9 females); M33 (4 males); M55 (2 females). *N* = 20 adults, 9 males, 11 females.

Methods: search (6 females); sweep net (9 males, 5 females).

Months: June (8 males, 5 females); July (1 male, 2 females); August (4 females).

Habitats: sweeping grasses, freshwater marsh (1 male); sweeping grasses and meadowsweet, freshwater marsh (1 male); sweeping marsh grasses and shrubs (*Spiraea*, *Kalmia*), freshwater marsh (3 males, 5 females); sweeping grasses and sedges, freshwater marsh (4 males); in retreats, blue-joint grass seedheads, freshwater marsh (4 females); in retreats, blue-joint grass seedheads, freshwater streamside (2 females).

Regional Distribution: ME (Longcore, unpubl.); ON (Gertsch 1953); QC (Bélanger and Hutchinson 1992).

Xysticus elegans Keyserling, 1880

Taxonomy: Gertsch (1939, 1953); Turnbull et al. (1965); Dondale and Redner (1978b); Paquin and Dupérré (2003).

Records: M01 (10 males, 6 females); M07 (2 males); M12 (1 female); M22 (13 males, 1 female); M24 (21 males); M25 (34 males, 2 females); M26 (1 male); M27 (16 males, 2 females). *N* = 109 adults; 97 males, 12 females.

Methods: pitfall traps (95 males, 7 females); search (2 males, 1 female); sweep net (4 females).

Months: May (11 males); May-June (13 males, 1 female); June (42 males, 6 females); June-July (19 males, 1 female); July (12 males, 2 females); September (1 female); October (1 female).

Habitats: forest-floor litter, *Betula-Acer* stand (1 female); litter, deciduous-coniferous woodland (5 males, 1 female); litter, *Amelanchier-Rubus* stand (2 males); litter, seashore-backshore (1 male); litter, *Kalmia-Vaccinium* stand (2 males); forest-floor litter, bigtooth aspen stand (13 males, 1 female); forest-floor litter, red maple stand (21 males); forest-floor litter, white (paper) birch stand (34 males, 2 females); litter, saltmarsh edge (1 male); forest-floor litter, red maple-white birch stand (16 males, 2 females); sweeping vegetation, old field (1 female); sweeping low understory shrubs, *Betula-Acer* woods (1 female); sweeping shore grasses and sedges, seashore-backshore (1 female); sweeping marsh grasses and shrubs (*Spiraea-Kalmia*), freshwater marsh (1 female); on exterior of garage door, house (1 female); on porch at night, house (1 male); on exterior wall, house (1 male).

Regional Distribution: ME (Bryant 1908, as *Xysticus limbatus* Keyserling); NH, VT, MA, CT, NY, ON, QC, NS (Gertsch 1939); NB, NF (Turnbull et al. 1965).

Note: Bryant's (1908) record of *Xysticus limbatus* Keyserling from Cumberland County, ME may refer to *X. elegans* Keyserling (females only) or to *X. emertoni* Keyserling (males only), or to both species. Gertsch (1939) cited Bryant's (1908) paper under both *X. elegans* and *X. emertoni*.

Xysticus ellipticus Turnbull et al., 1965

Taxonomy: Turnbull et al. (1965); Dondale and Redner (1978b); and Paquin and Dupérré (2003).

Records: M01 (1 male); M07 (3 males, 1 female); M26 (1 male). *N* = 6 adults; 5 males, 1 female.

Method: pitfall traps (5 males, 1 female).

Months: May (1 female); June (4 females); July (1 male).

Habitats: litter, *Kalmia-Vaccinium* heath (3 males, 1 female); litter, *Amelanchier-Rubus* stand (1 male); litter, saltmarsh edge (1 male).

Regional Distribution: ME (Jennings et al., unpubl.); NH, VT (Gertsch 1939, as *Synema obscurum* Keyserling); NB (Dondale and Redner 1978b); QC (Koponen 1994).

Xysticus emertoni Keyserling, 1880

Taxonomy: Gertsch (1939, 1953); Turnbull et al. (1965); Dondale and Redner (1978b); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (4 males, 17 females); M05 (2 females); M06 (1 female); M07 (2 females); M12 (2 females); M20 (1 male); M37 (1 female); M55 (1 female). *N* = 31 adults; 5 males, 26 females.

Methods: pitfall trap (1 female); search (4 males, 7 females); sweep net (1 male, 17 females); n. d. (1 female).

Months: May (2 males, 2 females); June (2 males, 6 females); July (1 male, 8 females); August (9 females); September (1 female).

Habitats: litter, *Kalmia-Vacciniium* heath (1 female); sweeping vegetation, old fields (1 male, 12 females); sweeping vegetation, saltmarsh (1 female); sweeping grasses, freshwater marsh (1 female); sweeping marsh grasses and shrubs (*Spiraea-Kalmia*), freshwater marsh (1 female); sweeping grasses, forbs, and meadowsweet, mown field (1 female); sweeping grasses and forbs, school playground edge (1 female); in common St. Johnswort, old field (1 female); in old fields (2 females); in rolled chokecherry leaf (1 female); in camp near seashore (1 female); on blackberry leaf, old field (1 female); on wild raspberry along lane (1 male); on wild cherry (1 male); on heath plants, *Kalmia-Vaccinium* heath (1 female); on foundation, house (1 male); on paved parking lot (1 male); under old board feeding on lycosid (1 female).

Regional Distribution: ME (Bryant 1908, as *Xysticus limbatus* Keyserling); NH, VT, MA, NY, ON, QC (Gertsch 1939); NB, NS, NF (Turnbull et al. 1965).

Notes: Regarding the identity of *X. limbatus* Keyserling listed by Bryant (1908), see notation under *Xysticus elegans* above. The spider wasp *Dipogon sayi sayi* Banks provisioned its nests with paralyzed female crab spiders, chiefly *X. emertoni*, in strip-clearcut stands of spruce-fir-mixed hardwood on the Moosehorn National Wildlife Refuge, near Calais, ME (Jennings and Parker 1987).

Xysticus ferox (Hentz, 1847)

Taxonomy: Gertsch (1939, 1953); Turnbull et al. (1965); Kaston (1981); Dondale and Redner (1978); and Paquin and Dupérré (2003).

Records: M01 (2 males); M06 (1 male); M07 (2 males); M25 (1 male, 1 female); M26 (1 male). *N* = 8 adults; 7 males, 1 female.

Methods: pitfall traps (5 males, 1 female); search (2 males).

Months: May (3 males, 1 female); June (3 males); July (1 male).

Habitats: litter, *Kalmia-Vaccinium* heath (2 males); litter, saltmarsh (1 male); litter, white (paper) birch stand (1 male, 1 female); litter, saltmarsh edge (1 male); on screen door, house (1 male); running in vegetable garden (1 male).

Regional Distribution: ME (Bryant 1908, as *Xysticus stomachosus* Keyserling); NH, VT, MA, CT, RI, NY, ON, LB (Gertsch 1939); QC, NS (Turnbull et al. 1965); NB (Dondale and Redner 1978).

Xysticus luctans (C. L. Koch, 1845)

Taxonomy: Gertsch (1939, 1953); Turnbull et al. (1965); Kaston (1981); Dondale and Redner (1978); Paquin and Dupérré (2003).

Records: M01 (2 males); M07 (2 males, 1 female). *N* = 5 adults; 4 males, 1 female.

Methods: pitfall traps (2 males, 1 female); search (2 males).

Months: May (2 males, 1 female); May-June (1 male); June (1 male).

Habitats: litter, *Kalmia-Vaccinium* heath (2 males, 1 female); on cobble beach, seashore (1 male); running in old field (1 male).

Regional Distribution: ME (Bryant 1908, as *Xysticus quadrilineatus* Keyserling); VT, NH, MA, CT, NY, QC, NS (Gertsch 1939); ON (Gertsch 1953).

****Xysticus luctuosus* (Blackwall, 1836)**

Taxonomy: Gertsch (1939), as *Xysticus lutulentus* Gertsch, 1934; Locket and Millidge (1951); Turnbull et al. (1965); Dondale and Redner (1978b); Paquin and Dupérré (2003).

Records: M01 (1 male); M30 (1 male); M55 (1 male). *N* = 3 adult males.

Methods: search (1 male); sweep net (2 males).

Months: June (2 males); July (1 male).

Habitats: sweeping roadside grasses, forbs, ferns, and rushes, alder-aspen edge (1 male); sweeping grasses and forbs, school playground edge (1 male); on window screen, house (1 male).

Regional Distribution: ME (this study); ON, QC (Turnbull et al. 1965); NB (Dondale and Redner 1978); LB (Gertsch 1939, as *Xysticus lutulentus* Gertsch, 1934).

Xysticus punctatus Keyserling 1880

Taxonomy: Gertsch (1939, 1953); Turnbull et al. (1965); Dondale and Redner (1978b); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (7 males, 8 females); M05 (2 males); M06 (1 female); M37 (1 female); M44 (1 male); M57 (1 female). *N* = 21 adults; 10 males, 11 females.

Methods: beating cloth (6 males, 2 females); pitfall trap (1 female); search (1 male, 4 females); sweep net (3 males, 4 females).

Habitats: beating red spruce foliage (4 males, 1 female); beating red spruce foliage, old field edge (2 males); beating spruces, old field edge (1 female); litter, saltmarsh (1 female); sweeping grasses and forbs, old field (1 male); sweeping vegetation, old field (1 male, 2 females); sweeping wet meadow, old field-brackish marsh edge (1 male); sweeping and shaking chokecherry foliage (1 female); sweeping rushes, brackish marsh (1 female); in folded chokecherry leaves, old field (2 females); in rolled pin cherry leaf (1 female); on raspberry canes, garden (1 female); on rock wall, cemetery (1 male).

Regional Distribution: ME (Bryant 1908, as *Xysticus formosus* Banks); NH, VT, MA, NY, ON, NS (Gertsch 1939); CT (Gertsch 1953); ON, NB (Turnbull et al. 1965); QC (Bélanger and Hutchinson 1992).

Xysticus triguttatus Keyserling, 1880

Taxonomy: Gertsch (1939, 1953); Turnbull et al. (1965); Dondale and Redner (1978); Kaston (1981); Paquin and Dupérré (2003).

Records: M01 (8 males, 5 females); M07 (2 males, 2 females); M23 (1 male). *N* = 11 males, 7 females.

Methods: pitfall traps (2 males, 1 female); search (4 males, 1 female); sweep net (5 males, 5 females).

Months: May-June (1 male); June (6 males, 1 female); June-July (1 male); July (3 males, 2 females); August (3 females); September (1 female).

Habitats: litter, *Kalmia-Vaccinium* heath (2 males, 1 female); sweeping grasses, forbs, and shrubs, old field (2 females); sweeping vegetation, old field (3 males, 2 females); sweeping vegetation, old field edge (1 male); sweeping vegetation, *Kalmia-Vaccinium* heath (1 female); sweeping grasses and *Kalmia*, mixed conifer opening, island (1 male); on ox-eye daisy, old field (1 female); in bathtub, house (1 male); in shed (1 male); on exterior wall, house (2 males).

Regional Distribution: ME (Bryant 1908); NH, MA, CT, NY, NS (Gertsch 1939); ON (Gertsch 1953); QC, NF (Turnbull et al. 1965); NB (Dondale and Redner 1978).

Xysticus winnipegensis Turnbull *et al.*, 1965

Taxonomy: Turnbull et al. (1965); Dondale and Redner (1978b); Redner and Dondale (1980); Paquin and Dupérré (2003).

Records: M07 (11 males). *N* = 11 adult males.

Method: pitfall traps (11 males).

Months: May (9 males); June (2 males).

Habitat: litter, *Kalmia-Vaccinium* heath (11 males).

Regional Distribution: ME (Collins et al. 1996); NB (Dondale and Redner 1978); QC (Bélanger and Hutchinson 1992).

FAMILY SALTICIDAE

The salticids or jumping spiders have the keenest eyesight of all spiders. They are diurnal hunters that slowly stalk their prey until a short distance away. They then make a sudden quick jump, with the front legs (usually the heaviest) extended and an anchoring line fastened to the substrate by the spinnerets. These strategies permit salticids to leap from vertical surfaces and capture flying insects. They are found in diverse habitats, including cobble beaches and rocks in old fields and meadows; on foliage of grasses, forbs, shrubs, and small trees; on and under bark of standing and dead trees, and bark of stumps; and on sandy beaches of streams, lakes, rivers, and seashores. They are usually common and active in open sunny places. Richman and Jackson (1992) reviewed the behavior of these most fascinating spiders.

None of our North American species of Salticidae are known to spin webs for prey capture. However, they all construct closely woven retreats for molting, hibernating, and egg-laying. Often several spiders of the same (or different) species will spin their hibernating nests in aggregations under bark; others spin maternal nests among dry leaves and on and in dry, senescent seedheads of forbs and shrubs.

The salticids are easily recognized by their large anterior median eyes and minute posterior median eyes. The eyes are typically arranged in three rows; the posterior row is strongly recurved, thus appearing as two rows. Legs I and II are prograde, some with enlarged femora; the tarsi are two-clawed, and claw tufts are usually present. Some species have constricted bodies and mimic ants (Cutler 1988); others have wide bodies and mimic beetles (Gertsch 1979, Richman and Jackson 1992). Richman et al. (2005) provide additional information on family characteristics, natural and taxonomic histories, and a key to the genera in North America north of Mexico.

This is the largest family of spiders, with 560 genera and 5,077 species worldwide (Platnick 2007). Collectively, the United States and Canada have more than 315 species in 63 genera (Richman et al. 2005). The Maine salticid fauna is represented by 21 genera and 50 species; 15 genera and 25 species are found in Milbridge. Source literature, including revisionary works, are listed below for each species found in Milbridge. Kaston (1981) provides an identification key for the more common species likely to be found in New England; however, some of the species names are now out-of-date. See the latest version of Norman I. Platnick's "World Spider Catalog" (e.g., Platnick 2007, version 7.5) for currently approved names.

Eris militaris (Hentz, 1845)

Taxonomy: Maddison (1986); Kaston (1981, as *Eris marginata* (Walckenaer)); Paquin and Dupérré (2003).

Records: M01 (50 males, 64 females); M02 (1 male, 2 females); M04 (9 males, 5 females); M06 (8 males, 7 females); M07 (3 males, 2 females); M10 (1 male); M12 (3 males, 7 females); M13 (1 male, 1 female); M15 (2 females); M17 (1 female); M26 (1 female); M30 (2 males); M31 (1 female); M32 (1 female); M33 (2 males, 3 females); M34 (1 male, 5 females); M35 (3 females); M37 (2 males, 5 females); M38 (3 males, 2 females); M39 (2 males); M47 (1 male); M51 (2 males, 1 female); M55 (1 male); M57 (1 female); M58 (1 female). N = 207 adults; 92 males, 115 females.

Methods: beating cloth (12 males, 15 females); brushing tree-bole bark (1 female); search (29 males, 29 females); sifted litter-hand sorted (1 female); sweep net (49 males, 69 females); n. d. (2 males).

Months: May (1 male, 1 female); June (15 males, 23 females); July (9 males, 21 females); August (48 males, 35 females); September (18 males, 30 females); October (1 male, 4 females); December (1 female).

Habitats: beating red spruce foliage, seashore-backshore (2 males, 1 female); beating red spruce foliage, old field edge (1 female); beating red spruce foliage, mixed conifer-hardwood (1 male); beating red spruce foliage, saltmarsh edge (2 females); beating red spruce foliage (1 male, 1 female); beating spruce branches (1 male); beating spruce at shore, seashore-backshore (2 males); beating spruces, saltmarsh edge (1 female); beating white pine foliage (1 male, 1 female); beating alders, old field edge (1 female); beating foliage in alder thicket (2 males, 2 females); beating foliage of hardwoods (1 male, 3 females); beating eastern larch foliage (1 male, 2 females); brushing white (paper) birch bark, *Betula-Acer* stand (1 female); sifting forest-floor litter, *Acer-Betula-Picea* stand (1 female); sweeping grasses, forbs, shrubs, and small trees, old field (5 males, 7 females); sweeping vegetation, old field (15 males, 18 females); sweeping vegetation, old field edge (1 male, 2 females); sweeping vegetation, freshwater pond shore (3 females); sweeping shore grasses and sedges, seashore-backshore (1 female); sweeping aster and raspberry (1 male); sweeping stand of meadowsweet (1 male); sweeping vegetation, low marshy area, coastal spruce-mixed hardwood (2 females); sweeping vegetation (*Juncus-Spartina*), saltmarsh (7 males, 7 females); sweeping vegetation, saltmarsh edge (1 female); sweeping vegetation, *Kalmia-Vaccinium* heath (2 males, 2 females); sweeping grasses, sedges, and shrubs, freshwater marsh (3 males, 7 females); sweeping grasses and sedges, freshwater marsh (1 male, 2 females); sweeping roadside grasses, forbs, ferns, and rushes, roadside alder-aspen edge (1 male); sweeping foliage, mixed hardwood-conifer (1 female); sweeping grasses, sedges, and forbs, dry streambed, mixed hardwood-conifer (1 male, 4 females); sweeping vegetation, brackish marsh (2 females); sweeping and shaking chokecherry foliage and flowers, old field (1 female); sweeping grasses and *Spiraea*, mown field edge (2 males, 4 females); sweeping vegetation, *Sphagnum*-cranberry-rush bog (3 males, 2 females); sweeping understory shrubs and ferns, red maple sapling stand (2 males); sweeping marsh vegetation near freshwater stream, riparian (1 male); sweeping meadowsweet, mixed conifer opening (2 males, 1 female); sweeping grasses and forbs, edge of school playground, disturbed area (1 male); sweeping rushes, brackish marsh (1 female); sweeping grasses, forbs, and rushes, brackish marsh (1 female); in old field (1 male, 3 females); in grass (1 female); in retreat on chokecherry (1 female); in alders along shore, seashore-backshore (1 female); in silk nest, St. Johnswort flower head (1 male); in silk nest, folded blackberry leaf (1 male); in folded cherry leaf, old field (1 male); in garden (1 male); in retreat with penultimate female, saltmarsh (1 male); in low foliage along streamside, riparian (1 male, 1 female); in folded red maple leaf, mixed hardwood-conifer (1 female); in silk retreat, folded green leaves, meadowsweet, freshwater marsh edge (1 female); in silk retreat, dry meadowsweet inflorescence, freshwater marsh edge (1 male); in dead blackberry leaf (1 female); in downed burned trees over dry streambed, mixed hardwood-conifer (1 female); in nest, folded dead leaf impaled on black rush (*Juncus* sp.), brackish marsh (1 female); on grass blade, old field edge (1 female); on vegetation, old field (1 male); on potato plant, vegetable garden (1 female); on squash leaf, vegetable garden (1 female); on green bean leaf, vegetable garden (1 male); on alder leaf and twig (2 females); on alder leaf along lane, mixed hardwood-conifer (1 male); on shrub foliage along lane, mixed hardwood-conifer (1 male); on foliage in alder thicket (1 male); on autumn olive (1 female); on mountain-ash feeding on bug (1 female); on blackberry leaves (1 female);

on ground, old field edge (1 male); on meadowsweet (1 male); on grass, freshwater pond edge (1 male); on rocks, seashore-backshore (2 males, 1 female); on balsam fir foliage, understory balsam fir-red spruce stand (1 male); descending on dragline in garage, house (1 female); on outside shingled wall, house (1 male, 2 females); on cellar door (exterior), house (1 female); on ceiling light fixture (dead), house (1 female); on lawn chair feeding on winged ant (1 female); on lawn chair (1 male); on lawn table (1 male); on metal table, old field (1 male); on table inside house (1 male); on porch, house (1 male); on screen door (1 male); running on brick wall (1 male); under bark, white (paper) birch, *Betula-Acer* stand (1 female); under bark, dead red maple, coastal spruce-mixed hardwood (1 male, 1 female); *Kalmia-Vaccinium* heath (1 male); n. d. (2 males).

Regional Distribution: ME (Bryant 1908, as *Dendryphantes militaris* (Hentz) Emerton); CT (Kaston 1981, as *Eris marginata* (Walckenaer)); NY (Crosby and Bishop 1928); QC (Bélanger and Hutchinson 1992).

Euophrys monadnock Emerton, 1891

Taxonomy: Kaston (1938b, 1981, as *Euophrys nearctica* Kaston, 1938); Edwards (1980); Paquin and Dupérré (2003).

Record: M01 (1 male). *N* = 1 adult male.

Method: search (1 male).

Month: June (1 male).

Habitat: on inside wall, house (1 male).

Regional Distribution: ME (Bryant 1908, as *Evophrys* (sic.) *monadnock* Emerton); NH (Richman and Cutler 1978, as *Euophrys nearctica* Kaston, 1938); QC (Paquin and Dupérré 2003).

Evarcha hoyi (Peckham & Peckham, 1883)

Taxonomy: Chickering (1944); Kaston (1981, as *Evarcha hoyi* Peckham)); Paquin and Dupérré (2003).

Records: M01 (22 males, 20 females); M03 (1 male); M05 (2 males, 2 females); M06 (5 males, 4 females); M07 (1 male); M10 (2 females); M12 (1 female); M14 (2 males, 2 females); M15 (1 female); M17 (1 female); M23 (3 females); M28 (2 females); M34 (1 female); M35 (6 females); M38 (1 male); M39 (1 male); M41 (4 females); M51 (1 male, 1 female); M55 (3 males, 3 females); M57 (1 female). *N* = 93 adults; 39 males, 54 females.

Methods: beating cloth (5 females); search (1 male, 14 females); sweep net (37 males, 34 females); n. d. (1 male, 1 female).

Months: May (3 females); June (6 males, 15 females); July (9 males, 14 females); August (11 males, 11 females); September (13 males, 11 females).

Habitats: beating white pine foliage (2 females); beating red spruce foliage (saplings), conifer-mixed hardwood (2 females); beating wild-raisin, brackish marsh edge (1 female); sweeping grasses, forbs, shrubs, and small trees, old field (12 males, 7 females); sweeping vegetation, old fields (7 males, 7 females); sweeping *Vaccinium* and small shrubs, old field (1 female); sweeping vegetation, old field edge (2 males, 1 female); sweeping *Vaccinium* and *Myrica* near woods, old field (1 male); sweeping low vegetation, deciduous-coniferous woodland understory (1 male); sweeping vegetation, saltmarsh (4 males, 2 females); sweeping grasses and shrubs, saltmarsh (1 female); sweeping vegetation, saltmarsh edge (1 female); sweeping grasses, saltmarsh edge (1 female); sweeping vegetation, *Kalmia-Vaccinium* heath (1 male); sweeping vegetation, freshwater marsh (1 female); sweeping understory vegetation along trail, mixed hardwood-conifer (2 males, 2 females); sweeping grass, island (2 females); sweeping grassy area near cabin, mixed conifer opening, island (1 female); sweeping *Kalmia* near freshwater pond, island (1 male); sweeping roadside white and yellow clover, disturbed area (1 female); sweeping roadside disturbed area (1 female); sweeping vegetation, dry streambed, mixed hardwood-conifer (1 female); sweeping *Sphagnum* bog (1 male); sweeping understory shrubs, red maple stand (1 male); sweeping rhodora and *Spiraea*, mixed conifer-opening (1 female); sweeping meadowsweet, mixed conifer opening (1 male); sweeping grasses and forbs, school playground edge, disturbed area (3 males, 3 females); in nest on grasses, old field (1 female); in silk retreat on black rush, saltmarsh (1 female); in silk retreats, red maple leaves (dead) on *Juncus* sp., brackish marsh (2 females); in nests, folded dead leaves impaled on black rush, brackish marsh (2 females); in retreat, impaled leaf on black rush, brackish marsh (1 female); in silk retreats, folded (dead) red maple leaves impaled on black rush stems, saltmarsh edge (4 females); in silk retreat, impaled leaf on rush, brackish marsh (1 female); on cobble beach with dipteran prey, seashore (1 female); on foliage in flower garden (1 female); in trash bin (1 male); n. d., old field-brackish marsh edge (1 female); n. d., saltmarsh (1 male).

Regional Distribution: ME (Bryant 1908, as *Evarcha hoyi* (Peckham) Simon); CT (Kaston 1981, as *Evarcha hoyi* (Peckham)); NY (Crosby and Bishop 1928); QC (Bélanger and Hutchinson 1992).

Ghelna canadensis (Banks, 1897)

Taxonomy: Chickering (1944, as *Metaphidippus canadensis* (Banks)); Kaston (1973, 1981, as *M. canadensis* (Banks)); Maddison (1996); Paquin and Dupérré (2003).

Records: M12 (2 males, 1 female); M26 (1 female); M56 (9 males, 5 females). *N* = 18 adults; 11 males, 7 females.

Methods: condensed litter-Berlese funnel (2 males); condensed litter-hand sorted (7 males, 5 females); pitfall traps (1 male, 1 female); search (1 male, 1 female).

Months: June-July (1 female); July-August (1 male); August (1 male, 1 female); September (9 males, 5 females).

Habitats: in nests, meadowsweet seedheads (1 male, 1 female); litter, freshwater pond edge (1 male); litter, saltmarsh edge (1 female); sifted litter (grasses, forbs, tidal debris), salt meadow (9 males, 5 females).

Regional Distribution: ME (Mairs and Jennings, unpubl.); MA, NY, ON (Kaston 1973, 1981, as *Metaphidippus canadensis* (Banks)); QC (Bélanger and Hutchinson 1992).

Habronattus borealis (Banks, 1895)

Taxonomy: Chickering (1944); Kaston (1981); Griswold (1987); Paquin and Dupérré (2003).

Records: M04 (2 females); M08 (2 males, 5 females); M35 (1 female). *N* = 10 adults; 2 males, 8 females.

Methods: search (1 male, 6 females); sweep net (1 male, 2 females).

Months: May (2 females); June (2 males, 5 females); July (1 female).

Habitats: sweeping marsh vegetation near brackish pond, seashore-brackish marsh (1 female); sweeping grasses and shrubs on shore, seashore-backshore (1 male, 1 female); among rocks at shore, seashore (1 male); in retreats under rocks, cobblestone beach, seashore (4 females); in silk retreat, red maple leaf on rush, brackish marsh (1 female); on cobblestone beach and ledge, seashore (1 female).

Regional Distribution: ME (Peckham and Peckham 1909, as *Pellenes borealis* B.); MA, NY, ON (Griswold 1987); CT (Kaston 1981); QC (Paquin et al. 2001).

Habronattus calcaratus maddisoni Griswold, 1987

Taxonomy: Griswold (1987); Paquin and Dupérré (2003).

Records: M04 (1 male); M58 (1 female). *N* = 2 adults; 1 male, 1 female.

