

## THE SPIDER SPECIES OF THE GREAT LAKES STATES

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**ABSTRACT.** Critical analysis of existing spider species lists for Wisconsin, Michigan, Ohio, Indiana and Illinois reveals 900 species recorded from the five-state region (284 genera, 40 families). All non-native, Palearctic, or otherwise questionable species records were scrutinized, and their status is discussed. The most speciose families in the region are the Linyphiidae (almost 24% of species), Salticidae (10.3%), Theridiidae (8.9%), Lycosidae (8.8%), and Araneidae (7.7%). All sources used for spider species names and species records are unambiguously quoted. Spider species records are presented in tables allowing comparison of family composition among the states, and prediction of number of heretofore unrecorded species. Richness among states is analyzed and found to be dependent on varying degrees of sampling effort. As a new tool, a Spider Species Name Concordance Table allows tracking previously published spider species names to the currently valid name of every species record. The study demonstrates the need for crucial pieces of scientific infrastructure, such as complete species catalogs, and the great utility of faunistic and taxonomic data to meet today's biodiversity challenges.

**Keywords:** Midwest spider fauna, checklist, faunistics, Araneae, gap analysis, Illinois, Indiana, Ohio, Wisconsin, Michigan

In the past, faunal studies and alpha-taxonomic work played a significant role in biological research. Their importance and influence in biological science diminished during the past 6 decades (Wheeler 2004), especially in the developed (and supposedly well-studied) regions in the world, such as Europe and North America. The recent focus on biodiversity decline and conservation efforts demonstrates significant gaps in our faunistic knowledge. While species discovery for vertebrates is well advanced, the discovery of the majority of non-vertebrate species on the planet (Agenda 2000) lags far behind (Knapp et al. 2005). A 139% increase of recorded bivalve species from the Florida Keys between 1995 and 2004 illustrates the point (Bieler & Mikelsen 2004).

Conservation efforts focus mainly on the estimated species-richness of habitats and the occurrence of endangered and threatened species (Mace 2004). Charismatic vertebrate species and their protection are most often invoked in conservation actions, whereas the

majority of animal biodiversity, the invertebrates, remains on the sideline. We often know so little about species' ranges and abundance that species-richness estimates for any particular habitat or region are vague and uncertain.

Spiders, a mega-diverse group with 38,000 described species (Platnick 2005) are a case in point. As insect predators, they play a pivotal role in the regulation of insect populations in all terrestrial habitats. Species lists offer solid baseline data for large-scale biogeographic analyses, survey and monitoring efforts, and tracking of environmental changes. These lists form the foundation of species-richness estimates. Yet, reliable, up-to-date spider species lists for the 50 United States are not available, because faunistic research declined (and lost funding) before the job was done (Crawford 1988). Consequently, the current assemblage of spider species lists suffers from several problems, impeding biogeographic research as well as hampering their

utility for ecological research and conservation efforts.

Spider species lists for various states and habitats were completed over a long period of time. The species records for the five states covered here are gleaned from the literature dating back 50 years for Wisconsin (Levi & Field 1954), while Indiana and Illinois were covered recently (Beatty 2002). Species names changed during this period. While such name changes are often somewhat naively decried as hampering the accessibility of the records (Golding & Timberlake 2003), it is imperative to assert that such name changes are the result of significant and badly needed progress in the systematics of the animals involved (see for example Froese & Pauly 2005). Since invertebrates in general, and spiders in particular are species-rich and require highly trained taxon-experts for identification, more name changes can be expected in the decades to come. Authors of previous species lists used various cross-reference methods to make lists compatible by citing older names in their lists, but these in turn became quickly out-dated. Therefore, employing such lists for various research and conservation tasks requires significant taxon-expertise and general users, especially within the ecological research and conservation communities, still face obstacles interpreting and using these records (Gotelli 2004).