Method: search (1 male, 1 female).

Month: May (1 male, 1 female).

Habitats: on rock ledge, seashore (1 male); on ground, marsh grass and matted straw, seashore-brackish marsh (1 female).

Regional Distribution: ME, MA, CT, NY, ON, QC (Griswold 1987).

Habronattus decorus (Blackwall, 1846)

Taxonomy: Chickering (1944); Kaston (1981); Griswold (1987); Paquin and Dupérré (2003).

Records: M01 (1 male); M06 (5 males); M35 (1 male). *N* = 7 adult males.

Methods: pitfall traps (5 males); search (1 male); sweep net (1 male).

Months: May (1 male); June (2 males); July (4 males).

Habitats: litter, saltmarsh (5 males); sweeping shrubs and grasses, brackish marsh (1 male); in garden (1 male).

Regional Distribution: ME (Procter 1933, as *Pellenes splendens* (Peckham)); NH, VT, MA, CT, NY, ON, NS (Griswold 1987); QC (Hutchinson 1999).

Habronattus viridipes (Hentz, 1846)

Taxonomy: Chickering (1944, as *Habronattus peregrinus* (Peckham), female only); Kaston (1981); Griswold (1987); Paquin and Dupérré (2003).

Records: M07 (2 males); M11 (1 female). *N* = 3 adults; 2 males, 1 female.

Habitats: litter, *Kalmia-Vaccinium* heath (2 males); ground, gravel pit in conifer-mixed hardwood opening (1 female).

Method: pitfall traps (2 males, 1 female).

Months: May (1 male); June (1 male); July (1 female).

Regional Distribution: ME (Peckham and Peckham 1909, as *Pellenes peregrinus* P.); VT, CT, NY, ON (Griswold 1987); QC (Bélanger and Hutchinson 1992).

****Marpissa grata* (Gertsch, 1936)**

Taxonomy: Gertsch (1936, as *Hyctia grata* Gertsch); Barnes (1958).

Record: M33 (1 female). *N* = 1 adult female.

Method: sweep net (1 female).

Month: June (1 female).

Habitat: sweeping grasses and sedges, freshwater marsh (1 female).

Regional Distribution: ME (this study).

Note: Previously known only from Minnesota and Michigan (Barnes 1958).

Neon nelli Peckham & Peckham, 1888

Taxonomy: Chickering (1944, as *Neon nellii* Peckham); Gertsch and Ivie (1955); Kaston (1981, as *Neon nellii* Peckham); Paquin and Dupérré (2003).

Records: M01 (1 female); M04 (1 male); M24 (1 female). *N* = 3 adults; 1 male, 2 females.

Method: pitfall traps (1 male, 2 females).

Months: June (1 male, 1 female); July-August (1 female).

Habitats: litter, seashore-backshore (1 female); litter, coastal red spruce stand (1 male); litter, red maple sapling stand (1 female).

Regional Distribution: ME (Bryant 1908); NH, MA, CT, NY, ON, NF, LB (Gertsch and Ivie 1955); QC (Bélanger and Hutchinson 1992).

Pelegrina flaviceps (Kaston 1973)

Taxonomy: Kaston (1973, 1981 as *Metaphidippus flaviceps* Kaston); Maddison (1996); Paquin and Dupérré (2003).

Records: M01 (26 males, 13 females); M04 (4 males, 12 females); M06 (2 males, 3 females); M10 (1 male, 3 females); M13 (1 male, 2 females); M15 (1 male, 2 females). *N* = 70 adults; 35 males, 35 females.

Methods: beating cloth (34 males, 33 females); search (1 male); sweep net (2 females).

Months: April (1 male); May (20 males, 12 females); June (2 males, 2 females); August (9 males, 17 females); September (1 female); October (3 males, 3 females).

Habitats: beating red spruce foliage, old field edge (8 males, 4 females); beating red spruce foliage, old field (3 males); beating red spruce foliage (10 males, 5 females); beating spruce foliage (branches) (4 males, 4 females); beating red spruce foliage, seashore-backshore (4 males, 11 females); beating spruce at shore (1 female); beating white spruce foliage, saltmarsh edge (2 males, 1 female); beating eastern larch foliage (saplings) (1 female); beating red spruce foliage (saplings), conifer-mixed hardwood (1 male, 2 females); beating red spruce foliage, mixed hardwood-conifer (1 male, 2 females); beating red spruce foliage, saltmarsh edge (1 male, 2 females); sweeping vegetation, saltmarsh (1 female); sweeping grasses, saltmarsh (1 female); on red spruce (1 male).

Regional Distribution: ME, CT (Kaston 1973, 1981, as *Metaphidippus flaviceps* Kaston); NH, VT, NY, ON, QC (Maddison 1996).

Note: Kaston's (1973) record of *Pelegrina flaviceps* in Maine refers to a collection by E. B. Bryant on 4 August 1904 at Casco Bay, Cumberland County. He also noted that this species has been found at many other localities in Maine, but did not give specifics.

Pelegrina flavipes (Peckham & Peckham, 1888)

Taxonomy: Chickering (1944, as *Metaphidippus flavipedes* (Peckham)); Kaston (1973, 1981, as *Metaphidippus flavipedes* (Peckham)); Maddison (1996); Paquin et al. (2001) and Paquin and Dupérré (2003).

Records: M01 (4 males, 10 females); M04 (5 males, 3 females); M05 (1 male); M06 (3 females); M15 (2 males, 2 females); M17 (1 female); M32 (2 females); M38 (1 female); M48 (1 male, 1 female); M49 (3 males). *N* = 39 adults; 16 males, 23 females.

Methods: beating cloth (15 males, 20 females); sweep net (1 male, 3 females).

Months: May (1 male, 4 females); June (2 males, 8 females); July (3 males, 2 females); August (7 males, 6 females); September (3 males, 2 females); October (1 female).

Habitats: beating red spruce foliage, old field (2 males, 1 female); beating red spruce foliage, old field edge (1 female); beating red spruce foliage, upper shore, seashore-backshore (2 females); beating red spruce foliage (1 male, 3 females); beating spruces (1 female); beating white pine foliage (1 male, 1 female); beating spruce at shore (5 males, 3 females); beating white spruce foliage, saltmarsh edge (3 females); beating red spruce foliage, saltmarsh edge (2 males, 2 females); beating red spruce foliage, mixed hardwood-conifer (2 females); beating red spruce foliage, seashore-backshores (4 male, 1 female); sweeping *Vaccinium* and small shrubs, old field (1 female); sweeping wet meadow, old field-brackish marsh (1 male); sweeping grasses, saltmarsh (1 female); sweeping *Sphagnum* bog (1 female).

Regional Distribution: ME (Bryant 1908, as *Dendryphantes flavipedes* Peckham); CT (Kaston 1981, as *Metaphidippus flavipedes* (Peckham)); NY (Crosby and Bishop 1928, as *Metaphidippus flavipedes* (Peck.); NB (Loughton et al. 1963, as *Metaphidippus flavipedes* (Peckham)); ON, QC, NS, PE, NF (Maddison 1996).

Pelegrina insignis (Banks, 1892)

Taxonomy: Kaston (1981, as *Metaphidippus insignis* (Banks)); Maddison (1996); Paquin and Dupérré (2003).

Records: M01 (3 males, 12 females); M05 (3 males, 11 females); M06 (2 males, 8 females) M07 (1 female); M08 (1 female); M12 (2 males, 8 females); M30 (1 female); M33 (1 male, 3 females); M35 (4 females); M41 (1 female); M47 (3 females); M51 (1 female); M55 (4 males, 3 females). *N* = 72 adults; 15 males, 57 females.

Methods: search (4 females); sweep net (15 males, 53 females).

Months: May (4 males, 12 females); June (11 males, 31 females); July (11 females); August (3 females).

Habitats: sweeping vegetation, old field (3 males, 10 females); sweeping grasses and forbs in open field, old field (1 male, 9 females); sweeping wet meadow, old field-brackish marsh (2 males, 2 females); sweeping vegetation (*Juncus-Spartina*), saltmarsh (1 male, 8 females); sweeping grasses and low shrubs, saltmarsh edge (1 male); sweeping grasses and shrubs on shore, seashore-backshore (1 female); sweeping marsh grasses and shrubs (*Spiraea-Kalmia*), freshwater marsh (2 males, 2 females); sweeping grasses, freshwater marsh (2 females); sweeping shrubs, freshwater marsh edge (3 females); sweeping vegetation (1 female); sweeping grasses, forbs, ferns, and rushes, roadside alder-aspen edge (1 female); sweeping marsh grasses and sedges, freshwater marsh (1 male, 3 females); sweeping vegetation, brackish marsh (4 females); sweeping vegetation, freshwater streamside (3 females); sweeping rhodora and *Spiraea*, mixed conifer opening (1 female); sweeping grasses and forbs, school playground edge, disturbed area (4 males, 3 females); in web, head of grass stem, with remains of *Dictyna coloradensis* and various Diptera, old field (1 female); in dry, folded red maple leaf, saltmarsh edge (1 female); on heath plants, *Kalmia-Vaccinium* heath (1 female); n. d., old field (1 female).

Regional Distribution: ME (Richman and Cutler 1978, as *Metaphidippus insignis* (Banks); VT, MA, CT, NY, NB, ON (Maddison 1996); QC (Bélanger and Hutchinson 1992).

Pelegrina proterva (Walckenaer, 1837)

Taxonomy: Kaston (1973, 1981, as *Metaphidippus proterva* (Walckenaer); Maddison (1996); Paquin and Dupérré (2003).

Records: M01 (8 males, 11 females); M08 (2 females); M12 (1 male, 2 females); M14 (1 female); M15 (1 male); M24 (1 female); M26 (4 males, 2 females); M35 (1 female); M37 (1 male, 2 females); M47 (1 female). *N* = 38 adults; 15 males, 23 females.

Methods: beating cloth (1 male); pitfall trap (1 female); search (1 male, 2 females); sifted litter-hand sorted (1 male); sweep net (12 males, 20 females).

Months: May (1 male, 1 female); June (9 males, 15 females); July (4 females); August (3 females); September (4 males); October (1 male).

Habitats: beating foliage in alder thicket (1 male); sifting forest-floor litter under maple-birch overstory, mixed hardwood-conifer (1 male); litter, saltmarsh edge (1 female); sweeping vegetation, old field (5 males, 3 females); sweeping vegetation, old field edge (4 females); sweeping asters, goldenrod, and small alders, old field (1 male); sweeping meadowsweet stand (1 female); sweeping grasses on shore, seashore-backshore (1 female); sweeping grasses, forbs, and seaside-pea, seashore-upper beach (1 female); sweeping grasses and shrubs on shore, seashore-upper beach (1 female); sweeping marsh grasses and sedges, freshwater marsh (1 female); sweeping shrubs, freshwater marsh (1 female); sweeping grasses and forbs, mixed hardwood-conifer (1 female); sweeping grasses, saltmarsh edge (1 male); sweeping understory vegetation, red maple sapling stand (1 female); sweeping and shaking chokecherry foliage and flowers, saltmarsh edge (4 males, 1 female); sweeping shrubs, brackish marsh (1 female); sweeping grasses and *Spiraea*, mown field edge (1 male, 2 females); sweeping marsh vegetation, freshwater streamside (1 female); among alder leaves (1 female); in silk retreat with egg sac, folded *Spiraea* leaf (1 female); on rhodora in blossom, freshwater marsh (1 male).

Regional Distribution: ME (Procter 1938, as *Dendryphantes capitatus* (Hentz)); NH, VT, MA, CT, RI, NY, ON, QC, NS (Maddison 1996).

Phidippus clarus Keyserling, 1885

Taxonomy: Chickering (1944); Kaston (1981); Paquin and Dupérré (2003); Edwards (2004).

Records: M01 (11 males, 18 females); M05 (2 males, 3 females); M06 (5 females); M07 (1 male, 3 females); M22 (1 male); M28 (2 males, 1 female); M35 (9 males, 6 females); M47 (1 male); M55 (4 males, 4 females). *N* = 71 adults; 31 males, 40 females.

Methods: pitfall trap (1 male); search (3 males, 8 females); sweep net (27 males, 30 females); n. d. (2 females).

Months: June (4 males, 4 females); June-July (1 male); July (21 males, 15 females); August (5 males, 15 females); September (6 females).

Habitats: litter, bigtooth aspen stand (1 male); sweeping vegetation, old fields (9 males, 12 females); sweeping vegetation, old field edge (1 female); sweeping *Vaccinium* and *Myrica* near woods, old field (1 male, 1 female); sweeping vegetation, saltmarsh (2 females); sweeping vegetation, *Kalmia-Vaccinium* heath (1 male, 3 females); sweeping white and yellow clover, roadside disturbed area (2 males, 1 female); sweeping vegetation, brackish marsh (9 males, 6 females); sweeping marsh vegetation, freshwater streamside, riparian (1 male); sweeping grasses and forbs, school playground edge, disturbed area (4 males, 4 females); in folded blackberry leaf (1 female); in silken nest, low shrub leaves (1 female); in leaf retreat, chokecherry seedling, old field (1 female); in nest with egg sac, curled chokecherry leaves, old field (1 female); in nest between two hawthorn leaves (1 female); in nest with spiderlings, hawthorn leaves (1 female); in retreats, goldenrod basal leaves (2 females); on wild cherry leaf (1 male); on twig, small pin cherry (1 male); running over ledge at shore, seashore (1 male); n. d., old field (1 female); n. d., saltmarsh (1 female).

Regional Distribution: ME (Bryant 1908, as *Phidippus multiformis* Emerton); QC (Bélanger and Hutchinson 1992); NH, VT, MA, CT, RI, NY, ON (Edwards 2004).

Phidippus purpuratus Keyserling, 1885

Taxonomy: Chickering (1944); Kaston (1981); Paquin and Dupérré (2003); Edwards (2004).

Records: M01 (1 male); M04 (1 male, 1 female); M07 (1 female); M11 (1 male); M15 (1 female); M45 (1 male). *N* = 7 adults; 4 males, 3 females.

Method: search (4 males, 3 females).

Months: May (1 male, 1 female); June (2 males); July (1 male); August (2 females).

Habitats: among rocks, roadside embankment (1 male); in silk retreat under rock, coastal spruce-mixed hardwood (1 female); in egg retreat under rock, *Kalmia-Vaccinium* heath (1 female); on *Cladina*-covered ledges, mixed conifer-hardwood (1 male); on cobblestone beach and ledge (1 male); on rock, gravel pit, mixed conifer-hardwood opening (1 male); on small rock, saltmarsh (1 female).

Regional Distribution: ME (Keyserling 1885); NH, VT, MA, CT, NY, ON, QC (Edwards 2004).

Phidippus whitmani Peckham & Peckham, 1909

Taxonomy: Chickering (1944); Kaston (1981); Paquin and Dupérré (2003); Edwards (2004).

Records: M01 (2 males); M27 (1 male). *N* = 3 adult males.

Method: search (3 males).

Month: June (3 males).

Habitats: in flower garden (1 male); on ground, red maple-white (paper) birch stand (1 male); inside window, house (1 male).

Regional Distribution: ME (Procter 1946); NH, MA, CT, RI, NY, ON, QC, NS (Edwards 2004).

Salticus scenicus (Clerck, 1757)

Taxonomy: Chickering (1944); Kaston (1981, as *Salticus scenicus* (Linnaeus)); Paquin and Dupérré (2003).

Records: M01 (8 males, 1 female); M21 (1 female). *N* = 10 adults; 8 males, 2 females.

Method: search (8 males, 2 females).

Months: May (2 males); June (6 males, 2 females).

Habitats: in wood bin (1 male); on ground, old field edge (1 male); on ground, vegetable garden (1 male); on exterior walls, house (3 males, 1 female); on floor, house (1 male); on exterior of screen door, house (1 male); on exterior white vinyl siding, building (1 female).

Regional Distribution: ME (Bryant 1908); CT (Kaston 1981, as *Salticus scenicus* (Linnaeus)); NY (Crosby and Bishop 1928); QC (Bélanger and Hutchinson 1992).

***Sibianor aemulus* (Gertsch, 1934)

Taxonomy: Gertsch (1934, as *Sassacus aemulus* n. sp.); Maddison (1978, as *Bianor aemulus* (Gertsch, 1934)); Logunov (2001).

Records: M01 (2 males); M14 (1 male). *N* = 3 adult males.

Methods: pitfall traps (2 males); search (1 male).

Months: June (1 male); July (2 males).

Habitats: litter, deciduous-coniferous woodland (1 male); litter, *Betula-Acer* stand (1 male); on ground among grasses and forbs, mixed hardwood-conifer overstory (1 male).

Regional Distribution: ME (this study); ON (Richman and Cutler 1978, as *Bianor aemulus* (Gertsch); QC (Bélanger and Hutchinson 1992).

Note: Richman et al. (2005) also noted this species in Maine, but their record originated from this study.

Sitticus floricola palustris (Peckham & Peckham, 1883)

Taxonomy: Chickering (1944); Prószyński (1980); Kaston (1981, as *Sitticus palustris* (Peckham)); Paquin and Dupérré (2003).

Records: M01 (2 males); M05 (1 female); M06 (5 males, 2 females); M12 (1 male, 10 females); M15 (1 female); M17 (3 males); M23 (1 female); M33 (1 male, 22 females); M34 (1 male, 1 female); M35 (3 males, 27 females); M38 (1 male); M41 (1 male, 6 females); M47 (2 males, 3 females); M55 (2 males, 2 females); M57 (1 female). *N* = 99 adults; 22 males, 77 females.

Methods: litter condenser-Berlese funnel (1 male); search (3 males, 65 females); sweep net (18 males, 10 females); n. d. (2 females).

Months: June (5 males, 44 females); July (5 males, 25 females); August (12 males, 8 females).

Habitats: sifted grass litter near freshwater stream, riparian (1 male); sweeping foliage, freshwater pond edge (1 male); sweeping vegetation, old field (1 female); sweeping vegetation (*Juncus-Spartina*), saltmarsh (1 male); sweeping grasses, saltmarsh (1 female); sweeping grasses and shrubs, saltmarsh (1 female); sweeping vegetation, saltmarshes (6 males); sweeping grasses and shrubs (*Spiraea-Kalmia*), freshwater marsh (1 male, 1 female); sweeping grasses, freshwater marshes (1 male, 1 female); sweeping grasses and sedges, freshwater marsh (1 female); sweeping grasses, sedges, and forbs, dry stream bed, mixed hardwood-conifer (1 male, 1 female); sweeping grasses, brackish marsh (2 females); sweeping vegetation, brackish marsh (3 males); sweeping vegetation, *Sphagnum*-cranberry-rush bog (1 male); sweeping marsh vegetation, freshwater streamside, riparian (2 males); sweeping grasses along freshwater stream, riparian (1 female); sweeping mixed vegetation (grasses, forbs) near school playground, disturbed area (1 male); in silk retreat, folded *Spiraea* leaf, freshwater pond edge (1 male); in silk retreat on black rush (1 male); in silken retreats on meadowsweet, freshwater marsh (4 females); in retreats on rhodora (2 females); in retreat, fruiting head of rush, freshwater marsh (1 female); in silk retreats, dry inflorescences of meadowsweet, freshwater marsh (21 females); in adjacent nests, rolled leaves stuck on black rush, brackish marsh (3 females); in retreats, leaves and seedhead of marsh grass, brackish marsh (3 females); in retreats, dry composite seedhead, brackish marsh (4 females); in silk retreats, red maple leaf on *Juncus* sp., brackish marsh (2 females); in retreats, dry forb stem, brackish marsh (4 females); in retreats, impaled maple leaves on black rush stems, brackish marsh (5 females); in nests, folded dead leaves on black rush, brackish marsh (3 females); in nest with young spiderlings on *Juncus* (1 female); in silk retreats, dead red maple leaves impaled on black rush stems, saltmarsh edge (1 male, 6 females); in silk retreats on *Scirpus* seedhead, freshwater marsh, riparian (3 females); in retreat, dry inflorescence of meadowsweet, freshwater streamside (1 female); in silk retreat, impaled tree leaf on black rush (1 female); on ground under paper, bog edge, island (1 female); n. d., saltmarsh (1 female); n. d., freshwater marsh (1 female).

Regional Distribution: ME (Emerton 1891, as *Attus palustris* Peckham); CT (Kaston 1981, as *Sitticus palustris* (Peckham)); NY (Crosby and Bishop 1928); QC (Bélanger and Hutchinson 1992, as *Sitticus palustris* (Peckham & Peckham)).

Note: Most North American investigators of Salticidae consider Prószyński's (1980) designation of *S. palustris* as a subspecies of *S. floricola* (C. L. Koch, 1837), a European species, to be invalid (B. Cutler, pers. comm.). However, the basis for such emendation remains to be made; see Platnick (2007).

**Sitticus pubescens* (Fabricius, 1775)

Taxonomy: Roberts (1985, 1987); Kaston (1981).

Record: M21 (1 male). *N* = 1 adult male.

Method: search (1 male).

Month: August (1 male).

Habitat: on exterior white vinyl siding, building (1 male).

Regional Distribution: ME (this study); MA, CT (Kaston 1981).

Note: *Sitticus pubescens* is an invasive species from Europe, which was first discovered in North America at Allston, MA (Bryant 1941). It has since been found in Connecticut (Kaston 1981) and in New Jersey (B. Cutler, pers. comm.).

Sitticus striatus Emerton, 1911

Taxonomy: Prószyński (1980); Kaston (1981); Paquin and Dupérré (2003).

Records: M06 (1 male, 1 female); M56 (2 females). *N* = 4 adults; 1 male, 3 females.

Methods: litter condenser-hand sorted (2 females); pitfall trap (1 female); sweep net (1 male).

Months: July (1 female); August (1 male); September (2 females).

Habitats: litter, saltmarsh (1 female); sifted litter (grasses, forbs, tidal debris), salt meadow (2 females); sweeping vegetation, saltmarsh (1 male).

Regional Distribution: ME (Emerton 1911, as *Sittacus* [sic.] *striatus* Emerton); CT (Kaston 1981); MA, NF (Richman and Cutler 1978); QC (Bélanger and Hutchinson 1992); LB (Prószyński 1980).

**Synageles noxiosus* (Hentz, 1850)

Taxonomy: Kaston (1981); Cutler (1987); Paquin and Dupérré (2003).

Record: M12 (1 male). *N* = 1 adult male.

Method: sweep net (1 male).

Month: June (1 male).

Habitat: sweeping grasses and other vegetation, freshwater marsh (1 male).

Regional Distribution: ME (this study); MA, CT, NY, ON (Cutler 1987); QC (Hutchinson 1999).

Talavera minuta (Banks, 1895)

Taxonomy: Kaston (1981); Paquin and Dupérré (2003).

Records: M06 (1 male); M07 (1 female). *N* = 2 adults; 1 male, 1 female.

Methods: pitfall trap (1 male); unsifted litter-Berlese funnel (1 female).

Months: July (1 male); August (1 female).

Habitats: litter, saltmarsh (1 male); litter, *Kalmia-Vaccinium* heath (1 female).

Regional Distribution: ME (Collins et al. 1996); MA, CT, NY (Richman and Cutler 1978); QC (Bélanger and Hutchinson 1992).

Tutelina similis (Banks, 1895)

Taxonomy: Kaston (1981); Paquin and Dupérré (2003).

Records: M51 (2 females); M55 (2 females). *N* = 4 adult females.

Method: sweep net (4 females).

Month: June (4 females).

Habitats: sweeping meadowsweet, mixed conifer opening (1 female); sweeping rhodora and meadowsweet, mixed conifer opening (1 female); sweeping grasses and forbs, school playground edge, disturbed area (2 females).

Regional Distribution: ME (Procter 1938, 1946, as *Icius similis* Banks); CT (1981); NY (Crosby and Bishop 1928, as *Icius similis* Banks); QC (Bélanger and Hutchinson 1992).

FAUNAL ATTRIBUTES AND HABITAT ASSOCIATIONS

Spider Taxa

Adult spiders of 19 families, 145 genera, and 302 species (4 unknown) were collected from diverse habitats in Milbridge, Washington County, ME, during 1991-2005. By comparison, Procter (1946) listed spiders of 15 families, 94 genera, and 179 species from various habitats of Mount Desert Island, Hancock County, ME. With recent taxonomic revisions, Procter's faunal list now represents 22 families, 109 genera, and 179 species (2 unknown). Studies of the ground-inhabiting fauna of blueberry fields in Washington County (Milbridge excluded) yielded spiders of 17 families, 53 genera, and 87 species (Collins et al. 1996). Maloney (2002) also investigated the terrestrial spider fauna of blueberry fields in Washington County and reported 17 families, 81 genera, and 133 species. In Maine's northern spruce-fir forests, a pitfall-trap study yielded spiders of 15 families, 76 genera, and at least 125 species associated with forest-floor litter (Jennings et al. 1988). Thus, comparatively, the Milbridge study represents the most comprehensive inventory of spiders for any locale within Maine, and includes taxa associated with diverse communities, habitats, and strata.

Species richness per family at Milbridge ranged from 1 to 89; overall mean = 15.9 ± 4.6, *N* = 19. Not surprisingly, the Linyphiidae were represented by the greatest number of genera and species, with 19 genera and 35 species of the subfamily Linyphiinae, and 28 genera and 54 species (2 unknown) of the subfamily Erigoninae. These sheet-web spiders comprise diverse assemblages of genera and species in New England (Hilburn and Jennings 1988, Jennings et al. 1988, Kaston 1981) and in eastern Canada (Bélanger and Hutchinson 1992, Paquin *et al.* 2001). Conversely, three spider families at Milbridge were represented by only a single species each: the Pholcidae, Titanoecidae, and Pisauridae. All three families have a limited number of species per family in the northern region, i.e., two species of Pholcidae, one species of Titanoecidae, and six species of Pisauridae (Dondale and Redner 1990, Kaston 1981, Paquin and Dupérré 2003).

Species richness per genus at Milbridge ranged from 1 to 13; overall mean = 2.1 ± 0.2, *N* = 145. Fully 88 genera (60.1 percent of total genera) of spiders collected at Milbridge were represented by a single species; most were genera of Linyphiinae and Erigoninae. However, some of the collected genera have only one known species in North America (e.g., *Neottiura*, *Estrandia*, *Macrargus*, *Metopobactrus*, and *Trabeops*); others have limited numbers of species in New England (e.g., *Allomengea*, *Tapinopa*, *Misumena*, *Misumenoides, Sibianor*, and *Ghelna*). The five richest genera at Milbridge were *Clubiona*, *N* = 13 species; *Xysticus*, *N* = 12 species; *Pardosa*, *N* = 10 species; *Walckenaeria*, *N* = 9 species; and *Theridion*, *N* = 8 species.

Spider Numbers

Fully 6,979 adult spiders were collected during this inventory. In addition, 3,980 juvenile spiders were also taken but were discarded because of their limited contribution to species richness. Few juvenile spiders can be determined to species with certainty. Most of the juvenile spiders were cursorial species captured by pitfall traps. As expected, adult spider abundances were unequally distributed among families, genera, and species. Individual specimens per family ranged from 1 (Titanoecidae, Pisauridae) to 1,691 (Lycosidae) (Fig. 2); overall mean = 367.3 ± 97.9, *N* = 19. Individual specimens per genus ranged from 1 (*N* = 22 genera) to 1,159; overall mean = 48.1 ± 9.2, *N* = 145. The five most frequently collected genera were *Pardosa*, *N* = 1,159; *Neoantistea*, *N* = 314; *Clubiona*, *N* = 248; *Xysticus*, *N* = 245; and *Trochosa*, *N* = 222. Individual specimens per species ranged

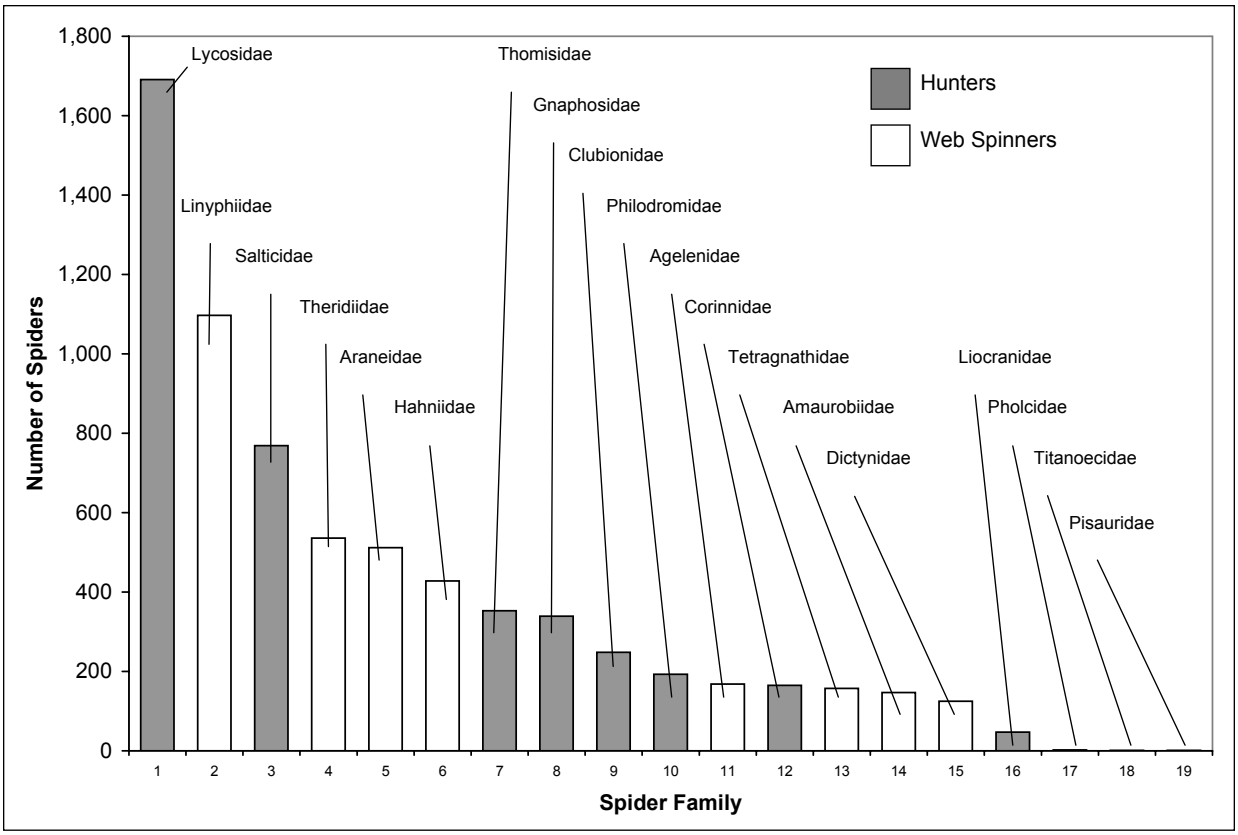

Figure 2.—Rank-order abundances of spider families collected in Milbridge, Washington County, ME, during the period 1991-2005.

from 1 to 470; overall mean = 23.1 ± 2.7, *N* = 302. Fully 53 species were represented by a single specimen.

The 10 most frequently collected species of spiders at Milbridge were *Pardosa moesta* Banks, 1892, *N* = 470; *P. modica* (Blackwall, 1846), *N* = 326; *Neoantistea magna* (Keyserling, 1887), *N* = 283; *Eris militaris* (Hentz, 1845), *N* = 207; *Zelotes fratris* Chamberlin, 1920, *N* = 172; *P. xerampelina* (Keyserling, 1877), *N* = 170; *Enoplognatha ovata* (Clerck, 1757), *N* = 158; *Neoscona arabesca* (Walckenaer, 1842), *N* = 156; *Trochosa terricola* Thorell, 1856, *N* = 156; and *Grammonota angusta* Dondale, 1959, *N* = 137. Collectively, these 10 species represented about one-third (32.0 percent) of the total adult spiders (*N* = 6,979) taken during this inventory.

Spider Foraging Guilds

Spider taxa and abundance of individuals also varied by two basic foraging strategies or guilds (Root 1973, Uetz et al.1999), i.e., web spinners and hunters. Web-spinning spiders spin webs to capture their prey, whereas hunting spiders rely on visual cues and use stealth, ambush, and chase to capture prey. More families, genera, and species of web spinners were collected than hunters. Of the 19 families of spiders collected at Milbridge, 10 belonged to the web spinner guild and 9 to the hunter guild. Genera of web spinners (*N* = 98) per guild family ranged from 1 (*Pholcus*, *Titanoeca*) to 49 (Linyphiinae, Erigoninae); overall mean = 9.8 ± 4.6, *N* = 10. Genera of hunters (*N* = 47) per guild family ranged from 1 (*Dolomedes*, *Agroeca*, *Clubiona*) to 15 (Salticidae); overall mean = 5.2 ± 1.6, *N* = 9. Species of web spinners (*N* = 179) per guild family ranged from 1 (*Pholcus manueli* Gertsch, 1937;

Titanoeca americana Emerton, 1888) to 89 (Linyphiinae, Erigoninae); overall mean = 17.9 ± 8.4, N = 10. Species of hunters (N = 123) per guild family ranged from 1 (*Dolomedes striatus* Giebel, 1869) to 25 (Lycosidae, Salticidae); overall mean = 13.7 ± 2.9, N = 9. Both the Lycosidae and Salticidae were represented by 25 species each.

The preponderance of web spinner taxa over hunter taxa in the Milbridge inventory was not unexpected. Kaston (1981) noted there were more families, genera, and species of web spinners than hunters in all of New England. Excluding those families not found at Milbridge, Kaston's totals were for web spinners, 146 genera and 376 species; for hunters, 73 genera and 278 species. The proportional representation of these guilds at Milbridge was remarkably similar to those estimated by Kaston for New England. Web spinners made up 67.6 percent of the total genera (N = 145) and 59.3 percent of the total species (N = 302) observed at Milbridge; the corresponding estimated values for web spinners in New England were 66.7 percent genera and 57.5 percent species. Conversely, hunters made up 32.4 percent of the total genera, and 40.7 percent of total species observed at Milbridge; the corresponding estimated values for hunters in New England were 33.3 percent genera and 42.5 percent species. G-tests indicated that none of the observed vs. estimated proportions differed significantly by guild; for genera, $G < 0.005$, $P \leq 0.05$; for species, $G = 0.40$, $P \leq 0.05$.

During the 15-year study period, more hunters (N = 3,806) were collected than web spinners (N = 3,173). Among web spinners, the number of individuals per family ranged from 1 (Titanoecidae) to 1,097 (Linyphiidae); guild mean = 317.3 ± 106.4, N = 10. Among hunters, the number of individuals per family ranged from 1 (Pisauridae) to 1,691 (Lycosidae); guild mean = 422.9 ± 175.2, N = 9. Collectively, both guilds were represented by 6,979 spiders; overall guild mean = 367.3 ± 97.9, N = 19 families.

Spider guild representation also differed by genera and by species. Among web spinners, the number of individuals per genus ranged from 1 (14 genera) to 314 (*Neoantistea*); guild mean = 32.4 ± 5.3, N = 98; among hunters, the number of individuals per genus ranged from 1 (4 genera) to 1,159 (*Pardosa*); guild mean 81.0 ± 25.7. For both foraging guilds, overall mean = 48.1 ± 9.2 individuals per genus, where N = 145.

Collected individuals per web spinner species ranged from 1 (38 species) to 283 (*Neoantistea magna* (Keyserling, 1887)); overall guild mean = 17.7 ± 2.6, N = 179. Collected individuals per hunter species ranged from 1 (15 species) to 470 (*Pardosa moesta* Banks, 1892). For both guilds, overall mean = 23.1 ± 2.7 individuals per species, where N = 302.

Spider Sex Ratios

More female spiders (N = 3,870) were collected than male spiders (N = 3,109); overall female: male ratio = 1.24: 1.00. Not surprisingly, spider sex ratios varied widely among collected species and by foraging guild, and were influenced by sampling method, habitat structure, spider life histories, and seasonal differences.

For both foraging guilds, the proportional distribution of the sexes among species varied from 0.0 percent to 100.0 percent, with web spinners contributing more to female biasness than hunters. Among the 179 species of web spinners, 109 (60.9 percent) were female biased, 54 (30.2 percent) were male biased, and 16 (8.9 percent) reached unity (50.0 percent female, 50 percent male). By

contrast, among the 123 species of hunters, 61 (49.6 percent) were female biased, 52 (42.3 percent) were male biased, and 10 (8.1 percent) reached unity (50.0 percent female, 50.0 percent male).

Among web spinner species (N = 179), collected males per species ranged from 0 to 247 (*Neoantistea magna* (Keyserling, 1887)), mean = 7.6 ± 1.6; collected females per species ranged from 0 to 128 (*Enoplognatha ovata* (Clerck, 1757)), mean = 10.2 ± 1.5. Among hunter species (N = 123), collected males per species ranged from 0 to 219 (*Pardosa moesta* Banks, 1892), mean = 14.3 ± 2.5; collected females per species ranged from 0 to 251 (*Pardosa moesta*), mean = 16.7 ± 3.2. For both guilds combined (N = 302 species), the overall means per species were 12.8 ± 1.6 females, and 10.3 ± 1.4 males.

Three distributional patterns were evident among these spider guild-sex comparisons: 1) within guilds, mean abundances were consistently higher for females than males; 2) between guilds, mean abundances of both sexes were consistently higher for hunters than for web spinners; and 3) for both guilds combined, mean abundances were consistently higher for females than males.

Of the 179 web spinner species, 44 (24.6 percent) were represented by females only; 25 (14.0 percent) were represented by males only; both sexes made up the remaining 110 (61.4 percent) species of web spinners.

Most (58.0 percent, N = 69) of the web spinner species represented by only one sex were linyphiids (N = 40 species), especially small erigonids of the subfamily Erigoninae (N = 30). However, species of other families were also included in the single sex category; 12 species of theridiids, 3 species of tetragnathids, 8 species of araneids, 5 species of dictynids, and 1 species of Titanoecidae. For female only species, the number of collected individuals ranged from 1 to 114; for male only species, from 1 to 4.

Collections of two species of web spinners, *Hypselistes florens* (O. Pickard-Cambridge, 1875) and *Hypsosinga pygmaea* (Sundevall, 1831), yielded significant numbers of females but no males: *Hypselistes florens*, N = 114 females; *Hypsosinga pygmaea*, N = 54 females. Both species mature in early spring; males of *Hypselistes florens* have been taken through June in Connecticut (Kaston 1981); males of *Hypsosinga pygmaea* in May and June in Minnesota and elsewhere (Levi 1971). Although numerous sweep-net samples were taken during May and June at Milbridge, none yielded males of either species.

Of the 123 hunter species, 13 (10.6 percent) were represented by females only; 19 (15.4 percent) were represented by males only; both sexes made up the remaining 91 (74.0 percent) species of hunters.

Most of the hunter species represented by only one sex (N = 32) were distributed unequally among eight families: six species of Lycosidae, one species of Pisauridae, five species of Clubionidae, two species of Corinnidae, one species of Gnaphosidae, four species of Philodromidae, five species of Thomisidae, and eight species of Salticidae.

Sampling methodology and habitat structure contributed to the dominance of female spiders collected at Milbridge. For example, female-occupied webs of araneids and linyphiids were visibly prominent in the herb-shrub-small tree strata of old fields, marshes, and forests, especially during and immediately after coastal fogs. Searches and sweep-netting of these strata and habitats yielded

numerous females of *Araneus marmoreus* Clerck, 1757 and *Frontinella communis* (Hentz 1850). Beating coniferous-tree foliage yielded chiefly females of *Theridion murarium* Emerton, 1882; *T. pictum* Walckenaer, 1802; *Pityohyphantes costatus* (Hentz, 1850); and *P. phrygianus* (C. L. Koch, 1836). Pitfall trapping in the litter layer of saltmarshes yielded males of *Pardosa modica* (Blackwall, 1846) early on; however, as the season progressed, females were more abundant among trap catches. Sweeping herbaceous vegetation of old fields and roadsides yielded numerous females of *Enoplognatha ovata* (Clerck, 1757), but few males. Females but no males of *Hypselistes florens* (O. Pickard-Cambridge, 1875) were also swept from old field and roadside vegetation. Females but no males of *Hypsosinga pygmaea* (Sundevall, 1831) were swept chiefly from herbaceous vegetation of salt, brackish, and freshwater marshes. Several other examples of female-biased collections were evident and attributable to sampling methodology and habitat.

Spider life histories no doubt contributed to the apparent disparity between the collected sexes at Milbridge. Male spiders generally have fewer molts and reach adulthood before the females (Foelix 1996, Gertsch 1979, Schaefer 1987). Male spiders also have shorter lifespans than the females; hence, sex ratios of field-collected spiders are usually characterized by fewer males (Schaefer 1987), especially as the season progresses. With few exceptions, this was the case at Milbridge. For example, adult males of some lycosid species were captured early in the season before adult females appeared in the same traps. Two notable exceptions to this protandrous pattern of activity were evidenced by pitfall-trap captures of the hahniid *Antistea brunnea* (Emerton 1909) and the corrinid *Castianeira cingulata* (C. L. Koch 1841). Females of *A. brunnea* were taken in June and July, whereas males were captured in August and September, chiefly the latter. Females of *C. cingulata* were taken monthly from May to August; males were captured only in August.

Another factor that no doubt contributed to the greater abundance of female spiders among the Milbridge collection was our tendency to collect females during their reproductive period. Because of their larger size and consequent greater visibility to observers, female lycosids with egg sacs were more apt to be collected than the smaller males. Females of *Pardosa xerampelina* (Keyserling 1877) with egg sacs were collected more frequently than the males of this species. Multiple collections of *Clubiona riparia* L. Koch, 1866 and *Sitticus floricola palustris* (Peckham & Peckham 1883) females also were made, once their nesting microhabitats had been discovered. In fresh and saltwater marshes, females of *C. riparia* construct their nests by folding *Spartina* leaves into an oblong, three-sided retreat; see Comstock (1948, fig. 643). Such retreats are easily detected once a search image has been formed. At the edges of freshwater marshes and elsewhere, females of *Sitticus floricola palustris* spin retreats on the dried inflorescences of meadowsweet. Retreats of this salticid spider were often found in aggregations of four to five females per inflorescence, with one female per retreat. These examples of observer-biased collections contributed to the disparity between the sexes.

Collection Method Effects

Pitfall traps yielded more species of spiders (N = 179) and more spider individuals (N = 3,143) than any other sampling method used at Milbridge (Figs. 3 and 4). This result was not surprising because we used pitfall traps to sample the ground-inhabiting fauna at several different sites and habitats. Once deployed, the traps were operated over extended periods of time (months), thus yielding both diurnally active and nocturnally active species. Because some spiders exhibit diel activity patterns (Williams 1962), several investigators have stressed the importance of sampling both during the day and at night (Green 1999, Sørensen et al. 2002, and others).

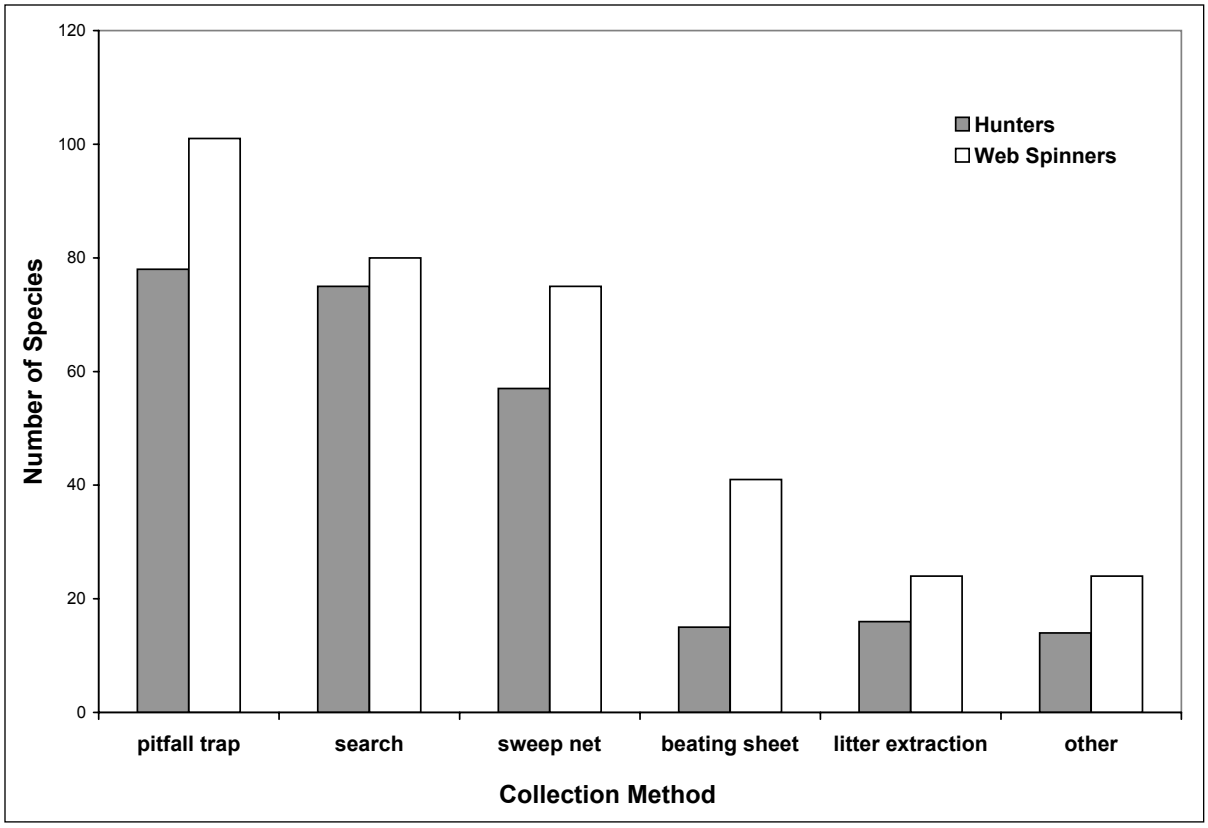

Figure 3.—Number of species of spiders by collection method. Other includes aquatic pitfall traps, brushing tree-bole bark, shaking foliage over net, and no data.

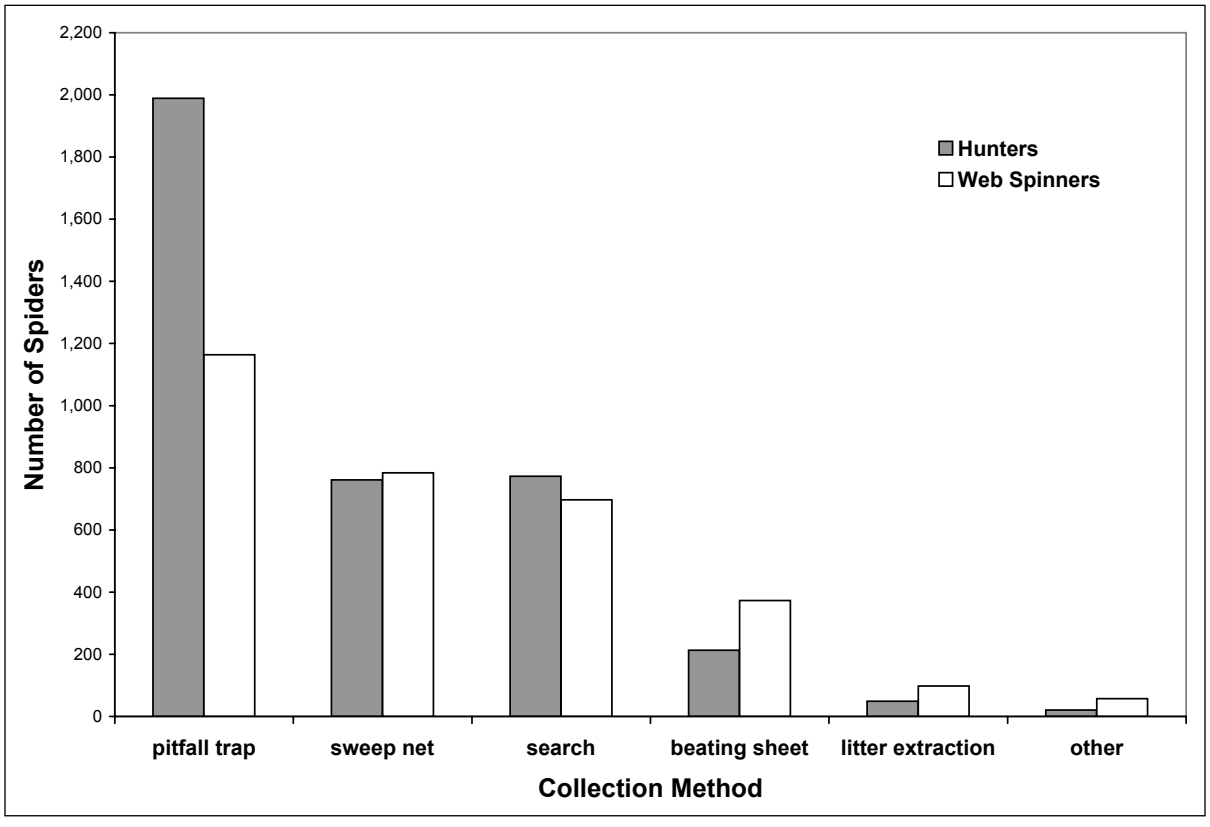

Figure 4.—Number of spiders by collection method. Other includes aquatic pitfall traps, brushing tree-bole bark, shaking foliage over net, and no data.

Although pitfall-trapping yielded the most species and most individuals, searches, sweep-netting, and beating-cloth collections were also productive at Milbridge; searches yielded 1,545 spiders of 155 species; sweep-netting yielded 1,470 spiders of 132 species; beating foliage, chiefly of deciduous and coniferous trees, yielded 586 spiders of 56 species. Each of the remaining sampling methods (brushing tree-bole bark, sifted and unsifted litter-Berlese funnel, sifted litter-hand sorted, shaking foliage-sweep net, and aquatic pitfalls) used at Milbridge yielded < 75 individuals and < 35 species. Nonetheless, the importance of these low-yielding methods was evidenced by the number of method-unique species (see below).

Except for aquatic pitfall traps which yielded only one species of hunting spider, species of web spinners were consistently captured more frequently than hunters regardless of method (Fig. 3). This dominant web spinner trend held true even for the lesser yielding methods, such as brushing bark, sifting litter, and shaking foliage. However, the abundance of individual spiders was more variable among methods (Fig. 4), with pitfall traps, including aquatic pitfall traps, and searches yielding more hunters than web spinners. All remaining methods yielded more web spinners than hunters.

The importance of using multiple sampling methods to inventory spiders was evidenced by the number of species collected by only one method, i.e., method-unique species (Coddington et al. 1996, Standen 2000, Sørensen *et al.* 2002). Fully 142 (47.0 percent) of the 302 species collected at Milbridge were taken exclusively by only one sampling method. Of these method-unique species, 67 (47.2 percent) were captured by pitfall traps, 33 (23.2 percent) by searches, 28 (19.7 percent) by sweep-netting; 6 (4.2 percent) by beating foliage, and 8 (5.6 percent) by litter extraction. Three methods, aquatic pitfall traps, shaking foliage over a sweep net, and brushing bark failed to yield method-unique species; however, none of these were used extensively during this study. A comparison of method-unique species per number of collected specimens showed that litter extractions contributed the most (5.4 percent), followed by searches (2.2 percent), pitfall trapping (2.1 percent), sweeping (1.8 percent), and beating foliage (1.0 percent).

All inventoried families of spiders at Milbridge were represented by at least one method-unique species; two families, Pholcidae and Titanoecidae, were represented solely by method-unique species, both collected by individual searches. Overall, more method-unique species of web spinners (N = 91) were taken than method-unique species of hunters (N = 51). Specimens of Linyphiinae and Erigoninae taken by pitfall traps and litter extraction made up most of the method-unique web spinners. However, searches, sweep-netting, and beating foliage also yielded unique species of web spinners. Pitfall traps, searches, and sweep-netting were the principal means of collecting method-unique hunters, chiefly species of Salticidae (N = 11), Lycosidae (N = 10), and Thomisidae (N = 7).

Complementarity, i.e., the extent to which two samples or lists complement each other (Colwell and Coddington 1994, Sørensen et al. 2002), was also evident among the methods used at Milbridge. Of the 302 species inventoried, 179 (59.3 percent of N) were captured by pitfall traps. Searches yielded an additional 75 species, bringing the cumulative percentage of species inventoried to 84.1 percent. Inclusion of specimens collected by sweep-netting, but not by pitfall-trapping or searches, boosts the total to 289 species or 95.7 percent of N. Fully 97.7 percent of the total inventoried spiders can be achieved by adding the 6 method-unique species collected by beating coniferous-tree foliage.

Our efforts to collect additional species of *Dolomedes* by deploying aquatic pitfall traps were thwarted. The floating pitfall traps designed and used by Graham et al. (2003) near a freshwater pond in Alberta, Canada, caught numerous specimens of *D. triton* (Walckenaer 1837), a species likely to occur in Milbridge. However, our floating pitfalls yielded only specimens of *Pirata piraticus* (Clerck 1757), a species frequently caught by terrestrial pitfall traps.