Traditional forms of printed publications of individual species lists hamper regional and inter-state comparisons of species records. In connection with the significant time-gap between individual faunal lists and the inevitable nomenclatorial changes, such species lists do not support biogeographic research (Soberón & Peterson 2004), nor do they offer easy access to species-richness estimates. There are currently numerous activities with respect to GIS software development (e.g., Lifemapper, <http://Lifemapper.org>) to generate distribution maps. The goal is a '... predictive, electronic atlas of Earth's biological diversity,' the data for which must be retrieved from '... records of millions of plants and animals in the world's natural history museums.' Certainly, locality data taken directly from actual collection specimens would provide the best possible foundation of species-richness estimates and biogeographic research (Graham et al. 2004). Furthermore, vouchered museum spec-

imens can be re-examined at any time for additional data, such as sex, size, abundance, and intraspecific variability; misidentifications will be rooted out over time. What stands between us and such a rich data source is the simple fact that the data of most invertebrate, especially arthropod collections, have not been electronically captured, and, at the current meager state of collection support, we cannot expect access to these data any time soon.

What measures, then, can be taken now to accelerate the rate of biodiversity discovery, either through sampling in nature or mining of museum collections? The existing faunistic and taxonomic literature harbors a wealth of biogeographic data; making these legacy data universally available, i.e., electronically and nomenclatorially updated, will serve a wide range of users, from researchers to land managers to collection managers. Various taxonomic authority files can be generated from such cross-referenced legacy data, e.g., generating species lists for states, regions, or habitats, aiding in museum collection management, and guiding future survey and monitoring efforts. The present study clearly demonstrates the great utility and predictive power of old-fashioned faunistics required for today's biodiversity research.

**Our approach.**—Two of the prevailing problems inherent to traditional faunal lists are the nomenclatorial changes due to time gaps and the isolation of lists from one another, hampering comparison and predictions. Using modern database technologies and electronic dissemination over the Web (Scoble 2004), these problems can be easily overcome today. However, even with these technologies, keeping checklists and nomenclature up-to-date requires expertise by sufficiently supported taxon-specialists. Spider systematics benefited from a relatively large number of active spider systematists, when compared to other rather neglected groups, such as many other terrestrial arthropods (e.g., the Myriapoda, see Milli-PEET, Field Museum Website). Furthermore, spider systematics is boosted by a rare piece of scientific infrastructure, an on-line world-wide taxonomic catalog (Platnick 2005). Such a catalog, generated and maintained by a taxon expert, forms the standardized base for all spider species names used here. The need for such standardization is

readily acknowledged by the conservation and ecology user community (e.g., NatureServe's Central Databases, '... a "standard" name is selected and maintained ...' for every '... taxon tracked in its database').

To track name changes we employ the *Spider Species Name Concordance Table* (Appendix II). The table contains all species names and genus-species combinations present in the referenced species lists (see Literature Cited) with their currently valid name according to Platnick (2005). Appendix II is available online at <http://www.uwgb.edu/biodiversity/glspiders>.

Comparisons between regions, habitats and states demonstrate differences in recorded species, allow predictions, and guide future species discovery. Explanations of recorded species differences can be sought; species-richness estimates can be deduced. Electronic manipulation of such species data allows sorting the data in various ways to answer questions about distribution and species-richness, and facilitates the discovery of faunal shifts. Recorded occurrences of species allow for prediction of future discovery of species in nearby regions (gap analysis). The species lists as presented in Table 8 and Appendices I and II are available online at <http://www.uwgb.edu/biodiversity/glspiders>. The data are also presented in database format at the same site. Maintaining such lists online will allow periodic updates. We hope that others will join the endeavor and add spider species lists for more U.S. states.

#### METHODS

The project brought together species records from a variety of sources (see Literature Cited) for five states surrounding the Great Lakes: A northern tier of two states, Wisconsin and Michigan, and a southern tier of three states, Illinois, Indiana, and Ohio (Fig. 1). Essentially the whole area of these states is part of the Great Lakes bioregion of eastern North America, which also includes portions of Minnesota, Pennsylvania, New York, and the Canadian province of Ontario. For four of the studied states, species lists exist in some form. Additional records were gleaned from regional and habitat surveys, from the alpha-taxonomic literature, and in some cases directly from identified specimens in collections.