Spider Habitat Associations

As expected, spider species composition varied among the habitats sampled at Milbridge. For example, species inhabiting coniferous-tree foliage (i.e., arboreal species) differed significantly from those found on the forest floor. Segregation and stratification of available habitats is a well-known phenomenon among spiders (see reviews by Riechert and Gillespie 1986, Uetz 1991). The physiognomy or structural features of habitats has an important influence on habitat selection, and ultimately on spider species composition of habitats (Uetz 1991). Vegetation structure, diversity, and architecture all play significant roles in habitat selection and residency by spiders (Greenstone 1984, Gunnarsson 1988, 1990; Jennings et al. 1990; Stratton et al. 1979). Consequently, habitat specificity or preferences were indicated by several species of spiders making up the araneofauna of Milbridge.

Species of spiders found in only one habitat (i.e., single-specimen species) might be considered habitat-unique species; however, because of their dispersal capabilities (aerial ballooning, cursorial activities) such one-specimen species may simply be transients passing through the sampled habitat. Hence, caution must be exercised in assigning habitat specificity or affinity of single-specimen species.

Species of spiders found in diverse, multiple habitats might be considered habitat-generalist species. Nonetheless, some of these occupants of diverse habitats also demonstrated a degree of habitat selection or specificity by their relative abundances. We arbitrarily choose the following criteria as indicators of habitat specificity: 1) species abundance ≥ 10 individuals per habitat, and 2) abundance of species *X* in *Y* habitat ≥ 66.7 percent, i.e., the proportional distribution of species *X* abundances among all habitats where it was found. Where numerous habitats are sampled, such percentages provide an indication of species-habitat specificity or lack thereof. This was especially so for species frequently collected and with high abundances. However, we do not suggest that species meeting these criteria are restricted to each specified habitat.

Seashores

Fifty-seven species of spiders were collected in seashore habitats, including cobble, shingle, and grass-sedge beaches, and coastal ledges. Of these 57 species, 7 were habitat-unique species, i.e., collected exclusively at the seashore: *Diplocephalus cristatus* (Blackwall 1833), *Erigone aletris* Crosby & Bishop 1928, *E. zographica* Crosby & Bishop 1928, *Titanoeca americana* Emerton 1888, *Pardosa groenlandica* (Thorell 1872), *P. lapidicina* Emerton 1885, and *Dolomedes striatus* Giebel 1869. Most of these habitat-unique species were taken by pitfall traps; the lycosids *P. groenlandica* and *P. lapidicina* were taken chiefly by searches.

Only 7 of the 57 species of spiders associated with seashores were represented by 10 or more individuals. Of these 7 species, 4 showed habitat specificity (66.7 percent of species *N*) for seashores: *Diplostyla concolor* (Wider 1834), 71.4 percent (*N* = 42); *Diplocephalus cristatus* (Blackwall 1833), 100.0 percent (*N* = 13); *Pardosa groenlandica* (Thorell 1872), 100.0 percent (*N* = 37); and *P. lapidicina* Emerton 1885, 100.0 percent (*N* = 14). In addition to habitat affinity, *Diplostyla concolor*

and *Diplocephalus cristatus* were taken solely by pitfall traps in a grassy area above the wrack line. *Pardosa groenlandica* and *P. lapidicina* were found chiefly on cobble beaches; specimens of both species were taken by search and aspirator.

Seashore-Backshores

By sampling the ecotone between seashores and forest or shrub edges, we collected an additional 44 species of spiders. Of these 44 species, only 2 were habitat-unique species: *Erigone ephala* Crosby & Bishop 1928 and *Clubiona moesta* Banks 1896. However, both species were represented by single specimens. *Erigone ephala* was swept from backshore grasses; *C. moesta* was found on alders near the shore.

Five of the 44 species associated with seashore-backshores were represented by 10 or more specimens: *Enoplognatha ovata* (Clerck 1757), *Grammonota angusta* Dondale 1959, *Clubiona trivialis* C. L. Koch 1843, *Pelegrina flaviceps* (Kaston 1973), and *P. flavipes* (Peckham & Peckham 1888). However, none of these species showed a preference for the seashore-backshore habitat. Specimens of *E. ovata* were taken chiefly by sweeping herbaceous-shrub vegetation; the remaining four species were taken most frequently by beating coniferous-tree foliage.

Collectively, seashores and seashore-backshores yielded a total of 101 species of spiders; however, only 9 species were shared in common between these two sampled habitats (QS = 17.8), thus indicating that the habitats were distinct. Habitat-unique species in each of the two sampled habitats, and arboreal species associated with backshore conifers, no doubt contributed to the observed distinction.

***Amelanchier-Rubus* Stand**

Pitfall-trapping and searches in a stand of serviceberry-blackberry near the seashore yielded 20 species of spiders. None were unique to this habitat, nor were they captured in sufficient numbers to indicate habitat specificity. Searches yielded 4 species of web spinners; pitfall traps yielded 5 species of web spinners and 11 species of hunters. Two of the hunter species, *Zelotes exiguoides* Platnick & Shadab 1983 and *Xysticus ellipticus* Turnbull, Dondale & Redner 1965, were method-unique species; both were also found in other habitats. Pitfall catches in the *Amelanchier-Rubus* stand were often contaminated by earthworms and slugs, thus making retrieval of spider specimens difficult.

Old Fields

Sweep-netting and searches of old field vegetation (grasses, forbs, shrubs, tree seedlings) yielded 75 species of spiders. Only four were habitat-unique and method-unique species: *Ceraticelus bulbosus* (Emerton 1882), *C. emertoni* (O. Pickard-Cambridge 1874), *Gonatium crassipalpum* Bryant 1933, and *Misumenops carletonicus* Dondale & Redner 1976. All four were taken by sweeping old field vegetation, but were represented by only one or two specimens. Two specimens of the thomisid *M. carletonicus* were taken from an old field-abandoned farm habitat on Bois Bubert Island; the three remaining species (erigonids) were taken from inland old fields.

Of the 75 old field species, 13 had abundances ≥ 10; however, none were taken in sufficient numbers to indicate habitat specificity. The proportional representation of two species, *Linyphia triangularis* (Clerck 1757), 59.0 percent (N = 39) and *Xysticus emertoni* Keyserling 1880, 54.8 percent (N = 31), showed a weak affiliation with old field habitats. *Linyphia triangularis* is an invasive species frequently found in shrubs and small trees of edge habitats.

Old Field Edges

Forty-four species of spiders were collected from old field edges, chiefly by beating coniferous-tree foliage and by sweeping herbaceous and shrubbery vegetation. Of the 44 species, only 1 was a habitat-unique and method-unique species, i.e., *Araneus iviei* (Archer 1951) taken by search. Fourteen of the 44 old field edge species had abundances ≥ 10 individuals; however, none were taken in sufficient numbers to qualify as specialist of this habitat. Two species, *Xysticus punctatus* Keyserling 1880 and *Pelegrina flaviceps* (Kaston 1973), showed a weak affinity for old field edges, specifically with conifers. The proportional representation of each species' total collected individuals was *X. punctatus*, 57.1 percent (*N* = 21); *P. flaviceps*, 55.7 percent (*N* = 70).

Twenty-eight species of spiders were shared in common between old fields and old field edges; nonetheless, their faunas were distinct, i.e., QS = 47.1.

Old Field-Alder Edge

Twenty-six species of spiders were captured in pitfall traps placed in an old field-alder edge. Of the 26 species, only 1, *Centromerus sylvaticus* (Blackwall 1841), was taken exclusively in this habitat and exclusively by pitfall traps, thus qualifying it as a habitat-unique and method-unique species. This linyphiid was also captured in sufficient numbers to indicate habitat specificity; fully 100.0 percent of this species' individuals (*N* = 19) were trapped in the old field-alder edge.

Of the 26 species collected in this habitat, 11 were shared in common with old field edges; 18 were shared in common with old fields. However, all three habitats had distinct spider faunas; old field-alder edge vs. old field edges, QS = 31.43; old field-alder edge vs. old fields, QS = 35.6. Such faunal distinctiveness in closely allied habitats was probably due to differences in habitat structure, sampling methods, or a combination of both.

Heaths

Seventy-six species of spiders were collected in a *Kalmia-Vaccinium* heath east of Ficketts Point Road. Most were taken by pitfall traps; others were taken by sweeping herbaceous-shrub foliage and by litter extraction. Of the 76 species, 5 were unique to this heath: *Ceraticelus laticeps* (Emerton 1884), *Metopobactrus prominulus* (O. Pickard-Cambridge 1875), *Haplodrassus bicornis* (Emerton 1909), *Xysticus ampullatus* Turnbull et al. 1965, and *X. winnipegensis* Turnbull et al. 1965. In addition to habitat uniqueness, all five were method-unique species; *C. laticeps* was taken solely by litter extraction and the remainder only by pitfall traps.

Despite the rich diversity of species in this *Kalmia-Vaccinium* heath, only 7 of the 76 species had abundances ≥ 10 individuals, which ranged from 11 to 470. However, only two of the seven frequently collected species met or exceeded our definition of habitat specificity: *Zelotes exiguoides* Platnick & Shadab 1983, 86.7 percent (*N* = 15); and *Xysticus winnipegensis* Turnbull et al. 1965, 100.0 percent (*N* = 11). The lycosid *Pardosa distincta* (Blackwall 1846) showed a weak affiliation with the *Kalmia-Vaccinium* heath; although 60 individuals were trapped in the heath, this number represented only 58.2 percent of the total *P. distincta* individuals over all sampled habitats (i.e., species *N* = 103).

In addition to the *Kalmia-Vaccinium* heath, limited searches in a commercial blueberry field yielded four species, including one habitat-unique and method-unique species, i.e., *Schizocosa communis*

(Emerton 1885). This field of common lowbush blueberry (*Vaccinium angustifolium* Ait.) is located off of Old County Road in northern Milbridge. The remaining three species of spiders were: *Callilepis pluto* Banks 1896, *Drassodes neglectus* (Keyserling 1887), and *Haplodrassus signifer* (C. L. Koch 1839). Only *H. signifer* was shared in common with the *Kalmia-Vaccinium* heath where extensive sampling was done.

Saltmarshes

Pitfall-trapping, sweep-netting, and individual searches yielded 101 species of spiders in saltmarshes. Habitat-unique species in saltmarshes were *Allomengea dentisetis* (Grube 1861), *Dictyna minuta* Emerton 1888, *Emblyna manitoba* (Ivie 1947), *Castianeira gertschi* Kaston 1945, *Arctosa rubicunda* (Keyserling 1877), and *Micaria gertschi* Barrows & Ivie 1942. The two dictynid species were swept from saltmarsh vegetation; the others were captured by pitfall traps placed in saltmarsh litter.

Spider abundances exceeded 10 specimens per species for 21 of the 101 saltmarsh spiders; however, only 3 showed definite affinities for saltmarshes. Their proportional representation in saltmarshes was *Pachygnatha brevis* Keyserling 1884, 80.8 percent ($N = 26$), *Arctosa rubicunda* (Keyserling 1877), 100.0 percent ($N = 18$), and *Pardosa modica* (Blackwall 1846), 88.0 percent ($N = 287$). Specimens of *A. rubicunda* were taken exclusively by pitfall traps at Beaver Meadow Brook saltmarsh. Specimens of *Pardosa modica* were also taken at this sampling locality; most were captured by pitfall traps, often in large numbers. Fewer specimens of *P. modica* were taken by searching saltmarsh litter and by sweeping saltmarsh vegetation. Sweeping saltmarsh vegetation (*Spartina*, *Juncus*) yielded adult specimens of *Pachygnatha brevis*.

An additional three species were collected in sufficient numbers to show a weak affiliation with saltmarshes: *Pirata minutus* Emerton 1885, 62.5 percent ($N = 16$), *P. piraticus* (Clerck 1757), 61.3 percent ($N = 31$), and *Sergiolus ocellatus* (Walckenaer 1837), 62.5 percent ($N = 16$). All three of these cursorial ground-dwellers were taken chiefly by pitfall traps placed in saltmarsh litter.

Saltmarsh Edges

We sampled saltmarsh edges at both Beaver Meadow Brook and Sawyer Saltmarsh. At Beaver Meadow Brook, sweep-netting, searches, and beating coniferous-tree foliage were the principal collecting methods. These same methods plus pitfall traps were used to sample the edges of Sawyer Saltmarsh. Edges of Cain's Creek saltmarsh were not sampled.

Collectively, 77 species of spiders were taken from saltmarsh edges. Of these 77 species, 5 were habitat-unique species, i.e., taken exclusively in saltmarsh edges. The five habitat-unique species were *Floricomus rostratus* (Emerton 1882), *Schizocosa crassipalpata* Roewer 1951, *Micaria elizabethae* Gertsch 1942, *Misumenops asperatus* (Hentz 1847), and *Ozyptila* sp. (nr. *distans* Dondale & Redner 1975). In addition to habitat uniqueness, all five were method-unique species; however, each was represented by only one or two individuals.

Saltmarsh edges yielded 11 species of spiders with abundances ≥ 10; only 2 of the 11 were collected in sufficient numbers to indicate habitat specificity. Fully 68.8 percent of all *Dictyna brevitarsa* Emerton 1915 specimens ($N = 16$) were taken by beating coniferous-tree foliage along saltmarsh edges. Likewise, 68.6 percent of all *Arctosa emertoni* Gertsch 1934 specimens ($N = 70$) were captured by pitfall traps placed along saltmarsh edges. This ground-dwelling lycosid was also found within saltmarsh interiors, but in fewer numbers.

Segregation of habitats was indicated by the two species of *Arctosa* collected during this study. *Arctosa rubicunda* was found solely within the interior of the Beaver Meadow Brook saltmarsh; whereas, *A. emertoni* was found chiefly along the edges of Sawyer Saltmarsh, and only occasionally (28.6 percent, $N = 70$) within the interior of Beaver Meadow Brook saltmarsh. Additional data (i.e., pitfall traps deployed along replicated line transects oriented perpendicular to edges) are needed to confirm this habitat-segregation hypothesis.

As might be expected, 37 species were shared in common between saltmarsh interiors and saltmarsh edges. Nonetheless, the two sampled habitats had distinct (QS = 41.6) spider faunas due largely to habitat-unique species and relatively few species shared in common.

Salt Meadow

Litter extraction and sweep-netting yielded only 15 species of spiders in a salt meadow near the Bar Island causeway; however, our collecting efforts were minimal in this habitat. Two of the 15 species were habitat-unique and method-unique: *Grammonota maritima* Emerton 1925 and *Walckenaeria spiralis* (Emerton 1882). Both were taken by hand-sorting condensed litter. Four of the 15 salt meadow species had abundances ≥ 10 individuals; *Ceratinops annulipes* (Banks 1892), *Grammonota gigas* (Banks 1896), *Argiope trifasciata* (Forskål 1775), and *Ghelna canadensis* (Banks 1897). Specimens of *A. trifasciata* were taken by sweeping herbaceous vegetation; specimens of the remaining four species were taken by hand-sorting condensed litter. Two of these four frequently collected species were taken in sufficient numbers to indicate habitat specificity for the salt meadow: *Ceratinops annulipes*, 97.3 percent ($N = 37$) and *G. canadensis*, 77.8 percent ($N = 18$).

Litter samples from the salt meadow yielded numerous juveniles of *Ghelna canadensis*, a distinctly marked species. Besides the adults, the juveniles represented at least three distinct body sizes, possibly indicating differential growth rates or multiple generations. Juveniles were not included in the species count.

The salt meadow shared few species in common with either saltmarshes or saltmarsh edges; salt meadow vs. saltmarshes, QS = 15.5; salt meadow vs. saltmarsh edges, QS = 10.9. However, these low similarity percentages may have been due to differences in sampling methodologies and intensity. Although samples of litter were taken twice in the salt meadow, pitfall traps that sample continuously over longer periods of time were not used in this habitat.

Brackish Marshes

Sweep-netting, searches, and sifted-litter extractions yielded 50 species of spiders in brackish marshes; one at the interface of an old field and the Narraguagus River; two further inland, east of Kansas Road, and west of Tom Leighton Point Road; and one near a seashore-cobblestone dam south of McClellan Park. All were subject to flooding during high tides and coastal storms.

Of the 50 brackish-marsh species, 5 were both habitat-unique and method-unique species: *Ceratinella parvula* (Fox 1891), *Araneus juniperi* (Emerton 1884), *Emblyna sublata* (Hentz 1850), *Clubiona pygmaea* Banks 1892, and an undetermined genus, species. *Ceratinella parvula* was taken by sifted-litter extraction; the remaining four species by sweeping brackish marsh vegetation. Seven of the 50 species associated with brackish marshes had abundances ≥ 10 individuals: *Hypselistes florens* (O. Pickard-Cambridge 1875), *Tetragnatha laboriosa* Hentz 1850, *Hypsosinga pygmaea* (Sundevall 1831),

Pardosa moesta Banks 1892, *Clubiona riparia* L. Koch 1866, *Phidippus clarus* Keyserling 1885, and *Sitticus floricola palustris* (Peckham & Peckham 1883). However, none of these seven species were taken in sufficient numbers to indicate a distinct preference for brackish marshes. Most were collected by sweeping herbaceous vegetation; *H. pygmaea* exclusively by sweeping. Dry inflorescences of forbs and tree leaves impaled on rushes yielded specimens of *S. floricola palustris* in nesting retreats.

Brackish marshes shared almost twice as many species in common with saltmarshes than with freshwater marshes; nonetheless, their associated spider faunas were distinct; brackish marshes vs. saltmarshes, QS = 43.7; brackish marshes vs. freshwater marshes, QS = 38.3.

Freshwater Marshes

Sweep-netting and searches yielded 44 species of spiders associated with freshwater marshes. Of these 44 species, four were habitat-unique species: *Pardosa fuscula* (Thorell 1875), *Clubiona maritima* L. Koch 1867, *Marpissa grata* (Gertsch 1936), and *Synageles noxiosus* (Hentz 1850). The same four were also method-unique species: *P. fuscula* and *C. maritima* by searches; *M. grata* and *S. noxiosus* by sweeping herbaceous vegetation. All but *P. fuscula* ($N = 5$) were represented by single specimens.

Nine of the 44 species associated with freshwater marshes had abundances ≥ 10 individuals; however, only 4 exhibited habitat specialty: *Tetragnatha caudata* Emerton 1884, 88.0 percent ($N = 25$); *Clubiona norvegica* Strand 1900, 86.7 percent ($N = 15$); *Philodromus peninsulanus* Gertsch 1934, 92.9 percent ($N = 14$); and *Xysticus chippewa* Gertsch 1953, 90.0 percent ($N = 20$). One other species, *Tibellus maritimus* (Menge 1875), exhibited a weak affinity for freshwater marshes, i.e., 55.6 percent ($N = 45$); however, this species was also taken in saltmarshes, brackish marshes, old fields, and other habitats.

Although 23 species of spiders were shared in common between freshwater marshes and saltmarshes, their inventoried faunas were distinct, i.e., QS = 31.7.

Freshwater Marsh Edges

Fifty-one species of spiders were collected along the edges of freshwater marshes. Most specimens were captured by pitfall traps; a few were collected by searching foliage of shrubs. Ten of the 51 species were both habitat-unique species and method-unique species, i.e., taken exclusively in freshwater marsh edges and solely by pitfall traps. The 10 were *Robertus banksi* (Kaston 1946), *Bathyphantes gracilis* (Blackwall 1841), *Centromerus longibulbus* (Emerton 1882), *Porrhomma terrestre* (Emerton 1882), *Tapinopa bilineata* Banks 1893, *Carorita limnaea* (Crosby & Bishop 1927), *Walckenaeria redneri* Millidge 1983, *Antistea brunnea* (Emerton 1909), *Cybaeopsis euopla* (Bishop & Crosby 1935), and *Scotinella pugnata* (Emerton 1890). All but *S. pugnata* are web spinners.

Spider abundances exceeded or equaled 10 specimens for only 7 of the 51 species associated with freshwater marsh edges. Spider-habitat specificity was indicated by: *Bathyphantes pallidus* (Banks 1892), 73.6 percent ($N = 110$); *Antistea brunnea* (Emerton 1909), 100.0 percent ($N = 27$); and *Pirata insularis* Emerton 1885, 84.0 percent ($N = 25$). All three species were taken by pitfall traps deployed in marsh litter.

Searches of dry inflorescences and green leaves of meadowsweet along freshwater marsh edges yielded salticid females in nesting retreats. Females of *Sitticus floricola palustris* (Peckham & Peckham 1883)

were fairly common in these microhabitats, sometimes in aggregations of four or five retreats per dry inflorescence.

Thirteen species of spiders were shared in common between freshwater marshes and their edges; however, the compared faunas were distinct per Sørensen's similarity quotient, where QS = 27.4. Such distinction may be due to differences in strata sampled or sampling methods, or both. Most marsh edge specimens came from the ground-litter layer and by pitfall traps; whereas most marsh proper specimens came from the herbaceous-shrub layer and by sweeping.

Freshwater Pond

Sweep-netting, searches, and floating pitfall traps yielded 27 species of spiders associated with a human-made freshwater pond. Only one of the collected species was unique to this habitat, i.e., *Clubiona obesa* Hentz 1847. This species also qualified as a method-unique species because only one specimen was found in a retreat on willow. Of the 27 species, none were found in sufficient numbers to indicate a definite habitat affinity. Most of the web spinner species (N = 17) were taken by sweeping herbaceous vegetation along the pond shore; species of hunters (N = 10) were taken by sweeping, searches, and aquatic pitfall traps.

Fully 70.0 percent of all tetragnathid species inventoried at Milbridge (N = 10) were associated with this particular habitat: *Pachygnatha brevis* Keyserling 1884, *Tetragnatha caudata* Emerton 1884, *T. elongata* Walckenaer 1842, *T. extensa* (Linnaeus 1758), *T. laboriosa* Hentz 1850, *T. straminea* Emerton 1884, and *T. versicolor* Walckenaer 1842. These observations suggest exploitation and species packing of an artificially made habitat, similar to those described by Wilson (1992).

Freshwater Streamsides

Thirty species of spiders were collected along freshwater streams, including a beaver flowage near Milbridge Elementary School, a dry intermittent stream near Wyman, and Mill River in northwestern Milbridge. Most of the specimens were taken by sweeping herbaceous vegetation in these riparian habitats; others were taken by searches, beating foliage of conifers, and sifting streamside litter, which was processed by Berlese funnels.

None of the 30 freshwater-streamside species were unique to this habitat; only 2 had abundances ≥ 10 individuals per species, but neither qualified as a riparian-habitat specialist. Both species, *Neoscona arabesca* (Walckenaer 1842) and *Sitticus floricola palustris* (Peckham & Peckham 1888), were taken in diverse habitats at Milbridge. Beating foliage of streamside red spruce yielded specimens of arboreal species such as *Pityohyphantes phrygianus* (C. L. Koch 1836), *Grammonota angusta* Dondale 1959, and *Philodromus exilis* Banks 1892. Samples of streamside grass litter yielded a few individuals of *Pirata cantralli* Wallace & Exline 1978 and *Micaria pulicaria* (Sundevall 1831), species found in similar habitats such as edges of freshwater ponds and freshwater marshes.

Four of the 30 riparian species, *Tetragnatha caudata* Emerton 1884, *Hypsosinga pygmaea* (Sundevall 1831), *Philodromus peninsulanus* Gertsch 1934, and *Tibellus maritimus* (Menge 1875), were method-unique species, i.e., taken solely by sweeping herbaceous vegetation. These four species were also found in similar freshwater habitats.

Although the freshwater habitats sampled at Milbridge were somewhat similar in vegetative structure and composition, their respective spider faunas appeared to be distinct; freshwater streamsides vs. freshwater pond, QS = 36.4; freshwater streamsides vs. freshwater marshes, QS = 46.0; freshwater streamsides vs. freshwater marsh edges, QS = 27.2. However, sampling methods varied among these habitats, which may have contributed to the apparent dissimilarities in spider-faunal composition.

***Sphagnum* Bogs**

Two small sphagnum bogs were sampled for spiders; one in west Milbridge, the other near the seashore on Bois Bubert Island. Due to their small size and time constraints, neither bog was sampled extensively. Only 14 species of spiders were taken in these bogs: 12 species at the inland site, 3 species on Bois Bubert Island, with 1 species, *Sitticus floricola palustris* (Peckham & Peckham 1883) shared in common. Most of the species were taken by sweeping bog vegetation; three species were taken by searches; one species, *Walckenaeria directa* (O. Pickard-Cambridge 1874), was taken by sifting and hand-sorting litter. Both foraging guilds (web spinner, hunter) were represented equally, with seven species each.

None of the 14 species were unique to these sphagnum bogs; only 1 species, *Argiope trifasciata* (Forskål 1775), was represented by ≥ 10 individuals. We suspect that additional species of spiders inhabit these bogs, especially in the litter layer. Deployment of pitfall traps no doubt would yield additional species. The relatively low number of species was probably due to minimal sampling efforts.

Roadside Disturbed Areas

Forty-two species were collected in roadside disturbed areas, mostly by sweeping herbaceous vegetation along drainage ditches and rights-of-way. A few specimens were taken by searching under rocks and inside culverts; fewer still by beating roadside shrubs and trees. None of the 42 species were unique to roadsides; only 1 species, *Enoplognatha ovata* (Clerck 1757), was represented by ≥ 10 individuals, but not in sufficient numbers to demonstrate a habitat specificity for roadsides. In fact, this theridiid spider was found in diverse habitats at Milbridge and usually associated with herbaceous vegetation.

Not surprisingly, species of web spinners were more prevalent among these roadside collections than species of hunters, due chiefly to our reliance on sweep-netting for sampling these habitats. In addition to *Enoplognatha ovata*, two other invasive species were found in roadside disturbed areas. The theridiid *Achaearanea tabulata* Levi 1980 was found in roadside culverts; the linyphiid *Linyphia triangularis* (Clerck 1757) was found on roadside *Juncus* sp.

Betula-Acer Stand

Pitfall-trapping in forest-floor litter, sweeping understory vegetation, brushing bark, and searches yielded 27 species of spiders associated with a mixed birch-maple stand near Narraguagus Bay. Most of the 27 species were taken by pitfall traps; only 2 species were swept from understory vegetation. Only one species was taken exclusively in this habitat, i.e., *Enoplognatha intrepida* (Sørensen 1898) found under the bark of white (paper) birch, thus qualifying as both a habitat-unique and method-unique species. Two of the 27 associated species had collection abundances ≥ 10 individuals per species: *Agelenopsis utahana* (Chamberlin & Ivie 1933) and *Neoantistea magna* (Keyserling 1887). The latter species showed a distinct affinity for this forest-stand type. Fully 233 specimens, representing

82.3 percent of all collected individuals of *N. magna*, were captured by pitfall traps in this birch-maple stand. Although *N. magna* was found in other sampled habitats, none of the observed abundances approached that of the *Betula-Acer* stand.

Bigtooth Aspen Stand

Twenty-nine species were collected in a mature bigtooth aspen stand near Sawyer Saltmarsh. All 29 species were captured by pitfall traps. None were habitat-unique species, and only 4 had abundances ≥ 10 individuals per species: *Pardosa xerampelina* (Keyserling 1877), *Phrurotimpus alarius* (Hentz 1847), *Zelotes fratris* Chamberlin 1920, and *Xysticus elegans* Keyserling 1880. Not surprisingly, with such low abundances, none of these four species showed a distinct affinity for the ground-litter layer of this bigtooth aspen stand; habitat-species percentages ranged from 7.6 percent to 18.2 percent.

Aspen-Maple Stand

Condensed litter samples extracted by Berlese funnel yielded five species associated with the forest floor in an aspen-maple stand of east Milbridge. One of the five was a habitat-unique and method-unique species, but it was represented by only one specimen: *Eperigone undulata* (Emerton 1914). None of the five species associated with this habitat were collected in sufficient numbers to demonstrate habitat specificity.

White Birch Stand

Pitfall-trapping and sweeping understory vegetation yielded 39 species of spiders associated with a mature white birch stand near Sawyer Saltmarsh. Of the 39 species, none were habitat-unique; however, 3 were method-unique species captured by pitfall traps. Five specimens of *Mangora placida* (Hentz 1847) were swept from understory vegetation in this stand; the remaining 38 species were taken by pitfall traps.

Nine of the 39 species taken in the white birch stand had abundances ≥ 10 individuals; however, none were taken in sufficient numbers to demonstrate habitat specificity. Pitfall-trap catches of *Amaurobius borealis* Emerton 1909 showed a weak habitat affiliation, with 56.4 percent of all individuals of this species taken in the white birch stand. *Xysticus elegans* Keyserling 1880 was the most frequently captured species; however, it was also captured by pitfall traps in other deciduous-tree stands.

Red Maple-White Birch Stand

Thirty-eight species of spiders were associated with a mature red maple-white birch stand west of Sawyer Saltmarsh. All were captured by pitfall traps placed in forest-floor litter. None of the 38 species were habitat-unique, but 2 were method-unique species: *Amaurobius borealis* Emerton 1909 and *Agroeca ornata* Banks 1892. Only 7 of the 38 species had abundances ≥ 10 individuals. In addition to *Amaurobius borealis* and *Agroeca ornata*, frequently captured species in this habitat were: *Callobius bennetti* (Blackwall 1846), *Alopecosa aculeata* (Clerck 1757), *Phrurotimpus alarius* (Hentz 1847), *Zelotes fratris* Chamberlin 1920, and *Xysticus elegans* Keyserling 1880. However, none were taken in sufficient numbers to indicate a preference for this red maple-white birch stand.

Coastal Red Spruce Stands

Pitfall traps and litter-extracted samples yielded 31 species of spiders associated with two stands of coastal red spruce: one at McClellan Park where pitfall traps were used, and one on Bar Island where samples of forest-floor litter were collected and spiders extracted by Berlese funnels. Of the 31 species of spiders associated with these stands, 3 were both habitat-unique and method-unique species; 4

specimens of *Lepthyphantes alpinus* (Emerton 1882) captured by pitfall traps; 1 specimen each of *Eperigone entomologica* (Emerton 1911) and *Sciastes truncatus* (Emerton 1882) by litter-extracted samples.

Only 3 of the 31 species of spiders associated with red spruce stands had abundances ≥ 10 individuals, all taken by pitfall traps. The three species captured in abundance were *Cryphoeca montana* Emerton 1909, *Neoantistea magna* (Keyserling 1887), and *Callobius bennetti* (Blackwall 1846). However, only *Cryphoeca montana* was taken in sufficient numbers to demonstrate a distinct habitat affinity for forest-floor litter of red spruce; fully 92.1 percent of all *C. montana* specimens (*N* = 76) came from this habitat. Although 35 specimens of *N. magna* were also captured, their proportional representation in the red spruce stand was minimal (12.4 percent) compared to a *Betula-Acer* stand where 233 specimens (82.3 percent) were captured by pitfall traps. These results indicate that *N. magna* showed a distinct habitat specificity for birch-maple stands over red spruce stands at Milbridge. This hahniid was also a method-unique species; it was taken solely by pitfall traps regardless of forest-stand type.

Mixed Conifer Stands

Mixed conifer stands, chiefly red spruce and balsam fir, were sampled for spiders at several inland and offshore sites in Milbridge. Fifty species of spiders were taken from diverse microhabitats in mixed-conifer stands. Most were collected by beating foliage of conifers; others were taken by sweeping understory vegetation (*Kalmia*, *Spiraea*) and by searching forest-floor litter, ledges, and under rocks and loose tree bark. Of the 50 species, 2 were both habitat-unique and method-unique species: *Theridula emertoni* Levi 1954 and *Estrandia grandaeva* (Keyserling 1886). Both species were taken on Bois Bubert Island, where *T. emertoni* was swept from *Kalmia* sp. and *E. grandaeva* was beaten from foliage of red spruce.

Of the 50 species of spiders associated with mixed conifer stands, only *Callobius bennetti* (Blackwall 1846) had abundances ≥ 10 individuals, but insufficient numbers to demonstrate habitat specificity. This amaurobiid spider was found in diverse habitats at Milbridge: chiefly under loose bark of standing and downed trees, but also under rocks and in crevices of ledges.

The spider fauna associated with mixed conifer stands was allied to that found in mixed conifer-hardwood stands; QS = 52.5. Fully 26 species were shared in common between these two forest-stand types. However, the spider fauna associated with mixed hardwood-conifer stands apparently differs (QS = 37.8) from that found in mixed conifer stands. By definition, QS values less than 50.0 are considered distinct (Price 1975).

Mixed Conifer-Hardwood Stands

Forty-nine species of spiders were collected from diverse habitats at several inland and offshore sites. Most of the species were taken by beating foliage of conifers and sweeping understory vegetation. A few were found under rocks, on the ground, and beneath loose bark of hardwoods. Only 1 of the 49 associated species was unique to this forest-stand type; a single specimen of *Dismodicus decemoculatus* (Emerton 1911) was swept from laurel on Bois Bubert Island, thus making it a method-unique species at Milbridge.

The inventoried spider fauna associated with mixed conifer-hardwood stands differed from that associated with mixed hardwood-conifer stands (QS = 38.9), which had several habitat-unique species.

Mixed Hardwood-Conifer Stands

Sixty-four species of spiders were collected in mixed hardwood-conifer stands at Milbridge. All sampled sites were inland. Most of the species were taken by pitfall traps placed in a hardwood-conifer woodland near the eastern shore of Narraguagus Bay. Others were collected by sweeping understory vegetation, searching ground litter, ledges, and foliage of small trees, and beating foliage of hardwoods and conifers. A few species were collected by sifting and hand-sorting litter beneath maple and birch trees.

Of the 64 species, 6 were both habitat-unique and method-unique species: *Rugathodes aurantius* (Emerton 1915), *Meioneta nigripes* (Simon), *Bathyphantes brevis* (Emerton 1911), *Hypsosinga rubens* (Hentz 1847), *Cicurina arcuata* Keyserling 1887, and *C. placida* Banks 1892. All except *H. rubens* were captured by pitfall traps and were represented by only one or two specimens. A single female of *H. rubens* was taken by beating foliage of balsam fir.

Only 3 of the 64 species were represented by ≥ 10 individuals; however, species abundances were not sufficient to demonstrate habitat specificity for this forest-stand type. Although tree species were shared in common between mixed conifer-hardwood and mixed hardwood-conifer stands, their respective spider faunas apparently differed, QS = 38.9. This apparent distinctiveness may have been due to differences in sampling methodologies. Although most of the same methods were used in both stand types, pitfall traps were not used in mixed conifer-hardwood stands. Only one habitat-unique species was found in the mixed conifer-hardwood stands compared to six in the mixed hardwood-conifer stands, all but one taken by pitfall traps.

Gravel Pit

Only 11 species of spiders were collected in a gravel pit northeast of Milbridge village. The gravel pit is located in a conifer-mixed hardwood stand. Specimens were taken chiefly by pitfall traps; a few were taken by searches. None of the 11 species were unique to this habitat, nor were they collected in sufficient numbers to indicate habitat specificity. However, four species, *Diplostyla concolor* (Wider 1834), *Castianeira descripta* (Hentz 1847), *Habronattus viridipes* (Hentz 1846), and *Phidippus purpuratus* Keyserling 1885, were method-unique species; the first three were taken exclusively by pitfall traps, the latter solely by searches. Of the 11 collected species, 4 were web spinners; 7 were hunters.

Eight females of *Grammonota angusta* Dondale 1959, a species found chiefly on coniferous-tree foliage, were captured by pitfall traps placed on the ground in the gravel pit.

School Playground-Disturbed Area

A few sweeping samples were taken in a disturbed area adjacent to the Milbridge Elementary School playground. Vegetation of this area resembles that of old fields, i.e., grasses and forbs of pioneering species. Seventeen species of spiders were collected in this disturbed area; two were both habitat-unique and method-unique species: *Acanthepeira stellata* (Walckenaer 1805) and *Eustala cepina* (Walckenaer 1842). None of the 17 species associated with this habitat were collected in sufficient

numbers to demonstrate habitat specificity. Individuals of *Evarcha hoyi* (Peckham & Peckham 1883), *Pelegrina insignis* (Banks 1892), and *Phidippus clarus* Keyserling 1885 were relatively abundant among the sweepings, but none had collection frequencies ≥ 10 individuals.

Domestic Habitats

Ninety-eight species of spiders were collected exclusively by searches of domestic habitats. These habitats included interiors and exteriors of houses, storage shed, barn, screened house, seashore cottage, and professional building. Also included in the domestic category were boat, canoe, patio, hot tub, lawns and lawn furniture, ornamental shrubs and trees, compost bins, and vegetable and flower gardens.

Of the 98 species found in domestic habitats, most can be considered as "accidentals" or transient invaders. For example, 15 of the 98 species qualified as habitat-unique species, but few are known to be synanthropic species. Most of these "accidentals" were represented by only one or two specimens. The domestic habitat-unique species were *Pholcus manueli* Gertsch 1937, *Steatoda americana* (Emerton 1882), *S. borealis* (Hentz 1850), *Takayus lyricus* (Walckenaer, 1842), *Meioneta fabra* (Keyserling 1886), *Soulgas corticarius* (Emerton 1909), *Tapinocyba* sp. (unknown), *Meta ovalis* (Gertsch 1933), *Araneus cavaticus* (Keyserling 1882), *Pardosa saxatilis* (Hentz 1844), *Herpyllus ecclesiasticus* Hentz 1832, *Philodromus praelustris* Keyserling 1880, *P. vulgaris* (Hentz 1847), *Euophrys monadnock* Emerton 1891, and *Sitticus pubescens* (Fabricius 1775). Only one of these habitat-unique species can be considered domestic *sensu stricto*, the invasive hunter *S. pubescens*. The web spinners *Pholcus manueli* and *A. cavaticus* frequent domestic habitats, but can be found elsewhere in natural habitats. No doubt the constancy of observer searches contributed to the apparent spider-faunal richness of domestic habitats.

Invasive Species

At least 12 of the 302 species of spiders collected at Milbridge were non-native invasives, chiefly from the Palearctic realm; these include *Achaearanea tabulata* Levi 1980, *Enoplognatha ovata* (Clerck 1757), *Neottiura bimaculata* (Linnaeus 1767), *Steatoda bipunctata* (Linnaeus 1758), *Linyphia triangularis* (Clerck 1757), *Pityohyphantes phrygianus* (C. L. Koch 1836), *Porrhoma convexum* (Westring 1851), *Zygiella atrica* (C. L. Koch 1845), *Tegenaria domestica* (Clerck 1757), *Trochosa ruricola* (De Geer 1778), *Salticus scenicus* (Clerck 1757), and *Sitticus pubescens* (Fabricius 1775).

Not surprisingly, about half of the invasive species at Milbridge were found in or near domestic habitats: *Achaearanea tabulata*, *Steatoda bipunctata, Tegenaria domestica*, *Salticus scenicus*, and *Sitticus pubescens*. Due to their close association with human habitations, these and other synanthropic species are prone to widespread, long-range dispersal (Gertsch 1979, Kaston 1983), perhaps some dating back to early colonial times or even earlier on the northeastern Atlantic seaboard.

However, the dates, origins, and focal points of such introductions are generally unknown. The comb-footed spider *A. tabulata* was described from a single female taken in August 1976 at Richmond Hill, NY (Levi 1980a). This species has since spread rapidly into other regions of New England, including Maine and Canada (Dondale et al. 1994). Because of its close similarity to *Parasteatoda tepidariorum* (C. L. Koch), another invasive species first introduced into the Southern United States (Gertsch 1979), *A. tabulata* may have been overlooked earlier in the northeastern region (Levi 1980a). Nyffeler et al. (1986) provided evidence that *Steatoda bipunctata*, an invasive

from Europe, has partially displaced the native *S. borealis* (Hentz) in the Northeastern United States and Southeastern Canada. The apparent sparsity of *S. borealis* and relative abundance of *S. bipunctata* at Milbridge supports displacement theory; nonetheless, historical data are lacking. The William Procter collection of spiders on Mount Desert Island during the l920s and early 1930s provides the earliest known records of *S. bipunctata* in Maine (Nyffeler et al. 1986, Procter 1946).

According to Gertsch (1979), the European *Zygiella atrica* was first noticed on wharves in Massachusetts in about 1880; by 1911, it was abundant along coastal regions of Massachusetts and Rhode Island. *Zygiella atrica* now occurs in maritime habitats along the Maine coast including those of Milbridge. The European *Sitticus pubescens* (Fabricius 1775) was first collected in Allston, MA, the earliest record for this species in North America (Bryant 1941). This salticid spider has since been found in Connecticut (Kaston 1981) and in New Jersey (Cutler, pers. comm.).

The sheet-web weaver *L. triangularis* remains to be found elsewhere in New England or in North America (Jennings et al. 2002). Nonetheless, this Palearctic species is apt to spread rapidly because of its reproductive potential, aerial dispersal capabilities, and aggressive behaviors toward other spiders. We suspect that *L. triangularis* poses a threat to the native araneofauna at Milbridge and elsewhere in Maine (Jennings et al. 2002). Unlike some other invasive species, *L. triangularis* generally inhabits herb-shrub-small tree strata away from buildings; however, it also occurs in edge habitats (hedges, shrubs, trees) near houses.

Other invasive spiders at Milbridge (i.e., *Enoplognatha ovata*, *Neottitura bimaculata*, *Pityohyphantes phrygianus*, and *Trochosa ruricola*) were generally found away from domestic habitats. The theridiid *E. ovata* lives in deciduous shrubs and trees; it was especially abundant in sweepings of herbaceous vegetation (jewelweed) and shrubs along roadsides and forest edges. *Neottiura bimaculata* occupies the herb-shrub layer of old fields, marshes, and bogs; at Milbridge we found this species in five habitats, only one semidomestic (i.e., overturned canoe in old field). Sheet webs of *P. phrygianus* were usually observed and specimens taken on coniferous-tree foliage (e.g., red spruce), especially along old field edges. The lycosid *T. ruricola* was most abundant near the seashore of Narraguagus Bay. This latter species may pose a threat to our native *Trochosa terricola* Thorell 1856, especially on offshore islands where invasives are usually most successful at displacing natives (Cox 1999, Wilson 1992).

The zebra spider, *Salticus scenicus* (Clerck 1757), is common to both Europe and America and inhabits both domestic and native habitats. Although found chiefly in domestic and semidomestic habitats at Milbridge, *S. scenicus* has been observed inhabiting seashore ledges in Maine (Jennings, unpubl.).

Species-Range Extensions

The Milbridge collections yielded significant geographic range extensions for several species of spiders, including 31 new state records for Maine, 6 New England records, 3 national records, and 1 North American record, i.e., *Linyphia triangularis* (Clerck, 1757), a Palearctic species reported earlier (Jennings et al. 2002). Both native and non-native species were included among the observed range extensions. For example, before the Milbridge study, *Meioneta nigripes* (Simon 1884) had been found in Québec, the Northwest Territories, Greenland, and the Palearctic (Buckle et al. 2001), but not in Maine or elsewhere in the Northeastern United States. Conversely, *Erigone blaesa* Crosby and Bishop, 1928 has been taken in several New England States and northeastern Canadian Provinces,

but not in Maine. The European *Erigone dentipalpis* (Wider, 1834) found in Great Britain (Locket and Millidge 1953, Roberts 1987) has since been introduced (?) into Newfoundland (Buckle et al. 2001). Our collection of *E. dentipalpis* in Milbridge represents the second locality for this species in North America. First described from specimens taken along the seashore in Barrington, NS (Emerton 1925), and since in Québec and Newfoundland (Buckle et al. 2001), our collections of *Grammonota maritima* Emerton, 1925 from a salt meadow in Milbridge represent the first records of this species in Maine, New England, and the Eastern United States. Although previously recorded from Wisconsin, Washington, Québec, Manitoba, and Saskatchewan, the collection of *Walckenaeria redneri* Millidge 1983 from a freshwater marsh in Milbridge extends the known range of this species to Maine and New England. Likewise, specimens of *Emblyna manitoba* (Ivie, 1947) taken in Milbridge extend the range of a species previously known from the upper midwest, the Pacific Northwest, and Florida (Chamberlin and Gertsch 1958) to Maine and New England. This dictynid spider is also known in Ontario, Québec, and some western provinces (Buckle et al. 2001). Our collections of another widespread species, *Xysticus luctuosus* (Blackwall, 1836), extend its previously known range to Maine and New England. This crab spider ranges from Alaska, British Columbia, Oregon, Utah, Wyoming, Alberta, and Minnesota to Manitoba, Ontario, Québec, New Brunswick, and Labrador (Dondale and Redner 1978b; Gertsch 1939, 1953; Turnbull et al. 1965). Our collections of *Sibianor aemulus* (Gertsch, 1934) represent new State and Eastern United States records; before the Milbridge study, *S. aemulus* was known from Alberta, Manitoba, Ontario, Québec, and New Brunswick (Bélanger and Hutchinson 1992, Maddison 1978, Richman and Cutler 1978). Before our study, the invasive *Sitticus pubescens* (Fabricius 1775) had been taken only in Connecticut and Massachusetts (Kaston 1981); the Milbridge record represents a northward expansion. Apparently this species remains to be found in Québec (Paquin and Dupérré 2003).

Faunal Similarities

Predictably, the Milbridge fauna showed greater degrees of similarity among spider families and genera than among species when compared to the Mount Desert Island (MDI) fauna; for families, overall QS = 87.8; for genera, overall QS = 74.8; for species, overall QS = 52.8. However, the calculated QS value for species was only slightly above the arbitrary 50 percent limit for distinguishing similar vs. distinct communities (Price 1975). Because Milbridge and MDI are within the same East Coastal BioPhysical Region, a region with similar biotic and physical features (McMahon 1990), we had expected a much higher degree of similarity in spider species composition for the two compared faunas. Overall, 1 family, 47 genera, and 173 species were found at Milbridge but not at MDI; conversely, 4 families, 12 genera and 49 species were found at MDI but not at Milbridge. Similar differences in composition of spider taxa were also evident at the foraging guild level. For web spinners, 1 family, 36 genera, and 100 species were found at Milbridge but not at MDI; conversely, 2 families, 7 genera, and 29 species were found at MDI but not at Milbridge. For hunters, 0 families 11 genera, and 73 species were collected at Milbridge but not at MDI; whereas 2 families, 5 genera, and 20 species were collected at MDI but not at Milbridge. Our results indicated that web spinner abundances contributed most to the disparity in similarity of the two compared faunas.

We suspect that differences in sampling methodologies accounted for the relatively low degree of species similarity between the two faunas. At Milbridge, we relied chiefly on pitfall traps to sample the ground-inhabiting fauna; whereas at MDI, Procter and his associates used searches (e.g., turning stones, logs) and litter sifting to sample the ground-inhabiting fauna. The pitfall traps at Milbridge yielded a rich diversity of species not previously recorded as components of the MDI araneofauna.

Chief among these were species of linyphiid spiders commonly associated with ground litter. Notably absent from the MDI fauna listed by Procter (1946) were species of *Centromerus*, *Eperigone*, *Erigone*, and *Walckenaeria*, all small web spinners commonly taken by pitfall traps. Also absent from the inventoried MDI fauna were ground-dwelling species *Arctosa*, *Schizocosa*, and *Sergiolus*, all cursorial hunters commonly captured in pitfall traps. Likewise, additional species of *Pardosa*, *Pirata*, *Clubiona*, and *Xysticus* most likely occur at MDI. For example, the most frequently collected species of spider at Milbridge, *Pardosa moesta* Banks, 1892, surprisingly was not included among the inventoried species at MDI (Procter 1946).

Notably absent from the inventoried spiders at Milbridge, but present at MDI, were species of *Hyptiotes*, *Theridiosoma*, *Helophora*, *Maso*, *Ero*, *Mimetus*, *Elaver*, and *Misumenoides*. Further sampling of the fauna at Milbridge should yield additional species of *Robertus*, *Theridion*, *Neriene*, *Tetragnatha*, *Araneus*, *Zygiella*, *Emblyna*, *Dolomedes*, *Drassyllus*, *Philodromus*, *Xysticus*, and *Tutelina*, all components of the MDI fauna. The invasive *Dysdera crocata* C. L. Koch, 1838 present at MDI may also occur in Milbridge.

ESTIMATED FAUNAL RICHNESS

Estimated Milbridge Fauna

Like most faunal inventories, the absolute limit of spider species composition was not attained during this study. Consequently, we prepared a list of spider families, genera, and species likely to occur in Milbridge (Table 2). The list is based on collections of spiders from the same East Coastal BioPhysical Region, i.e., chiefly records from nearby localities in Washington and Hancock Counties. Both published and unpublished data sources were used to compile the list.

The additional spider taxa likely to occur in Milbridge include 5 families (Uloboridae, Theridiosomatidae, Dysderidae, Mimetidae, and Anyphaenidae), 27 genera (e.g., *Hyptiotes, Theonoe*, *Theridiosoma*, *Helophora*), and 109 species (Table 2). Hence, the total estimated araneofauna at Milbridge most likely comprises 24 families, 172 genera, and ~ 411 species. Results of this study indicate that 79.2 percent of the possible families, 84.3 percent of the possible genera, and 73.5 percent of the possible species have been found in Milbridge thus far. Of the 109 likely species, fully 51.4 percent had been found in commercial lowbush blueberry fields, which suggests that future inventories should concentrate sampling efforts in these habitats. Additional habitats and strata not sampled during the current study (e.g., stands of northern white-cedar, mid- and upper-crown levels of trees, bog litter) no doubt will lead to new discoveries.

SPIDER-HABITAT CONSERVATION

Spider Conservation

In addition to prey abundance, spiders respond to structural features within the habitat; i.e., physical features of the habitat are important determinants of spider species composition and abundances (see reviews by Greenstone 1984, Riechert and Gillespie 1986, Uetz 1991). For example, plant architecture or physiognomy greatly influences both the composition and abundance of spider occupants (Gunnarsson 1988, Jennings et al. 1990, Stratton et al. 1979). Because of spiders' close ties with habitat, alterations of habitat (e.g., deforestation, agriculture, grazing, and urbanization) can have dire consequences. For example, forest clearcutting drastically reduces spider abundance and species composition (Coyle 1981, McIver et al. 1990, 1992); strip clearcutting also affects spider abundance and composition (Jennings et al. 1988).

Table 2.—Spider taxa likely to occur in Milbridge based on published and unpublished records of species elsewhere in the East Coastal BioPhysical Region.