**Included species records.**—Inclusion of a



Fig. 1.—The Great Lakes states study region, consisting of a northern tier (Wisconsin (WI) and Michigan (MI)) and a southern tier (Illinois (IL), Indiana (IN), and Ohio (OH)) of states at the center of the Great Lakes bioregion of eastern North America.

species record followed the criterion: Is the species likely to be "established" i.e., have reproducing populations in the area? Thus, exotic species are listed, as are species that live only in buildings, as long as it is reasonable to assume that they actually reproduce in the Great Lakes region. Casual importations, such as exotic tarantula species in the houses of pet owners are excluded from the list. Certain exotic species, such as the huntsman spider *Heteropoda venatoria*, are occasionally imported with lumber and other merchandise and are encountered by the public as repeated inquiries to the authors indicate. Such species records are discussed in the text, but are not included in the spider species list of the Great Lakes States (Table 8 and Appendix I). Species records of a non-established species that appear in the published literature are listed in the Spider Species Name Concordance Table (Appendix II). If intercepted guest spiders are known only from informal records and public inquiries, such species are discussed in the text. Uncertainties remain, such as the brown recluse spider (*Loxosceles reclusa*), which is native to southern Illinois, but reproducing

populations have occasionally been encountered in some buildings in the region north of the species' natural range. Such species are included in the Great Lakes States spider species list. We further scrutinized the published spider species lists for questionable species records, mainly Palearctic species recorded for the Midwestern U.S. states. In each case a decision was based on the best of our knowledge whether the species was likely to have established populations in the Great Lakes area. Published records of clearly Palearctic species or species suspected to be misidentifications are not included in Table 8 and Appendix I, but can be found in the Spider Species Name Concordance Table (Appendix II) and are discussed in the text. It should be noted here that current geographic ranges of species, as they are noted in the Worldwide Spider Catalog (Platnick 2005), do not necessarily reflect the biogeographic origin of a species. Thus, a species listed as Holarctic may very well be introduced to a part of the Holarctic range. Several such cases are discussed below, and their biogeographic labels in Table 8 reflect our evaluation of their biogeographic status.

**Compilation of species lists.**—Spider species records are arranged alphabetically by family, genus, and species in Table 8 and Appendix I. Each species is found under its current genus-species combination (as listed in Platnick's on-line catalog 2005), which is not necessarily the combination used in the sources cited in Appendix I. Genera are listed in the family they are currently assigned to and disregard past family placements. Major family placement changes occurred with genera now assigned to the Agelenidae, Amaurobiidae, Liocranidae, Corinnidae, and Dictynidae. These, as well as a listing of old family names, are captured in the auxiliary Tables 6 and 7. Although we recognize that different opinions exist about genus placement or validity of species and synonyms, use of Platnick's nomenclature allows a stable foundation for all subsequent work and analyses conducted with the data presented. Table 8 lists presence-absence within states, and Appendix I lists sources and vouchers. For the literature source of the species records, a code is given, which can be found in the reference section. Name changes are dealt with in the Spider Species Name Concordance Table (Appendix II).

*Illinois:* The Illinois species records are taken from the faunistic and biogeographic literature (Kaston 1955; Beatty & Nelson 1976; Moulder 1966, and Beatty 2002) and a field guide (Moulder 1992). These are augmented by several sources. Spider records from the on-line database of Illinois species of the Illinois Natural History Survey (edited by S. Hill) were incorporated [URL: remains unavailable]. Also, spider material from pitfall traps and Berlese extractions in Cook and Lake Counties yielded additional records, primarily of ground spider species; these voucher specimens (Appendix I) are deposited at the Field Museum. The Cook County specimen collections were done biweekly from May to October in 1996 through 1999. Spider specimens were sorted and identified by co-author E. Lehman with additional determinations by P. Sierwald and M. Draney; the Cook county records have been databased (Field Museum of Natural History). The Lake County survey was conducted from 20 June–30 August, and 20, 24, 29 September 1999. Spider specimens were sorted and identified by co-author T. Prentice. The specimens are deposited at the Field Museum. We integrated the data of all vouchers from the five states housed in the collections of the Illinois Natural History Survey (University of Illinois, Champaign-Urbana) into our database (courtesy of C. Farvet); the majority of the INHS collection's spider specimens are from Illinois. The Illinois State Museum in Springfield (Illinois) maintains an on-line spider species database, which provides data on vouchered county records. Currently (2005) the Illinois State Museum database contains 224 spider species for Illinois. All vouchered species for which county records are cited are included in the Illinois species list.