Spider taxa [1]	Locality record(s) [2]	Habitat(s)	Source(s)
	WEB SPINNERS		
PHOLCIDAE			
Pholcus phalangioides (Fuesslin, 1775)	Machias, Washington County	inside house, barn	Jennings (unpubl.)
ULOBORIDAE			
Hyptiotes cavatus (Hentz, 1847)	Mount Desert Island (MDI), Hancock County	in underbrush	Procter (1946) [3]
Hyptiotes gertschi Chamberlin & Ivie, 1935	Steuben, Washington County	in web, dead spruce limb	HWRI (1998) [4]
THERIDIIDAE			
Crustulina altera Gertsch & Archer, 1942	MDI, Hancock County	under stones	Procter (1946) [3]
Enoplognatha caricis (Fickert, 1876)	Columbia, Washington County	litter, blueberry field	Maloney (2002)
	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
Enoplognatha marmorata (Hentz, 1850)	Cherryfield, Columbia, Deblois, Jonesboro, & T19 MD BPP, Washington County	litter, blueberry field	Collins et al. (1996)
	Cherryfield, Washington County	litter, blueberry field	Timms (unpubl.)
	Cherryfield, Columbia, & Jonesboro, Washington County	litter, blueberry field	Maloney (2002)
	Columbia, T18 MD BPP, & T19 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Euryopis argentea Emerton, 1882	Cherryfield, Washington County	litter, blueberry field	Timms (unpubl.)
	Petit Manan National Wildlife Refuge, (PMNWR), Steuben, Washington County	litter, maritime slope bog	Jennings (unpubl.)
	Cherryfield & Jonesboro, Washington County		Maloney (2002)
	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Euryopis saukea Levi, 1951	T19 MD BPP, Washington County	litter, blueberry field	Collins et al. (1996)
Keijia tincta (Walckenaer, 1802)	ANP headquarters, Bar Harbor, MDI,	beating white spruce foliage	Jennings (unpubl.)
Parasteatoda tepidariorum (C. L. Koch, 1841)	MDI, Hancock County	in or near houses, buildings; cellars	Procter (1946) [3]
	Acadia Nat'l Park (ANP), Bar Harbor, MDI, Hancock County	guest housing, porch foyer	Jennings & Cutler (unpubl.)

continued

Table 2.—continued

Spider taxa [1]	Locality record(s) [2]	Habitat(s)	Source(s)
Rhomphaea fictilium (Hentz, 1850)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
Robertus borealis (Kaston, 1946)	PMNWR, Steuben, Washington County	litter, *Sphagnum* bog	Jennings (unpubl.)
Robertus pumilus (Emerton, 1909)	Winter Harbor, Hancock County	sifted *Sphagnum*, brackish marsh	HWRI (1998) [4]
Robertus riparius (Keyserling, 1886)	MDI, Hancock County	sifting (litter)	Procter (1946) [3]
	Steuben, Washington County	sifted leaf litter	HWRI (1998) [4]
Robertus spinifer (Emerton, 1909)	Cherryfield & Columbia, Washington County	litter, blueberry field	Collins et al. (1996)
	Cherryfield, Washington County	litter, blueberry field	Timms (unpubl.)
	PMNWR, Steuben, Washington County	litter, old field-abandoned pasture	Jennings (unpubl.)
	Cherryfield, Columbia, & Jonesboro, Washington County	litter, blueberry field	Maloney (2002)
	Columbia, T18 MD BPP, T19 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Theonoe stridula Crosby, 1906	ANP, Schoodic Peninsula, Winter Harbor, Hancock County	sifted litter; hanging bog	HWRI (1999) [4]
Theridion petraeum L. Koch, 1872	MDI, Hancock County	S*phagnum* bog	Procter (1946) [3]
Theridion varians Hahn, 1831	Winter Harbor, Hancock County	on spruce, on cedar	Houser (unpubl.)
Thymoites marxi (Crosby, 1906)	Steuben, Washington County	sweeping roadside vegetation	HWRI (1991) [4]
THERIDIOSOMATIDAE			
Theridiosoma gemmosum (L. Koch, 1877)	MDI, Hancock County	low, wet places	Procter (1946) [3]
LINYPHIIDAE (Linyphiinae)			
Centromerus denticulatus (Emerton, 1909)	Winter Harbor, Hancock County	sifted litter; hanging bog	HWRI (1999) [4]
Helophora insignis (Blackwall, 1841)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
	Winter Harbor, Hancock County	beating red spruce foliage	HWRI (1999) [4]
Megalepthyphantes nebulosus (Sundevall, 1830)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
Meioneta angulata (Emerton, 1882)	MDI, Hancock County	sifting (litter)	Procter (1946) [3]
Neriene variabilis (Banks, 1892)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
Oreonetides sp. 1	Jonesboro, Washington County	litter, blueberry field	Collins et al. (1996)
Pityohyphantes limitaneus (Emerton, 1915)	MDI, Hancock County	on bush	Procter (1946) [3]

continued

Table 2.—continued

Spider taxa [1]	Locality record(s) [2]	Habitat(s)	Source(s)
Stemonyphantes blauveltae Gertsch, 1951	Cherryfield, Washington County	litter, blueberry field	Maloney (2002)
Tennesseellum formica (Emerton, 1882)	Harrington, Washington County	*Sphagnum* bog	HWRI (1997) [4]
	Columbia & T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
LINYPHIIDAE (Erigoninae)			
Baryphyma longitarsum (Emerton, 1882)	Jonesboro, Washington County	litter, blueberry field	Collins et al. (1996)
Ceratinopsis auriculata Emerton, 1909	Amherst, Hancock County	litter, blueberry field	Drummond et al. (unpubl.)
Ceratinopsis interpres (O. Pickard-Cambridge, 1874)	MDI, Hancock County	heath	Procter (1946) [3]
Coloncus sp. (undetermined)	Columbia	litter, blueberry field	Drummond et al. (unpubl.)
Eperigone trilobata (Emerton, 1882)	Steuben, Washington County	litter, old field-abandoned pasture	Jennings (unpubl.)
	Cherryfield & Jonesboro, Washington County	litter, blueberry field	Maloney (2002)
	Columbia, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
	T18 MD BPP & T19 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Eridantes erigonoides (Emerton, 1882)	Cherryfield, Washington County	litter, blueberry field	Maloney (2002)
	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Erigone autumnalis (Emerton, 1882)	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Floricomus plumalis (Crosby, 1905)	Steuben, Washington County	sifted litter; deciduous-mixed conifer	HWRI (1998) [4]
	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Grammonota capitata Emerton, 1924	Amherst, Hancock County	litter, blueberry field	Drummond et al. (unpubl.)
	Bar Harbor, Hancock County	beating white spruce foliage	Jennings (unpubl.)
	Jonesboro, Washington County	litter, blueberry field	Collins et al. (1996)
	Cherryfield, Washington County	litter, blueberry field	Timms (unpubl.)
	PMNWR, Steuben, Washington County	litter, mountain ash woodland	Jennings (unpubl.)
	Cherryfield, Columbia, Harrington, & Jonesboro, Washington County	litter, blueberry field	Maloney (2002)

continued

Table 2.—continued

Spider taxa [1]	Locality record(s) [2]	Habitat(s)	Source(s)
	Cherryfield, Columbia, T18 MD BPP, T19 MD BPP, & Whitneyville, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Grammonota ornata (O. Pickard- Cambridge, 1875)	T18 MD BPP	litter, blueberry field	Drummond et al. (unpubl.)
Grammonota pallipes Banks, 1895	Columbia, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Grammonota pictilis (O. Pickard-Cambridge, 1875)	MDI, Hancock County	in woods, on litter, on tree trunk	Procter (1946) [3]
Idionella rugosa (Crosby, 1905)	Cherryfield, Washington County	litter, blueberry field	Maloney (2002)
Lophomma depressum (Emerton, 1882)	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Maso sundevalli (Westring, 1851)	MDI, Hancock County	sifting (litter)	Procter (1946) [3]
Phlattothrata flagellata (Emerton, 1911)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
Scylaceus pallidus (Emerton, 1882)	Cherryfield, Washington County	litter, blueberry field	Maloney (2002)
Sisyrbe rustica (Banks, 1892)	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Walckenaeria breviaria (Crosby & Bishop, 1931)	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Walckenaeria castanea (Emerton, 1882)	Steuben, Washington County	litter, coastal red spruce stand	HWRI (1991) [4]
	Winter Harbor, Hancock County	litter, near fallen birch	HWRI (2001) [4]
Walckenaeria dondalei Millidge, 1983	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Walckenaeria pinocchio (Kaston, 1945)	Cherryfield & Columbia, Washington County	litter, blueberry field	Maloney (2002)
Walckenaeria tenella Millidge, 1983	Steuben, Washington County	litter, coastal red spruce stand	HWRI (1991) [4]
	Cherryfied, Washington County	litter, blueberry field	Timms (unpubl.)
Walckenaeria sp. 10	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
TETRAGNATHIDAE			
Pachygnatha tristriata C. L. Koch, 1845	Jonesboro, Washington County	litter, blueberry field	Collins et al. (1996)
	Columbia, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Pachygnatha xanthostoma C. L. Koch, 1845	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Tetragnatha viridis Walckenaer, 1842	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
ARANEIDAE			
Araneus corticarius (Emerton, 1884)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]

continued

Table 2.—continued

Spider taxa [1]	Locality record(s) [2]	Habitat(s)	Source(s)
Araneus thaddeus (Hentz, 1847)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
Larinioides sclopetarius (Clerck, 1757)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
	Steuben, Washington County	lobster bait-house window	HWRI (1991) [4]
Mangora gibberosa (Hentz, 1847)	MDI, Hancock County	on patch of vegetation	Procter (1946) [3]
	Winter Harbor, Hancock County	search, hanging bog	HWRI (1999) [4]
	Bar Harbor, Hancock County	sweeping *Kalmia-Vaccinium*, grasses	Jennings & Cutler
	Bar Harbor, Hancock County	sweeping vegetation, upland bog	Jennings & Cutler (unpubl.)
Metepeira labyrinthea (Hentz, 1847)	MDI, Hancock County	heath	Procter (1946) [3]
Neoscona crucifera (Lucas, 1839)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
Parazygiella montana (C. L. Koch, 1834)	MDI, Hancock County	branch of spruce tree	Procter (1946) [3]
Zygiella x-notata (Clerck, 1757)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
DICTYNIDAE			
Cicurina itasca Chamberlin & Ivie, 1940	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Dictyna foliacea (Hentz, 1850)	Columbia, Washington County	litter, blueberry field	Maloney (2002)
	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Emblyna annulipes (Blackwall, 1846)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
Emblyna cruciata (Emerton, 1888)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
	HUNTERS		
DYSDERIDAE			
Dysdera crocata C. L. Koch, 1838	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
MIMETIDAE			
Ero canionis Chamberlin & Ivie, 1935	Cherryfield, Washington County	litter, blueberry field	Maloney (2002)
Ero leonina (Hentz, 1850)	MDI, Hancock County	sifting leaves	Procter (1946) [3]
Mimetus epeiroides Emerton, 1882	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
LYCOSIDAE			
Alopecosa kochi (Keyserling, 1877)	Columbia & Jonesboro, Washington County	litter, blueberry field	Collins et al. (1996)
	Cherryfield, Columbia, & T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)

continued

Table 2.—continued

Spider taxa [1]	Locality record(s) [2]	Habitat(s)	Source(s)
Arctosa lama Dondale & Redner, 1983	Winter Harbor, Hancock County	hanging bog	HWRI (1999) [4]
	PMNWR, Steuben, Washington County	litter, maritime slope bog	Jennings (unpubl.)
	PMNWR, Steuben, Washington County	litter, *Sphagnum* bog	Jennings (unpubl.)
Hogna helluo (Walckenaer, 1837)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
Pardosa milvina (Hentz, 1844)	Cherryfield, Washington County	litter, blueberry field	Timms (unpubl.)
	Columbia & T19 MD BPP, Washington County	litter, blueberry field	Collins et al. (1966)
	Columbia, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Pirata canadensis Dondale & Redner, 1981	Winter Harbor, Hancock County	*Sphagnum* litter; hanging bog	HWRI (1999) [4]
Schizocosa avida (Walckenaer, 1837)	T18 MD BPP & T19 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
PISAURIDAE			
Dolomedes scriptus Hentz, 1845	MDI, Hancock County	female guarding nest, pond; dam	Procter (1946) [3]
Dolomedes triton (Walckenaer, 1837)	MDI, Hancock County	from pond	Procter (1946) [3]
Pisaurina mira (Walckenaer, 1837)	Cherryfield, Washington County	litter, blueberry field	Maloney (2002)
ANYPHAENIDAE			
Wulfila saltabundus (Hentz, 1847)	T19 MD BPP, Washington County	litter, blueberry field	Collins et al. (1996)
CLUBIONIDAE			
Clubiona mixta Emerton, 1890	Cherryfield, Washington County	litter, blueberry field	Maloney (2002)
Elaver excepta (L. Koch, 1866)	MDI, Hancock County	sifting (litter)	Procter (1946) [3]
CORINNIDAE			
Phrurotimpus certus Gertsch, 1941	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
	Amherst, Hancock County	litter, blueberry field	Drummond et al. (unpubl.)
	Steuben, Washington County	gravel pit, cobbles	HWRI (1991) [4]
	Steuben, Washington County	litter, maritime slope bog	Jennings (unpubl.)
	Jonesboro, Washington County	litter, blueberry field	Maloney (2002)
	Cherryfield & Columbia,	litter, blueberry field	Drummond et al. (unpubl.)
Phrurotimpus minutus (Banks, 1892)	Cherryfield, Washington County	litter, blueberry field	Drummond et al. (unpubl.)

continued

Table 2.—continued

Spider taxa [1]	Locality record(s) [2]	Habitat(s)	Source(s)
GNAPHOSIDAE			
Drassyllus depressus (Emerton, 1890)	MDI, Hancock County	sifting (litter)	Procter (1946) [3]
	Columbia & Deblois, Washington County	litter, blueberry field	Collins et al. (1996)
	T18 MD BPP, T19 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Drassyllus frigidus (Banks, 1892)	Amherst, Hancock County	litter, blueberry field	Drummond et al. (unpubl.)
Drassyllus rufulus (Banks, 1892)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
Gnaphosa brumalis Thorell, 1875	PMNWR, Steuben, Washington County	litter, maritime slope bog	Jennings (unpubl.)
Micaria longispina Emerton, 1911	Columbia & T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Micaria riggsi Gertsch, 1942	Cherryfield, Columbia, Jonesboro, & T19 MD BPP, Washington County	litter, blueberry field	Collins et al. (1996)
	Cherryfield, Columbia, & Jonesboro, Washington County	litter, blueberry field	Maloney (2002)
	Columbia & T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Sergiolus decoratus Kaston, 1945	Cherryfield, Washington County	litter, blueberry field	Collins et al. (1996)
Zelotes puritanus Chamberlin, 1922	Cherryfield, Columbia, & Jonesboro, Washington County	litter, blueberry field	Maloney (2002)
	Cherryfield & Columbia, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
PHILODROMIDAE			
Ebo iviei Sauer & Platnick, 1972	Jonesboro, Washington County	litter, blueberry field	Collins et al. (1996)
	Jonesboro, Washington County	litter, blueberry field	Maloney (2002)
	Cherryfield & T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Philodromus pernix Blackwall, 1846	MDI, Hancock County	heath	Procter (1946) [3]
	Cherryfield & Jonesboro, Washington County	litter, blueberry field	Maloney (2002)
	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Philodromus histrio (Latreille, 1819)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]

continued

Table 2.—continued

Spider taxa [1]	Locality record(s) [2]	Habitat(s)	Source(s)
	Bar Harbor, MDI, Hancock County	sweeping vegetation, upland bog	Jennings & Cutler (unpubl.)
	Columbia, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Philodromus validus (Gertsch, 1933)	Columbia & T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
THOMISIDAE			
Misumenoides formosipes (Walckenaer, 1837)	MDI, Hancock County	on flowers, sweeping grass	Procter (1946) [3]
Ozyptila americana Banks, 1895	MDI, Hancock County	young from sifting leaves	Procter (1946) [3]
Xysticus discursans Keyserling, 1880	Cherryfield, Columbia, Jonesboro, & T19 MD BPP, Washington County	litter, blueberry field	Collins et al. (1996)
	Cherryfield, Washington County	litter, blueberry field	Timms (unpubl.)
	Cherryfield & Jonesboro, Washington County	litter, blueberry field	Maloney (2002)
	Columbia, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Xysticus gulosus Keyserling, 1880	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
Xysticus fervidus Gertsch, 1953	T19 MD BPP, Washington County	litter, blueberry field	Collins et al. (1996)
	Cherryfield, Washington County	litter, blueberry field	Maloney (2002)
Xysticus pellax O. Pickard-Cambridge, 1894	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]
	Deblois, Washington County	litter, blueberry field	Collins et al. (1996)
	Jonesboro, Washington County	litter, blueberry field	Maloney (2002)
SALTICIDAE			
Habronattus waughi (Emerton, 1926)	T18 MD BPP, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Naphrys pulex (Hentz, 1846)	Jonesboro, Washington County	litter, blueberry field	Maloney (2002)
	Cherryfield, Washington County	litter, blueberry field	Drummond et al. (unpubl.)
Pelegrina galathea (Walckenaer, 1837)	MDI, Hancock County	beating oak	Procter (1946) [3]
Tutelina elegans (Hentz, 1846)	MDI, Hancock County	heath	Procter (1946) [3]
Tutelina formicaria (Emerton, 1891)	MDI, Hancock County	(n. d.) [5]	Procter (1946) [3]

[1] Within spider foraging guilds, enumeration of taxa follows Platnick (2007) “The world spider catalog, version 7.5.” New York: American Museum of Natural History, online at http://research.amnh.org/entomology/spiders/catalog/index.html
[2] Locality source names as given in The Maine Atlas and Gazetteer™ 29th ed. Yarmouth, ME: DeLorme. 78 p.
[3] Taxa listed by Procter (1946) have been updated to reflect recent species synonymies and other taxonomic changes.
[4] HWRI, Humboldt Wildlife Research Institute, “Biology of Spiders” Seminar, Class of (year).
[5] (n. d.) = no data.

Loss of habitat and invasion by exotic species are the two leading causes of species endangerment (Czech et al. 2000, Wilson 1992). Unfortunately, like most invertebrates, spiders are not immune to such adverse effects on species richness and diversity. For example, drainage of freshwater marshes at Milbridge could adversely impact resident spider species such as *Antistea brunnea*, *Clubiona norvegica*, and *Philodromus peninsulans*. Spiders associated with seashore cobble beaches (e.g., *Diplostyla concolor, Pardosa groenlandica*, *Habronattus borealis*) are susceptible and vulnerable to maritime oil spills. Apparently, some native spiders at Milbridge are already being displaced by invasive aliens such as *Achaearanea tabulata* and *Steatoda bipunctata*; most likely others will be impacted by *Linyphia triangularis*, an aggressive species recently introduced from the Palearctic (Jennings et al. 2002). Because of these and other potential threats, and the importance of spiders as bioregulators (Nyffeler and Benz 1987, Nyffeler et al. 1994, Riechert and Lockley 1984), and as bio-indicators of habitat quality (Allred 1975, Clausen 1986, Marc et al. 1999, Vollrath 1988), spiders warrant much greater attention from wildlife, land, and conservation managers. Perhaps this study will provide a basis for future evaluations and assessments of the araneofauna, and its health, at Milbridge.

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LITERATURE CITED

Agnarrson, I. 2004. **Morphological phylogeny of cobweb spiders and their relatives (Araneae, Araneoidea, Theridiidae.** Zoological Journal of the Linnean Society. 141(4): 447-626.

Aitchison-Benell, C.W.; Dondale, C.D. 1992 [1990]. **A checklist of Manitoba spiders (Araneae) with notes on geographic relationships.** Le Naturaliste Canadien. 117(4): 215-237.

Allred, D.M. 1975. **Arachnids as ecological indicators.** Great Basin Naturalist. 35(4): 405-406.

Banks, N. 1893. **Notes on spiders.** Journal of the New York Entomological Society. 1(3): 123-134.

Barnes, R.D. 1958. **North American jumping spiders of the subfamily Marpissinae (Araneae, Salticidae).** American Museum Novitates. 1867: 1-50.

Barnes, R.D. 1959. **The *lapidicina* group of the wolf spider genus *Pardosa* (Araneae, Lycosidae).** American Museum Novitates. 1632: 1-20.

Bélanger, G.; Hutchinson, R.. 1992. **Liste annotée des Araignées (Araneae) du Québec.** Pirata. 1(1): 2-119.

Bennett, R.G. 1987. S**ystematics and natural history of *Wadotes* (Araneae, Agelenidae).** Journal of Arachnology. 15(1): 91-128.

Bennett, R.G. 2005a. **Dictynidae.** In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 95-101.

Bennett, R.G. 2005b. **Hahniidae.** In: Ubick, D.; Paquin, P.; Cushing, P. E; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 112-115.

Bennett, R.G.; Ubick, D. 2005. **Agelenidae.** In: Ubick, D.; Paquin, P.; Cushing, P.E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 56-59.

Berman, J.D.; Levi, H.W. 1971. **The orb weaver genus Neoscona in North America (Araneae: Araneidae).** Bulletin of the Museum of Comparative Zoology. 141 (8): 465-500.

BioQuip® Products, Inc. 2007. **Bio Equipment Catalog 2007**, 10 K. Rancho Dominguez, CA. www.bioquip.com

Bishop, S.C. 1923. **A list of spiders taken on Isle-au-Haut, July to October 1922, together with a description of a new species.** In: A Scientific Survey of Turner's Lake, Isle-au-Haut, Maine. New York State Museum Bulletin. 252: 21-22, 26-27.

Bishop, S.C.; Crosby, C.R. 1930. **Studies in American spiders: genera *Ceratinopsis*, *Ceratinopsidis*, and *Tutaibo*.** Journal of the New York Entomological Society. 38: 15-33, + plates 3-6.

Bishop, S.C.; Crosby, C.R. 1933 [1932]. **Studies in American spiders: the genus *Grammonota*.** Journal of the New York Entomological Society. 40(4): 393-421.

Bishop, S.C.; Crosby, C.R. 1935. **A new genus and two new species of Dictynidae (Araneae).** Proceedings of the Biological Society of Washington. 48: 45-48.

Bishop, S.C.; Crosby, C.R. 1936. **A new genus of spiders in the Erigoneae.** Proceedings of the Biological Society of Washington 49: 39-42.

Bishop, S.C.; Crosby, C.R. 1938. **Studies in American spiders: miscellaneous genera of Erigoneae, part II.** Journal of the New York Entomological Society. 46(1): 55-107 + plates 2-7.

Blake, I.H. 1927 [1926]. **A comparison of the animal communities of coniferous and deciduous forests.** University of Illinois. Illinois Biological Monographs. 10 (4): 371-520 [7-148] + plates 1-16.

Bosselaers, J.; Jocqué, R. 2002. **Studies in Corinnidae: cladistic analysis of 38 corinnid and liocranid genera, and transfer of Phrurolithinae.** Zoologica Scripta. 31(3): 241-270.

Bowling, T.A.; Sauer,R.J. 1975. **A taxonomic revision of the crab spider genus *Coriarachne* (Araneida, Thomisidae) for North America north of Mexico.** Journal of Arachnology. 2(3): 183-193.

Brady, A.R. 1979. **Nearctic species of the wolf spider genus *Trochosa* (Araneae: Lycosidae).** Psyche. 86(2/3): 167-212.

Brignoli, P.M. 1983. **A catalogue of the Araneae described between 1940 and 1981.** Manchester, England: Manchester University Press in association with the British Arachnological Society. 755 p.

Bryant, E.B. 1908. **List of the Araneina.** In: Fauna of New England, 9. Occasional Papers of the Boston Society of Natural History. 7: 1-105.

Bryant, E.B. 1941. **Notes on the spider fauna of New England.** Psyche. 48(4): 129-146.

Buckle, D. 1988. **Linyphiinae.** In: Roth, V.D., ed. Linyphiidae of America north of Mexico. Checklists, synonymy and literature cited. Gainesville, FL: American Arachnological Society: 37-62.

Buckle, D.J.; Carroll, D.; Crawford, R.L.; Roth, V.D. 2001. **Linyphiidae and Pimoidae of America north of Mexico: checklists, synonymy, and literature.** Part 2. In: Paquin, P; Buckle, D.J. eds. Contributions à la connaissance des Araignées (Arachnida) d'Amérique du Nord. Fabreries, Supplément 10: 89-191.

Burian, S.K.; Gibbs, K.E. 1991. **Mayflies of Maine: an annotated faunal list.** Maine Agricultural Experiment Station Technical Bulletin 142, Orono, ME: University of Maine: 1-109.

Carico, J.E. 1972. **The Nearctic spider genus *Pisaurina* (Pisauridae).** Psyche. 79(4): 295-310.

Carico, J.E. 1973. **The Nearctic species of the genus *Dolomedes* (Araneae: Pisauridae).** Bulletin of the Museum of Comparative Zoology. 114(7): 435-488.

Carico, J.E. 2005. **Pisauridae.** In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 199-200.

Carroll, D.; Roth, V.D. 1988. **Erigoninae.** In: Roth, V. D., ed. Linyphiidae of America north of Mexico. Checklists, synonymy and literature cited. Gainesville, FL: American Arachnological Society: 3-36.

Chamberlin, R.V. 1909. **The American *Drapetisca*.** Canadian Entomologist. 41(10): 368.

Chamberlin, R.V. 1925. **Notes on North American spiders heretofore referred to *Coelotes*.** Proceedings of the Biological Society of Washington. 38(Nov.): 119-124.

Chamberlin, R.V.; Gertsch, W.J. 1958. **The spider family Dictynidae in America north of Mexico.** Bulletin of the American Museum of Natural History. 116(1): 1-152 + plates.

Chamberlin, R.V.; Ivie, W. 1940. **Agelenid spiders of the genus *Cicurina*.** Bulletin of the University of Utah. 30 (13). Biological Series. 5 (9): 1-108.

Chamberlin, R.V.; Ivie, W. 1941. **North American Agelenidae of the genera *Agelenopsis*, *Calilena*, *Ritalena*, and *Tortolena*.** Annals of the Entomological Society of America. 34(3): 585-628.

Chamberlin, R.V.; Ivie, W. 1943. **New genera and species of North American Linyphiid spiders.** Bulletin of the University of Utah, 33 (10). Biological Series. 7 (6): 1-39.

Chamberlin, R.V.; Ivie, W. 1944. S**piders of the Georgia region of North America.** Bulletin of the University of Utah. 35 (9). Biological Series. 8 (5): 1-267.

Chamberlin, R.V.; Ivie, W. 1947. **The spiders of Alaska.** Bulletin of the University of Utah. 37 (10). Biological Series. 10 (3): 1-103.

Chickering, A.M. 1944. **The Salticidae (jumping spiders) of Michigan.** Reprinted from: Papers of the Michigan Academy of Science, Arts and Letters. 1943. 29: 139-222.

Clausen, I.H. S. 1986. **The use of spiders (Araneae) as ecological indicators.** Bulletin British Arachnological Society. 7(3): 83-86.

Coddington, J.A.; Levi, H.W. 1991. **Systematics and evolution of spiders (Araneae).** Annual Review of Ecology and Systematics. 22: 565-592.

Coddington, J.A.;Young, L.H.; Coyle, F.A. 1996. **Estimating spider species richness in a southern Appalachian cove hardwood forest.** Journal of Arachnology. 24(2): 111-128.

Collins, J.A.; Jennings, D.T.; Forsythe, H.Y., Jr. 1996. **Effects of cultural practices on the spider (Araneae) fauna of lowbush blueberry fields in Washington County, Maine.** Journal of Arachnology. 24(1): 43-57.

Colwell, R.K.; Coddington, J.A. 1994. **Estimating the extent of terrestrial biodiversity through extrapolation.** Philosophical Transactions Royal Society, Series B. 345: 101-118.

Comstock, J.H. 1948. **The spider book, rev.** In: Gertsch, W.J., ed. New York: Comstock Publishing Company. 729 p.

Cox, G.W. 1999. **Alien species in North America and Hawaii: impacts on natural ecosystems.** Washington, DC: Island Press. 387 p.

Coyle, F.A. 1981. **Effects of clearcutting on the spider community of a southern Appalachian forest.** Journal of Arachnology. 9(3): 285-298.

Crosby, C.R.; Bishop, S.C. 1925. **Studies in New York spiders. Genera: *Ceratinella* and *Ceraticelus*.** New York State Museum Bulletin. 264: 1-71.

Crosby, C.R.; Bishop, S.C. 1927. **New species of Erigoneae and Theridiidae.** Journal of the New York Entomological Society. 35(2): 147-157.

Crosby, C.R.; Bishop, S.C. 1928. **Class Arachnida, Order Araneae.** In: Leonard, M.D., ed. A list of the insects of New York, with a list of the spiders and certain other allied groups. Cornell University Agricultural Experiment Station, Memoirs. 101: 1034-1074.

Crosby, C.R.; Bishop, S.C. 1931. **Studies in American spiders: genera *Cornicularia*, *Paracornicularia*, *Tigellinus*, *Walckenaeria*, *Epiceraticelus*, and *Pelecopsis*, with descriptions of new genera and species.** Journal of the New York Entomological Society. 39(3): 359-403.

Crosby, C.R.; Bishop, S.C. 1933. **American spiders: Erigoneae, males with cephalic pits.** Annals of the Entomological Society of America. 26(1): 105-182.

Crosby, C.R.; Bishop, S.C. 1936. **Studies in American spiders: miscellaneous genera of Erigoneae.** In: Festschrift f Embrik Strand Riga 2: 52-64 + plates 4-5.

Cushing, P.E. 2005. **Introduction.** In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 1-17.

Cutler, B. 1988 [1987]. **A revision of the American species of the antlike jumping spider genus *Synageles* (Araneae, Salticidae).** Journal of Arachnology. 15(3): 321-348.

Cutler, B. 2005. **Titanoecidae.** In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 248.

Cutler, B.; Grim, L.H.; Kulman, H.M. 1975. **A study in the summer phenology of dionychious spiders from northern Minnesota forests.** Great Lakes Entomologist. 8(3): 99-104.

Czech, B.; Krausman, P.R.; Devers, P.K. 2000. **Economic associations among causes of species endangerment in the United States.** BioScience. 50: 593-601.

Dondale, C.D. 1959. **Definition of the genus *Grammonota* (Araneae: Erigonidae), with description of seven new species.** Canadian Entomologist. 91(4): 232-242.

Dondale, C.D. 1961. **Revision of the *aureolus* group of the genus *Philodromus* in North America.** Canadian Entomologist. 93(3): 199-222.

Dondale, C.D. 1995. **A new synonym in the genus *Meta* (Araneae, Tetragnathidae).** Journal of Arachnology. 23(2): 125-126.

Dondale, C.D. 2005a. **Lycosidae.** In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 164-170.

Dondale, C.D. 2005b. **Philodromidae.** In: Ubick, D.; Paquin, P.; Cushing, P.E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 192-193.

Dondale, C.D. 2005c. **Thomisidae.** In: Ubick, D.; Paquin, P.; Cushing, P.E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 246-247.

Dondale, C.D.; Redner, J.H. 1968. **The *imbecillus* and *rufus* groups of the spider genus *Philodromus* in North America (Araneida: Thomisidae).** Memoirs of the Entomological Society of Canada. 55: 1-78.

Dondale, C.D.; Redner, J.H. 1975. **The genus *Ozyptila* in North America (Araneida: Thomisidae).** Journal of Arachnology. 2(3): 129-181.

Dondale, C.D.; Redner, J.H. 1976a. **A review of the spider genus *Philodromus* in the Americas (Araneida: Philodromidae).** Canadian Entomologist. 108(2): 127-157.

Dondale, C.D.; Redner, J.H. 1976b. **A new Nearctic of *Misumenops* (Araneida: Thomisidae).** Canadian Entomologist. 108(8): 1007-1008.

Dondale, C.D.; Redner, J.H. 1978a. **Revision of the Nearctic wolf spider genus *Schizocosa* (Araneida: Lycosidae).** Canadian Entomologist. 110(2): 143-181.

Dondale, C.D.; Redner, J.H. 1978b. **The crab spiders of Canada and Alaska (Araneae: Philodromidae and Thomisidae).** The insects and arachnids of Canada. Part 5. Canadian Department of Agriculture Pub. 1663. 255 p.

Dondale, C.D.; Redner, J.H. 1979. **Revision of the wolf spider genus *Alopecosa* Simon in North America (Araneida: Lycosidae).** Canadian Entomologist. 111(9): 1033-1055.

Dondale, C.D.; Redner, J.H. 1982. **The sac spiders of Canada and Alaska (Araneae: Clubionidae and Anyphaenidae).** The insects and arachnids of Canada. Part 9. Canadian Department of Agriculture Pub. 1724. 194 p.

Dondale, C.D.; Redner, J.H. 1983. **Revision of the wolf spider genus *Arctosa* C.L. Koch in North and Central America (Araneae: Lycosidae)**. Journal of Arachnology. 11(1): 1-30.

Dondale, C.D.; Redner, J.H. 1984. **Revision of the *milvina* group of the wolf spider genus *Pardosa* (Araneae: Lycosidae).** Psyche. 91(1/2): 67-117.

Dondale, C.D.; Redner, J.H. 1986. **The *coloradensis*, *xerampelina*, *lapponica*, and *tesquorum* groups of the genus *Pardosa* (Araneae: Lycosidae) in North America.** Canadian Entomologist. 118(8): 815-835.

Dondale, C.D.; Redner, J.H. 1987. **The *atrata*, *cubana*, *ferruginea*, *moesta*, *monticola*, *saltuaria*, and *solituda* groups of the spider genus *Pardosa* in North America (Araneae: Lycosidae).** Canadian Entomologist. 119(1): 1-19.

Dondale, C.D.; Redner, J.H. 1990. **The wolf spiders, nurseryweb spiders and lynx spiders of Canada and Alaska (Araneae: Lycosidae, Pisauridae, Oxyopidae).** The insects and arachnids of Canada. Part 17. Ottawa, ON: Agriculture Canada Pub. 1856. 383 p.

Dondale, C.D.; Redner, J.H.;LeSage, L. 1994. **A comb-footed spider, *Achaearanea tabulata*, new to the fauna of Canada (Araneae: Theridiidae).** Journal of Arachnology. 22(2): 176-178.

Dondale, C.D.; Redner, J.H.; Marusik, Y.M. 1997. **Spiders (Araneae) of the Yukon.** In: Danks, H.V.; Downes, J.A., eds. Insects of the Yukon. Ottawa, ON: Biological Survey of Canada Monograph series No. 2. Biological Survey of Canada (Terrestrial Arthropods): 73-113.

Dondale, C.D.; Redner, J.H.; Paquin, P.; Levi, H.W. 2003. **The orb-weaving spiders of Canada and Alaska.** Uloboridae, Tetragnathidae, Araneidae, and Theridiosomatidae (Araneae). The insects and arachnids of Canada. Part 23. Ottawa, ON: Agriculture Canada National Research Council Pub. NRC 44466. 371 p.

Dondale, C.D.; Turnbull, A.L.; Redner, J.H. 1964. **Revision of the Nearctic species of *Thanatus* C.L. Koch (Araneae: Thomisidae).** Canadian Entomologist. 96(4): 636-656.

Draney, M.L.; Buckle, D.J. 2005a. **Linyphiidae (Linyphiinae).** In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds.Spiders of North America: an identification manual. American Arachnological Society: 124-161.

Draney, M.L.; Buckle, D.J. 2005b. **Linyphiidae (Erigoninae).** In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 124-161.

Duffey, E.; Merrett, P. 1964 [1963]. ***Carorita limnaea* (Crosby and Bishop), a linyphiid spider new to Britain from Wybunbury Moss, Cheshire.** Annals and Magazine of Natural History. 13th series. 69 (6): 573-576.

Dunn, G.A.; Reeves, R.M. 1980. **A modified collection net for catching insects under cloth bands on trees.** Entomological News. 91(1): 7-9.

Edwards, G.B. 1980. **Jumping spiders of the United States and Canada: changes in the key and list (4).** Peckhamia 2(1): 11-14.

Edwards, G.B. 2004. **Revision of the jumping spiders of the genus *Phidippus* (Araneae: Salticidae).** Occasional Papers of the Florida State Collection of Arthropods 11: 1-156.

Edwards, R.J. 1958. **The spider subfamily Clubioninae of the United States, Canada and Alaska.** Bulletin of the Museum of Comparative Zoology. 118 (6): 363-436.

Edwards, R.L. 1993. **New records of spiders (Araneae) from Cape Cod, Massachusettes, including two possible European immigrants.** Entomological News. 104(2): 79-82.

Emerton, J.H. 1882. **New England spiders of the family Theridiidae.** Transactions of the Connecticut Academy of Arts and Sciences. 6(1): 1-86 + plates 1-24.

Emerton, J.H. 1884. **New England spiders of the family Epeiridae.** Transactions of the Connecticut Academy of Arts and Sciences. 6(7): 295-341 + plates 33-40.

Emerton, J.H. 1890. **New England spiders of the families Drassidae, Agalenidae and Dysderidae.**

Transactions of the Connecticut Academy of Arts and Sciences. 8(11): 166-206 + plates 3-8.

Emerton, J.H. 1891. **New England spiders of the family Attidae.** Transactions of the Connecticut Academy of Arts and Sciences. 8(14): 220-252 + plates 16-21.

Emerton, J.H. 1894. **Canadian spiders.** Transactions of the Connecticut Academy of Arts and Sciences. 9(7): 400-429 + plates 1-4.

Emerton, J.H. 1907. **A female spider with one male palpus.** Psyche. 14(2): 40.

Emerton, J.H. 1909. **Supplement to the New England spiders.** Transactions of the Connecticut Academy of Arts and Sciences. 14(3): 171-236 + plates 1-12.

Emerton, J.H. 1911. **New spiders from New England.** Transactions of the Connecticut Academy of Arts and Sciences. 16(4): 383-407 + plates 1-6.

Emerton, J.H. 1913. **New England spiders identified since 1910.** Transactions of the Connecticut Academy of Arts and Sciences. 18(3): 209-224 + plates 1-2.

Emerton, J.H. 1914. **Geographical distribution of spiders in New England.** Appalachia. 13(2): 143-159.

Emerton, J.H. 1915. **New spiders from New England, XI.** Transactions of the Connecticut Academy of Arts and Sciences. 20: 133-144 + plate 1.

Emerton, J.H. 1920. **Catalogue of the spiders of Canada known to the year 1919.** Transactions of the Royal Canadian Institute.12: 309-338.

Emerton, J.H. 1925. **New spiders from Canada and the adjoining states, No. 4.** Canadian Entomologist. 57(3): 65-69.

Emerton, J.H. 1926. **New spiders from Canada and the adjoining states, No. 5.** Canadian Entomologist. 58(5): 115-119.

Eskov, K.Y. 1994. **Catalogue of the linyphiid spiders of northern Asia.** Sofia, Bulgaria: Pensoft Publishers. 144 p.

Exline, H.; Levi, H.W. 1962. **American spiders of the genus *Argyrodes* (Araneae: Theridiidae).** Bulletin Museum of Comparative Zoology. 127(2): 75-204.

Foelix, R.F. 1996. **Biology of Spiders.** 2d ed. New York: Oxford University Press. 330 p.

Gertsch, W.J. 1933. **Diagnoses of new American spiders.** American Museum Novitates. 637: 1-14.

Gertsch, W.J. 1934. **Further notes on American spiders.** American Museum Novitates. 726: 1- 26.

Gertsch, W.J. 1936. **Further diagnosis of new American spiders.** American Museum Novitates. 852: 1-27.

Gertsch, W.J. 1937. **New American spiders.** American Museum Novitates. 936: 1-7.

Gertsch, W.J. 1939. **A revision of the typical crab-spiders (Misumeninae) of America north of Mexico.** Bulletin of the American Museum of Natural History. 76 (article 7): 277-442.

Gertsch, W.J. 1941. **New American spiders of the family Clubionidae.** I. American Museum Novitates. 1147: 1-20.

Gertsch, W.J. 1953. **The spider genera *Xysticus*, *Coriarachne*, and *Oxyptila* (Thomisidae, Misumeninae) in North America.** Bulletin of the American Museum of Natural History. 102(4): 413-482.

Gertsch, W.J. 1964. **The spider genus *Zygiella* in North America.** American Museum Novitates. 2188: 1-21.

Gertsch, W.J. 1979. **American Spiders, 2d ed.** New York: Van Nostrand Reinhold. 272 p.

Gertsch, W.J.; Ivie, W. 1936. **Descriptions of new American spiders.** American Museum Novitates. 858: 1-25.

Gertsch, W.J.; Ivie, W. 1955. **The spider genus *Neon* in North America.** American Museum Novitates. 1743: 1-17.

Graham, A.K.; Buddle, C.M.; Spence, J.R. 2003. **Habitat affinities of spiders living near a freshwater pond.** Journal of Arachnology. 31(1): 78-89.

Green, J. 1999. **Sampling method and time determines composition of spider collections.** Journal of Arachnology. 27(1): 176-182.

Greenstone, M.H. 1984. **Determinants of web spider species diversity: vegetation structural diversity vs. prey availability.** Oecologia (Berlin). 62(3): 299-304.

Greenstone, M.H. 1999. **Spider predation: how and why we study it.** Journal of Arachnology. 27(1): 333-342.

Grimaldi, D.A.; Engel, M.S. 2005. **Evolution of the insects.** New York: Cambridge University Press. 755 p.

Griswold, C.E. 1987. **A revision of the jumping spider genus *Habronattus* F. O. P.-Cambridge (Araneae; Salticidae), with phenetic and cladistic analyses.** University of California Publication in Entomology. 107: 1-344.

Gunnarsson, B. 1988. **Spruce-living spiders and forest decline: the importance of needle-loss.** Biological Conservation. 43(1988): 309-320.

Gunnarsson, B. 1990. **Vegetation structure and the abundance and size distribution of spruce-living spiders.** Journal of Animal Ecology. 59(2): 743-752.

Hackman, W. 1954. **The spiders of Newfoundland.** Acta Zoologica Fennica. 79(1): 1-99.

Haines, A.; Vining, T.F. 1998. **Flora of Maine: a manual for identification of native and naturalized vascular plants of Maine.** V.F. Thomas Company: Bar Harbor, ME: 847 p.

Helsdingen, P.J. van. 1969. **A reclassification of the species of *Linyphia* Latreille based on the functioning of the genitalia (Araneida, Linyphiidae), I.** Zoologische Zerhandelingen Uitgegeven Door Het Rijksmuseum van Natuurlijke Historie te Leiden. 105: 1-303 + plates 1- 2.

Helsdingen, P.J. van. 1970. **A reclassification of the species of *Linyphia* Latreille based on the functioning of the genitalia (Araneida, Linyphiidae), II.** Zoologische Zerhandelingen Uitgegeven Door Het Rijksmuseum van Natuurlijke Historie te Leiden. 111: 1-86.

Helsdingen, P.J. van. 1973. **A recapitulation of the Nearctic species of *Centromerus* Dahl (Araneida, Linyphiidae), with remarks on *Tunagyna debilis* (Banks).** Zoologische Zerhandelingen Uitgegeven Door Het Rijksmuseum van Natuurlijke Historie te Leiden. 124: 1-45.

Helsdingen, P.J. van. 1974. **The affinities of *Wubana* and *Allomengea* with some notes on the latter genus (Araneae, Linyphiidae).** Zoologische Mededelingen. 46 (22): 295-321.

Hentz, N.M. 1875. **The Spiders of the United States. A collection of the arachnological writings of N.M. Hentz.** Burgess, E., ed. With notes and descriptions by J. H. Emerton. Occasional Papers Boston Society of Natural History. vol. II. 171 p.

Hilburn, D.J.; Jennings, D.T. 1988. **Terricolous spiders (Araneae) of insecticide-treated spruce-fir forests in west-Central Maine.** Great Lakes Entomologist. 21(3): 105-114.

Houseweart, M.W.; Jennings, D.T.; Rea, J.C. 1979. **Large capacity pitfall trap.** Entomological News. 90(1): 51-54.

Huber, B.A. 2005. **Pholcidae.** In: Ubick, D.; Paquin, P.; Cushing, P.E.; Roth, V., eds. Spiders of North

America: an identification manual. American Arachnological Society: 194-196.

Hutchinson, R. 1999. **Premières mentions de neuf espèces d'Araignées (Araneae) pour le Québec.** Fabreries. 23: 124-130.

Ivie, W. 1965. **The spiders of the genus *Islandiana* (Linyphiidae, Erigoninae).** American Museum Novitates. 2221: 1-25.

Ivie, W. 1969. **North American spiders of the genus *Bathyphantes* (Araneae, Linyphiidae).** American Museum Novitates. 2364: 1-70.

Jennings, D.T.; Catley, K.M.; Graham, F., Jr. 2002. ***Linyphia triangularis*, a Palearctic spider (Araneae: Linyphiidae) new to North America.** Journal of Arachnology. 30(3): 455- 460.

Jennings, D.T.; Dimond, J.B. 1988. **Arboreal spiders (Araneae) on balsam fir and spruces in east-central Maine.** Journal of Arachnology. 16(2): 223-235.

Jennings, D.T.; Hilburn, D.T. 1988. **Spiders (Araneae) captured in Malaise traps in spruce-fir forests of west-central Maine.** Journal of Arachnology. 16(1): 85-94.

Jennings, D.T.; Houseweart, M.W. 1988. **Sex-biased predation by web-spinning spiders (Araneae) on spruce budworm moths.** Journal of Arachnology. 17(2): 179-194.

Jennings, D.T.; Houseweart, M.W.; Dondale, C.D.; Redner, J.H. 1988. **Spiders (Araneae) associated with strip-clearcut and dense spruce-fir forests of Maine.** Journal of Arachnology. 16(1): 55-70.

Jennings, D.T.; Parker, F.D. 1987. **Habitats and spider prey of *Dipogon sayi sayi* (Hymenoptera: Pompilidae) in Washington County, Maine.** The Great Lakes Entomologist. 20(3): 135-140.

Jennings, D.T.; Vander Haegen, W.M.; Narahara, M.A. 1990. **A sampling of forest-floor spiders (Araneae) by expellant, Moosehorn National Wildlife Refuge, Maine.** Journal of Arachnology. 18(1): 73-179.

Kaston, B.J. 1938a. **North American spiders of the genus *Agroeca*.** American Midland Naturalist. 20(3): 562-570.

Kaston, B.J. 1938b. **A note on synonymy in spiders (Araneae: Salticidae and Argiopidae).** Entomological News. 49(9): 258-259.

Kaston, B.J. 1945. **New spiders in the group Dionycha with notes on other species.** American Museum Novitates. 1290: 1-25.

Kaston, B.J. 1946. **North American spiders of the genus *Ctenium*. American Museum Novitates.** 1306: 1-19.

Kaston, B.J. 1973. **Four new species of *Metaphidippus* with notes on related jumping spiders from the Eastern and Central United States.** Transactions of the American Microscopical Society. 92(1): 106-122.

Kaston, B.J. 1977. **Supplement to the Spiders of Connecticut.** Journal of Arachnology. 4(1): 1-72.

Kaston, B.J. 1981. **Spiders of Connecticut, rev. ed.** Connecticut Geological and Natural History Survey Bulletin 70. 1020 p.

Kaston, B.J.1983. **Synanthropic spiders.** In: Frankie, G.W.; Koehler, C.S., eds. Urban Entomology: Interdisciplinary Perspectives. New York: Praeger: 221-245.

Keyserling, E. 1885. **Neue Spinnen aus Amerika. VI.** Verhandlungen der kaiserlich-königlichen zoologisch-botanishchen Gesellschaft in Wien. 34: 489-534 + plate 13.

Keyserling, E. 1886. **Die Spinnen Amerikas.** Theridiidae. II. Hälfte. Nürngerg. 2 (2): 1-295 + plates 1-21.

Kochalka, J.A. 1979 [1978]. ***Theridion biomaculatum* (Linné) in Vermont (Araneae: Theridiidae).** Journal of Arachnology. 6(3): 229-230.

Koponen, S. 1994. **Ground-living spiders, opilionids, and pseudoscorpions of peatlands in Quebec.** Memoirs of the Entomological Society of Canada. 169: 41-60.

Kronestedt, T. 1975. **Studies on species of Holarctic *Pardosa* group (Araneae, Lycosidae). I. Redescription of *Pardosa albomaculata* Emerton and description of two new species from North America, with comments on some taxonomic characters.** Zoologica Scripta. 4(5/6): 217-228.

Kronestedt, T. 1981. **Studies on species of Holarctic *Pardosa* group (Araneae, Lycosidae). II. Redescriptions of *Pardosa modica* (Blackwall), *Pardosa labradorensis* (Thorell), and *Pardosa sinistra* (Thorell).** Bulletin of the American Museum of Natural History. 170(1): 111-124.

Leech, R.E. 1972. **A revision of the Nearctic Amaurobiidae (Arachnida: Araneida).** Memoirs of the Entomological Society of Canada. 84: 1-182.

Lehtinen, P.T. 1967. **Classification of the cribellate spiders and some allied families, with notes on the evolution of the suborder Araneomorpha.** Annales Zoologici Fennici. 4: 199-468.

Levi, H.W. 1953. **Spiders of the genus *Dipoena* from America north of Mexico (Araneae, Theridiidae).** American Museum Novitates. 1647: 1-39.

Levi, H.W. 1954a. **Spiders of the genus *Euryopis* from North and Central America (Araneae, Theridiidae).** American Museum Novitates. 1666: 1-48.

Levi, H.W. 1954b. **The spider genus *Theridula* in North and Central America and the West Indies (Araneae: Theridiidae).** Transactions of the Microscopical Society. 73(4): 331-343.

Levi, H.W. 1955a. **The spider genera *Coressa* and *Achaearanea* in America north of Mexico (Araneae, Theridiidae).** American Museum Novitates. 1718: 1-33.

Levi, H.W. 1955b. **The spider genera *Oronota* and *Stemmops* in North America, Central America and the West Indies (Araneae: Theridiidae).** Annals Entomological Society America. 48(5): 333-342.

Levi, H.W. 1956. **The spider genera *Neottiura* and *Anelosimus* in America (Araneae: Theridiidae).** Transactions of the Microscopical Society. 75(4): 407-422.

Levi, H.W. 1957a. **The spider genera *Crustulina* and *Steatoda* in North America, Central America, and the West Indies (Araneae, Theridiidae).** Bulletin of the Museum of Comparative Zoology. 117(3): 367-424.

Levi, H.W. 1957b. **The spider genera *Enoplognatha*, *Theridion*, and *Paidisca* in America north of Mexico (Araneae, Theridiidae).** Bulletin American Museum of Natural History. 112(1): 5-123.

Levi, H.W. 1962. **The spider genera *Steatoda* and *Enoplognatha* in America (Araneae: Theridiidae).** Psyche 69(1): 11-36.

Levi, H.W. 1963a. **American spiders of the genus *Achaearanea* and the new genus *Echinotheridion* (Araneae, Theridiidae).** Bulletin of the Museum of Comparative Zoology. 129(3): 187-240.

Levi, H.W. 1963b. **American spiders of the genus *Theridion* (Araneae, Theridiidae).** Bulletin of the Museum of Comparative Zoology. 129(10): 481-589.

Levi, H.W. 1964a. **The spider genus *Thymoites* in America (Araneae: Theridiidae).** Bulletin of the Museum of Comparative Zoology. 130(7): 445-471.

Levi, H.W. 1964b. **American spiders of the genus *Phoroncidia* (Araneae: Theridiidae).** Bulletin of the Museum of Comparative Zoology. 131(3): 65-86.

Levi, H.W. 1968. **The spider genera *Gea* and *Argiope* in America (Araneae: Araneidae).** Bulletin of the Museum of Comparative Zoology. 136(9): 319-352.

Levi, H.W. 1971. **The *diadematus* group of the orb-weaver genus *Araneus* north of Mexico (Araneae: Araneidae).** Bulletin of the Museum of Comparative Zoology. 141(4): 131-179.

Levi, H.W. 1972. **The orb-weaver genera *Singa* and *Hypsosinga* in America (Araneae: Araneidae).** Psyche 78(4): 229-256.

Levi, H.W. 1973. **Small orb-weavers of the genus *Araneus* north of Mexico (Araneae: Araneidae).** Bulletin of the Museum of Comparative Zoology. 145(9): 473-552.

Levi, H.W. 1974. **Orb-weaver genera *Araniella* and *Nuctenea* (Araneae: Araneidae).** Bulletin of the Museum of Comparative Zoology. 146(6): 291-316.

Levi, H.W. 1975a. **Additional notes on the orb-weaver genera *Araneus*, *Hypsosinga*, and *Singa* north of Mexico (Araneae, Araneidae).** Psyche. 82(2): 265-274.

Levi, H.W. 1975b. **The American orb weaver genera *Larinia*, *Cercidia*, and *Mangora* north of Mexico (Araneae: Araneidae).** Bulletin of the Museum of Comparative Zoology. 147(3): 101-135.

Levi, H.W. 1976. **The orb-weaver genera *Verrucosa*, *Acanthepeira*, *Wagneriana*, *Acacesia*, *Wixia*, *Scoloderus*, and *Alpaida* north of Mexico.** Bulletin of the Museum of Comparative Zoology. 147(8): 351-391.

Levi, H.W. 1977. **The American orb-weaver genera *Cyclosa*, *Metazygia*, and *Eustala* north of Mexico (Araneae, Araneidae).** Bulletin of the Museum of Comparative Zoology. 148(3): 61-127.

Levi, H.W. 1980a. **Two new spiders of the genera *Theridion* and *Achaearanea* from North America (Araneae: Theridiidae).** Transactions of the American Microscopical Society. 99(3): 334-337.

Levi, H.W. 1980b. **The orb-weaver genus *Mecynogea*, the subfamily Metinae and the genera *Pachygnatha*, *Glenognatha* and *Azilia* of the subfamily Tetragnathinae north of Mexico (Araneae: Araneidae).** Bulletin of the Museum of Comparative Zoology. 149(1): 1-74.

Levi, H.W. 1981. **The American orb-weaver genera *Dolichognatha* and *Tetragnatha* north of Mexico (Araneae: Araneidae, Tetragnathinae).** Bulletin of the Museum of Comparative Zoology. 149(5): 271-318.

Levi, H.W. 2002. **Keys to the genera of araneid orbweavers (Araneae, Araneidae).** Journal of Arachnology. 30(3): 527-562.

Levi, H.W. 2005a. Araneidae. In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds. **Spiders of North America: an identification manual.** American Arachnological Society: 68-74.

Levi, H.W. 2005b. Tetragnathidae. In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds. **Spiders of North America: an identification manual.** American Arachnological Society: 232-234.

Levi, H.W. 2005c. Theridiidae. In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds. **Spiders of North America: an identification manual.** American Arachnological Society: 235-243.

Levi, H.W.; Field, H.M. 1954. **The spiders of Wisconsin.** American Midland Naturalist.51(2): 440-467.

Levi, H.W.; Randolph, D.E. 1975. **A key and checklist of American spiders of the family Theridiidae north of Mexico (Araneae).** Journal of Arachnology. 3(1): 31-51.

Locket, G.H.; Millidge, A.F. 1951. **British spiders. Volume I.** London, England: Ray Society. 310 p.

Locket, G.H.; Millidge, A.F. 1953. **British spiders. Volume II.** Pub.137. London, England: Ray Society. 449 p.

Logunov, D.V. 2001 [2000]. **A redefinition of the genera *Bianor* Peckham & Peckham, 1885 and *Harmochirus* Simon, 1885, with the establishment of a new genus *Sibianor* gen. n. (Aranei: Salticidae).** Arthropoda Selecta. 9(4): 221-286.

Loughton, B.G.; Derry, C.; West, A.S. 1963. **Spiders and the spruce budworm.** In: Morris, R.F., ed. The dynamics of epidemic spruce budworm populations. Memoirs of the Entomological Society of Canada. 31: 249-268.

Lowrie, D.C.; Dondale, C.D. 1981. **A revision of the *nigra* group of the genus *Pardosa* in North America (Araneae, Lycosidae).** Bulletin of the American Museum of Natural History. 170(1): 125-139.

Maddison, W.P. 1978. ***Bianor aemulus* (Gertsch), new combination (Araneae: Salticidae)**. Peckhamia. 1(5): 76-77.

Maddison, W.P. 1986. **Distinguishing the jumping spiders *Eris militaris* and *Eris flava* in North America (Araneae: Salticidae).** Psyche. 93(1/2): 141-149.

Maddison, W.P. 1996. ***Pelegrina* Franganillo and other jumping spiders formerly placed in the genus *Metaphidippus* (Araneae: Salticidae).** Bulletin of the Museum of Comparative Zoology. 154 (4): 215-368.

Maloney, D. 2002. **The ecology of wolf spiders (Lycosidae) in lowbush blueberry (*Vaccinium angustifolium*) agroecosystems.** Orono, ME: University of Maine. 182 p. M.S. thesis.

Maloney, D.; Drummond, F.A.; Alford, R. 2003. **Spider predation in agroecosystems: Can spiders effectively control pest populations.** Orono, ME: University of Maine. Maine Agricultural and Forest Experiment Station Technical Bulletin. 190: 1-28.

Marc, P.; Canard, A.; Ysnel, F. 1999. **Spiders (Araneae) useful for pest limitation and bioindication.** Agriculture Ecosystem Environment. 74(1999): 229-273.

Marusik, Y.M.; Koponen, S. 1992. **A review of *Meta* (Araneae, Tetragnathidae), with description of two new species.** Journal of Arachnology. 20(2): 137-143.

McIver, J.D.; Moldenke, A.R.; Parsons, G.L. 1990. **Litter spiders as bio-indicators of recovery after clearcutting in a western coniferous forest.** Northwestern Environmental Journal. 6(2): 410-412.

McIver, J.D.; Parsons, G.L.; Moldenke, A.R. 1992. **Litter spider succession after clear-cutting in a western coniferous forest.** Canadian Journal of Forest Research. 22(7): 984-992.

McMahon, J.S. 1990. **The biophysical regions of Maine: patterns in the landscape and vegetation.** Orono, ME: University of Maine. Map.

Miller, J.A. 1999. **Revision and cladistic analysis of the erigonine spider genus *Sisicottus* (Araneae, Linyphiidae, Erigoninae).** Journal of Arachnology. 27(3): 553-603.

Millidge, A.F. 1976 [1975]. **Re-examination of the erigonine spiders "*Micrargus herbigradus*" and "*Pocadicnemis pumila*" (Araneae: Linyphiidae).** Bulletin of the British Arachnological Society. 3(6): 145-155.

Millidge, A.F. 1981a. **A revision of the genus *Gonatium* (Araneae: Linyphiidae).** Bulletin of the British Arachnological Society. 5(6): 253-277.

Millidge, A.F. 1981b. **The erigonine spiders of North America. Part 5. The genus *Satilatlas* (Araneae: Linyphiidae).** Bulletin of the American Museum of Natural History. 170(1): 242-253.

Millidge, A.F. 1981c. **The erigonine spiders of North America. Part 3. The genus *Scotinotylus* Simon**

(Araneae: Linyphiidae). Journal of Arachnology. 9(2): 167-213.

Millidge, A.F. 1983. **The erigonine spiders of North America. Part 6. The genus *Walckenaeria* Blackwall (Araneae, Linyphiidae).** Journal of Arachnology. 11(2): 105-200.

Millidge, A.F. 1984. **The erigonine spiders of North America. Part 7. Miscellaneous genera (Araneae, Linyphiidae).** Journal of Arachnology. 12(2): 121-169.

Millidge, A.F. 1987. **The erigonine spiders of North America. Part 8. The genus *Eperigone* Crosby and Bishop (Araneae, Linyphiidae).** American Museum Novitates. 2885: 1-75.

Morse, D.H. 1985. **Nests and nest-site selection of the crab spider *Misumena vatia* (Araneae: Thomisidae) on milkweed. Journal of Arachnology.** 13(3): 383-390.

Morse, D.H. 1986. **Foraging behavior of crab spiders (*Misumena vatia*) hunting on inflorescences of different quality.** American Midland Naturalist 116(2): 341-347.

Morse, D.H. 1991. **Homing by crab spiders *Misumena vatia* (Araneae, Thomisidae) separated from their nests.** Journal of Arachnology. 19(2): 111-114.

Morse, D.H. 1992. **Predation on dispersing *Misumena vatia* spiderlings and its relationship to maternal foraging decisions.** Ecology. 73(5): 1814-1819.

Morse, D.H.; Fritz, R.S. 1982. **Experimental and observational studies of patch-choice at different scales by the crab spider *Misumena vatia*.** Ecology. 63(1): 172-182.

Muma, M.H. 1946. **North American Agelenidae of the genus *Coras* Simon.** American Museum Novitates. 1329: 1-20.

Muma, M.H. 1947. **North American Agelenidae of the genus *Wadotes* Chamberlin.** American Museum Novitates. 1334: 1-12.

Nyffeler, M.; Benz, G. 1987. **Spiders in natural pest control: a review.** Journal of Applied Entomology. 103(4): 321-339.

Nyffeler, M.; Dondale, C.D.; Redner, J.H. 1986. **Evidence for displacement of a North American spider, *Steatoda borealis* (Hentz), by the European species *S. bipunctata* (Linnaeus) (Araneae: Theridiidae).** Canadian Journal of Zoology. 64(4): 867-874.

Nyffeler, M.; Sterling, W.L.; Dean, D.A. 1994. **How spiders make a living.** Environmental Entomology. 23(6): 1357-1367.

Ono, H. 1988. **A revisional study of the spider family Thomisidae (Arachnida, Araneae) of Japan.** National Science Museum, Tokyo. ii + 1-252.

Opell, B.D.; Beatty, J.A. 1976. **The Nearctic Hahniidae (Arachnida: Araneae).** Bulletin of the Museum of Comparative Zoology. 147(9): 393-433.

Packard, A.S. 1905. **Change in color and protective coloration in a flower-spider (*Misumena vatia* Thorell).** Journal of the New York Entomological Society. 13(2): 85-96.

Paquin, P.; Dupérré, N. 2003. **Guide d'identification des Araignées (*Araneae*) du Québec.** Fabreries. Supplément 11. 251 p.

Paquin, P.; Dupérré, N.; Hutchinson, R. 2001. **Liste révisée des Araignées (Araneae) du Québec. Part 1.** In: Paquin, P.; Buckle, D.J., ed. Contributions à la connaissance des Araignées (Arachnida) d'Amérique du Nord. Fabreries. Supplément 10: 5-87.

Peckham, G.W.; Peckham, E.G. 1909. **Revision of the Attidae of North America.** Transactions of the

Wisconsin Academy of Sciences, Arts and Letters. 16. Part I. (5): 355-646.

Platnick, N.I. 1975. **A revision of the Holarctic spider genus *Callilepis* (Araneae, Gnaphosidae).** American Museum Novitates. 2573: 1-32.

Platnick, N.I. 1989. **Advances in spider taxonomy 1981-1987. A Supplement to Brignoli's A Catalogue of the Araneae Described between 1940 and 1981.** Merrett, P., ed. Manchester, England: Manchester University Press in association with the British Arachnological Society. 673 p.

Platnick, N.I. 1993. **Advances in spider taxonomy 1988-1991. With synonymies and transfers 1940-1980.** Merrett, P., ed. New York: New York Entomological Society in association with the American Museum of Natural History. 846 p.

Platnick, N.I. 1997. **Advances in spider taxonomy 1992-1995. With redescriptions 1940-1980.** Merrett, P., ed. New York: New York Entomological Society in association with the American Museum of Natural History. 976 p.

Platnick, N.I. 2007. **The World Spider Catalog. Version 7.5.** New York: The American Museum of Natural History. http://research.amnh.org/entomology/spiders/catalog/index.html.

Platnick, N.I.; Dondale, C.D. 1992. **The ground spiders of Canada and Alaska (Araneae: Gnaphosidae).** The insects and arachnids of Canada. Part 19. Pub. 1875. Ottawa, Ontario: Agriculture Canada, Ottawa. 297 p.

Platnick, N.I.; Shadab, M.U. 1975a. **A revision of the spider genus *Gnaphosa* (Araneae, Gnaphosidae) in America.** Bulletin of the American Museum of Natural History. 155 (1): 1-66.

Platnick, N.I.; Shadab, M.U. 1975b. **A revision of the spider genera *Haplodrassus* and *Orodrassus* (Araneae, Gnaphosidae) in North America.** American Museum Novitates. 2583: 1-40.

Platnick, N.I.; Shadab, M.U. 1976. **A revision of the spider genus *Drassodes* and *Tivodrassus* (Araneae, Gnaphosidae) in North America.** American Museum Novitates. 2593: 1-29.

Platnick, N.I.; Shadab, M.U. 1977. **A revision of the spider genera *Herpyllus* and *Scotophaeus* (Araneae, Gnaphosidae) in North America.** Bulletin of the American Museum of Natural History. 159 (article 1): 1-44.

Platnick, N.I.; Shadab, M.U. 1981. **A revision of the spider genus *Sergiolus* (Araneae, Gnaphosidae).** American Museum Novitates. 2717: 1-41.

Platnick, N.I.; Shadab, M.U. 1982. **A revision of the American spiders of the genus *Drassyllus* (Araneae, Gnaphosidae).** Bulletin of the American Museum of Natural History. 173 (1): 1-97.

Platnick, N.I.; Shadab, M.U. 1983. **A revision of the American spiders of the genus *Zelotes* (Araneae, Gnaphosidae).** Bulletin of the American Museum of Natural History. 174(2): 97-192.

Platnick, N.I.; Shadab, M.U. 1988. **A revision of the American spiders of the genus *Micaria* (Araneae, Gnaphosidae).** American Museum Novitates. 2916: 1-64.

Prentice, T.R. 2001. **Distinguishing the females of *Trochosa terricola* and *Trochosa ruricola* (Araneae, Lycosidae) from populations in Illinois, USA.** Journal of Arachnology. 29(3): 427-430.

Price, P.W. 1975. **Insect ecology.** New York: John Wiley & Sons. 337 p.

Procter, W. 1933. **Biological survey of the Mount Desert Region, Incorporated. Part V.** Marine fauna. Philadelphia, PA: The Wistar Institute of Anatomy and Biology. 402 p.

Procter, W. 1938. **Biological Survey of the Mount Desert Region, Incorporated. Part VI.** Insect Fauna.

Philadelphia, PA: The Wistar Institute of Anatomy and Biology. 496 p.

Procter, W. 1946. **Biological Survey of the Mount Desert Region, Incorporated. Part VII.** Insect Fauna. Philadelphia, PA: The Wistar Institute of Anatomy and Biology. 506 p.

Prószyński, J. 1980. **Revision of the spider genus *Sitticus* Simon 1901 (Aranei, Salticidae), IV. *Sitticus floricola* (C.L. Koch) group.** Annales Zoologici. Warszawa. 36(1): 1-35.

Redner, J.H.; Dondale, C.D. 1980. **Description of the female of *Xysticus winnipegensis* (Araneae: Thomisidae).** Canadian Entomologist. 112(9): 933-934.

Reillo, P.R. 1989. **Color polymorphism in the spider *Enoplognatha ovata* (Araneae: Theridiidae): broad-scale morph-frequency variation in northeastern North America.** American Midland Naturalist 122(1): 199-203.

Reiskind, J. 1969. **The spider subfamily Castianeirinae of the North and Central America (Araneae, Clubionidae).** Bulletin of the Museum of Comparative Zoology. 138 (5): 163-325 + plates.

Richman, D.B.; Cutler, B. 1978. **A list of the jumping spiders (Araneae: Salticidae) of the United States and Canada.** Peckhamia 1(5): 82-110.

Richman, D.B.; Edwards, G.B.; Cutler, B. 2005. **Salticidae.** In: Ubick, D.; Paquin, P.; Cushing, P.E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 205-216.

Richman, D.B.; Jackson, R.R. 1992. **A review of the ethnology of jumping spiders (Araneae, Salticidae).** Bulletin of the British Arachnological Society. 9(2): 33-37.

Richman, D.B.; Ubick, D. 2005. **Clubionidae.** In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 77-78.

Riechert, S.E.; Bishop, L. 1990. **Prey control by an assemblage of generalist predators: spiders in garden test systems.** Ecology 71(4): 1441-1450.

Riechert, S.E.; Gillespie, R.G. 1986. **Habitat choice and utilization in web-building spiders.** In: Shear, W.A., ed. Spiders: webs, behavior and evolution, Stanford, CA: University Press: 23-48.

Riechert, S.E.; Harp, J. 1987. **Nutritional ecology of spiders.** In: Nutritional Ecology of Insects, Mites, Spiders, and Related Invertebrates, Slansky, F. Jr.; Rodriguez, J.G., eds. John Wiley & Sons, NY: 645-672.

Riechert, S.E.; Lockley, T. 1984. **Spiders as biological control agents.** Annual Review of Entomology. 29: 299-320.

Roberts, M.J. 1985. **The spiders of Great Britain and Ireland.** Introduction, classification, and nomenclature, key to families, descriptions of species-Atypidae to Theridiosomatidae. Essex, England: Harley Books. 229 p. Vol. I

Roberts, M.J. 1987. **The spiders of Great Britain and Ireland. Description of species – Linyphiidae, checklist of the British Spiders.** Essex, England: Harley Books. 204 p. Vol. II.

Root, R.B. 1973. **Organization of a plant-arthropod association in simple and diverse habitats: the fauna of collards (*Brassica oleracea*).** Ecological Monographs. 43(1): 95-124.

Roth, V.D. 1968. **The spider genus *Tegenaria* in the western hemisphere (Agelenidae).** American Museum Novitates. 2323: 1-33.

Roth, V.D. 1994 (1993). **Spider genera of North America, with keys to families and genera, and a guide to literature.** 3d ed. Gainesville, FL: American Arachnological Society. 203 p.

Roth, V.D.; Brown, W.L. 1986. **Catalog of Nearctic Agelenidae.** The Museum Texas Tech University, Occasional Papers. 99: 1-21.

Russell-Smith, A. 1982. **A revision of the genus *Trabaea* Simon (Araneae: Lycosidae).** Zoological Journal of the Linnean Society. 74(1): 69-91.

Saaristo, M.I. 1973. **Taxonomical analysis of the type species of *Agyneta*, *Anomalaria*, *Meioneta*, *Atrolagus*, and *Syedrula* (Araneae, Linyphiidae).** Annales Zoologici Fenici. 10(3): 451-466.

Saaristo, M.I. 1974. **Taxonomical analysis of *Microneta viaria* (Blackwall, 1841), the type species of the genus *Microneta* Menge, 1869 (Araneae, Linyphiidae).** Annales Zoologici Fenici. 11 (2): 166-169.

Saaristo, M.I.; Koponen, S. 1998. **A review of northern Canadian spiders of the genus *Agyneta* (Araneae, Linyphiidae), with descriptions of two new species.** Canadian Journal of Zoology 76(3): 566-583.

Saaristo, M.I.; Tanasevitch, A.W. 1996. **Redelimitation of the subfamily Micronetinae Hull, 1920 and the genus *Lepthyphantes* Menge, 1866 with descriptions of some new genera.** Bericht des Naturforschenden lich Medzinischen Vereines in Innsbruck. 83: 163-186.

Sauer, R.J.; Platnick, N.E. 1972. **The crab spider genus *Ebo* (Araneida: Thomisidae) in the United States and Canada.** Canadian Entomologist. 104(1): 35-60.

Schaefer, M. 1987. **Life cycles and diapause. I.** In: Nentwig, W., ed. Ecophysiology of spiders. Berlin/ Heidelberg: Springer-Verlag: 331-347.

Schick, R.X. 1965. **The crab spiders of California (Araneida: Thomisidae).** American Museum of Natural History Bulletin. 129(1): 1-180.

Seeley, R.M. 1928. **Revision of the spider genus *Tetragnatha*.** New York State Museum Bulletin. 278: 99-149, plate 4.

Senglet, A. 2001. **Copulatory mechanisms in *Hoplopholcus*, *Stygopholcus* (revalidated), *Pholcus*, *Spermophora* and *Spermophorides* (Araneae, Pholcidae), with additional faunistic and taxonomic data.** Bulletin de la Societe Entomologique de Suisse. 74: 43-67.

Sokal, R.R.; Rohlf., F.J. 1981. **Biometry.** The principles and practice of statistics in biological research. 2^{d} ed. New York: W. H. Freeman and Company. 859 p.

Sørensen, L.L.; Coddington, J.A.; Scharff, N. 2002. **Inventorying and estimating subcanopy spider diversity using semiquantitative sampling methods in an Afromontane forest.** Environmental Entomology. 31(2): 319-330.

Standen, V. 2000. **The adequacy of collecting techniques for estimating species richness of grassland invertebrates.** Journal of Applied Ecology. 37(5): 884-893.

Stratton, G.E.; Uetz, G.W.; Dillery, D.G. 1979. **A comparison of the spiders of three coniferous tree species.** Journal of Arachnology. 6(3): 219-226.

The Maine Atlas and Gazetteer, 29th ed. 2006. Yarmouth, ME: DeLorme. 78 p.

Turnbull, A.L. 1973. **Ecology of the true spiders (Araneomorphae).** Annual Review of Entomology. 18: 305-348.

Turnbull, A.L.; Dondale, C.D.; Redner, J.H. 1965. **The spider genus *Xysticus* C.L. Koch (Araneae: Thomisidae) in Canada.** Canadian Entomologist 97(12): 1233-1280.

Ubick, D. 2005a. **Amaurobiidae.** In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 60-62.

Ubick, D. 2005b. **Gnaphosidae.** In: Ubick, D.; Paquin, P.; Cushing, P.E.; Rogh, V., eds. Spiders of

North America: an identification manual. American Arachnological Society: 106-111.

Ubick, D.; Paquin, P.; Cushing, P.E.; Roth, V., eds. 2005. S**piders of North America: an identification manual.** American Arachnological Society. 377 p.

Ubick, D.; Richman, D.B. 2005a. **Corinnidae.** In: Ubick, D.; Paquin, P.; Cushing, P. E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 79-82.

Ubick, D.; Richman, D.B. 2005b. **Liocranidae.** In: Ubick, D.; Paquin, P.; Cushing, P.E.; Roth, V., eds. Spiders of North America: an identification manual. American Arachnological Society: 162-163.

Uetz, G.W. 1991. **Habitat structure and spider foraging.** In: Bell, S.S.; McCoy, E.D.; Mushinsky, H.R., eds. Habitat structure: the physical arrangement of objects in space. London, England: Chapman and Hall: 325-348.

Uetz, G.W.; Halaj, J.; Cady, A.B. 1999. **Guild structure of spiders in major crops.** Journal of Arachnology. 27(1): 270-280.

Vogel, B.R. 1964. **A taxonomic revision of the *distincta* group of the wolf spider genus *Pardosa* in America north of Mexico (Araneida, Lycosidae).** Postilla. 82: 1-30.

Vogel, B.R. 2004. **A review of the spider genera *Pardosa* and *Acantholycosa* (Araneae, Lycosidae) of the 48 contiguous United States.** Journal of Arachnology. 32(1): 55-108.

Vollrath, F. 1988. **Spider growth as an indicator of habitat quality.** Bulletin British Arachnological Society. 7(7): 217-219.

Wallace, H.K.; Exline, H. 1978. **Spiders of the genus *Pirata* in North America, Central America and the West Indies (Araneae: Lycosidae).** Journal of Arachnology. 5(1): 1-112.

Williams, G. 1962. **Seasonal and diurnal activity of harvestmen (Phalangida) and spiders (Araneida) in contrasted habitats.** Journal of Animal Ecology 31(1): 23-42.

Wilson, E.O. 1992. **The diversity of life.** Cambridge, MA: The Belknap Press of Harvard University Press. 424 p.

Wise, D.H. 1993. **Spiders in ecological webs.** Cambridge Studies in Ecology. Cambridge, England: Cambridge University Press: 328 p

Wunderlich, J. 1995. **Revision und Neubeschreibung einiger Gattungen der Familie Theridiidae aus der Nearktis und Neotropis (Arachnida: Araneae).** Beiträge zur Araneologie. 4 (1994): 609-615.

Yoshida, H. 2001. **A revision of the Japanese genera and species of the subfamily Theridiinae (Araneae: Theridiidae).** Acta Arachnologica. 50(2): 157-181.

Zorsch, H.M. 1937. **The spider genus *Lepthyphantes* in the United States.** American Midland Naturalist. 18(5): 856-898.

APPENDIX

Common and Latin names of Plants with Associated Spiders, Milbridge, Washington County, Maine. [1]

Common Name	Latin Name
Alder, speckled	*Alnus incana* (L.) Moench ssp. *rugosa* (Du Roi) Clausen
Apple	*Malus* sp.
Aspen, bigtooth	*Populus grandidentata* Michx.
Aspen, quaking (trembling)	*Populus tremuloides* Michx.
Aster	*Aster sp.*
Astilbe	*Astilbe* sp.
Balsam fir	*Abies balsamea* (L.) Mill.
Bayberry	*Myrica pensylvanica* Loisel.
Birch	*Betula* sp.
Birch, gray	*Betula populifolia* Marsh.
Birch, white (paper)	*Betula papyrifera* Marsh.
Blackberry	*Rubus* sp.
Blueberry	*Vaccinium* sp.
Blueberry, common lowbush	*Vaccinium angustifolium* Ait.
Blue-joint grass	*Calamagrostis canadensis* (Michx.) Beau.
Bush-honeysuckle	*Diervilla lonicera* P. Mill.
Cedar, Northern white	*Thuja occidentalis* L.
Cherry, pin	*Prunus pensylvanica* L. f.
Cherry, wild	*Prunus* sp.
Chokecherry	*Prunus virginiana* L.
Cinquefoil	*Potentilla* sp.
Clover, white and yellow	*Melilotus officinalis* (L.) Lam.
Crabapple	*Malus prunifolia* (Willd.) Borkh.
Crowberry, black	*Empetrum nigrum* L.
Daisy, ornamental	*Leucanthemum* sp.
Daisy, ox-eye	*Leucanthemum vulgare* Lam.
Dunegrass, American	*Leymus mollis* (Trin.) Hara
Garden-heliotrope	*Valeriana officinalis* L.
Goldenrod	*Solidago* sp.
Goldenrod, common	*Solidago canadensis* L.
Goldenrod, seaside	*Solidago sempervirens* L.
Hawkweed, meadow	*Hieracium caespitosum* Dumort.
Hawthorn	*Crataegus* sp.

continued

Appendix—continued

Larch, eastern	*Larix laricina* (Du Roi) K. Koch
Leatherleaf	*Chamaedaphne calyculata* (L.) Moench
Lilac	*Syringa* sp.
Maple, red	*Acer rubrum* L.
Meadowsweet	*Spiraea alba* (Du Roi) var. *latifolia* (Ait.) Dippel
Mountain-ash	*Sorbus americana* Marsh.
Oak, Northern red	*Quercus rubra* L.
Pea, common	*Pisum sativum* L.
Potato	*Solanum tuberosum* L.
Pine, jack	*Pinus banksiana* Lamb.
Pine, white	*Pinus strobus* L.
Raspberry	*Rubus idaeus* L.
Reindeer lichen	*Cladina rangiferina* (L.) Nyl.
Rhodora	*Rhododendron canadense* (L.) Torr.
Rockweed	*Fucus vesiculosus* L.
Rose, rugosa	*Rosa rugosa* Thomb.
Rush, black	*Juncus gerardii* Loisel.
Russian olive	*Elaeagnus angustifolia* L.
Sarsaparilla, wild	*Aralia nudicaulis* L.
Seaside-pea	*Lathyrus japonicus* Willd.
Sedge	*Scirpus* sp.
Serviceberry	*Amelanchier* sp.
Sheep laurel	*Kalmia angustifolia* L.
Spruce, red	*Picea rubens* Sarg.
Spruce, white	*Picea glauca* (Moench) Voss
St. Johnswort, common	*Hypericum perforatum* L.
Sunflower	*Helianthus* sp.
Sweet gale	*Myrica gale* L.
Sweetpea	*Lathyrus* sp.
Timothy	*Phleum pratense* L.
Wild-raisin	*Viburnum nudum* var. *cassinoides* (L.) Torr. & Gray
Willow	*Salix* sp.
Winterberry	*Ilex verticillata* (L.) Gray
Witch alder	*Fothergilla gardenii* L.

[1] Most of the common and Latin names are based on: Haines, A.; Vining, T.F. 1998. Flora of Maine: a manual for identification of native and naturalized vascular plants of Maine. V.F. Thomas Company: Bar Harbor, ME: 847 p.

Jennings, Daniel T.; Graham, Frank Jr. 2007. **Spiders (Arachnida: Araneae) Of Milbridge, Washington County, Maine.** Gen. Tech. Rep. NRS-16. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 204 p.

An inventory or spiders associated with diverse habitats of Milbridge, a 6,290-ha area of the East Coastal BioPhysical Region, yielded 6,979 individuals of 19 families, 145 genera, and 302 species (4 unknown). Species richness per genus ranged from 1 to 13, with 88 genera represented by a single species. Total species composition favored web spinners over hunters; however, more hunters were collected than web spinners, and more females were collected than males. Pitfall traps yielded the greatest number of species and individuals; fully 47 percent of the inventoried spiders were method-unique species. Species-faunal compositions were generally distinct among the sampled habitats and included habitat-unique species. Species-range extensions include new state, regional, and national records. The total estimated araneofaunal richness for Milbridge is 24 families, 172 genera, and ~ 411 species.

KEY WORDS: spider faunal inventories, species richness, sampling methods, spider-habitat associations, method-unique species, habitat-unique species, invasive species, estimated faunal richness

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