*Indiana and Ohio:* The species records for Indiana are based on the most recent checklist by Beatty (2002, which incorporates the list by Parker 1969). The Ohio species records are adopted from an on-line state species list generated by Dr. Richard Bradley (Ohio State University, permission for inclusion granted) based on published records and voucher specimens of spider species from Ohio. No additional sources were drawn on for these two states.

*Michigan:* The Michigan data, initially compiled by Joan Jass (Curator of Inverte-

brates, Milwaukee Public Museum), are based on faunal studies of particular areas (Drew 1967; Chickering 1932, 1933, 1934), faunal studies restricted to particular habitats (Brady et al. 1991), and taxon-specific faunal lists by Chickering (1939, 1940, 1944, 1959) and Wolff (1984). Again, the alpha-taxonomic literature provided additional species records (Platnick & Dondale 1992; Proszynski 1968). Various statewide spider species lists were produced by Chickering & Bacorn (1933), Chickering (1935) and most recently by Snider (1991).

*Wisconsin:* The Wisconsin data compiled initially by Joan Jass (Milwaukee Public Museum) are based on state faunal lists (Levi & Field 1954; Levi et al. 1958), regional surveys (Blaczyk et al. 1992), habitat surveys (LeSar & Unzicker 1978; Riechert & Reeder 1978) and the taxonomic literature of Dondale & Redner (1976, 1978, 1982, 1990) and Levi (1980). Species records and vouchers (Appendix I) were added from identified and computerized collections at the Milwaukee Public Museum.

**Spider species name concordance table (Appendix II).**—Numerous name changes have occurred in North American spiders during the almost 70 years since publication of the earliest of the literature sources drawn upon. In some cases, a single species may have been renamed several times as a result of synonymies and taxonomic revisions. Some species were originally misidentified until later taxonomic work clarified species identities. Some species were transferred to other genera; other names were synonymized. Such name changes are captured in Appendix II. The table lists genus and species names as they occurred in each of the literature sources listed (see Appendix I) for that species. Historical intermediary names not used in the faunal source lists are not included. Thus “*Epeira cornuta* Clerck 1757” and “*Araneus cornutus* (Clerck 1757)” would both indicate “transferred to *Larinioides*,” the current araneid genus. *Example, species transferred to a different genus:* The Illinois Natural History Survey database (INHSD) listed the amaurobiid species: *Coelotes juvenilis* Keyserling. We added year of first description according to Platnick to ensure an unambiguous identification. The species is currently assigned to the genus *Coras*. Appendix I lists “*Coras juvenilis* (Key-

serling 1881)” giving INHSD as a source, and indicates that it has also been recorded from Indiana, Michigan and Ohio, but not Wisconsin. Appendix II lists *Coelotes juvenilis*, the literature source (INHSD) and the current name *Coras juvenilis* in the last column.

Table 8 and Appendix I list the currently valid genus-species name combination, crediting the source, even if the source listed this species under what is now considered a junior synonym. *Example, synonyms in faunal source lists:* In 1933, Chickering and Bacorn added *Anyphaena rubra* to the known Michigan Anyphaenidae. *Anyphaena rubra* was determined to be a junior synonym of *Hibana gracilis*. Table 8 lists *Hibana gracilis* as a member of the Michigan fauna. Appendix I credits ‘c&b’ as a source for the *Hibana gracilis* (Hentz 1847) record in Michigan, although they originally listed the species as *Anyphaena rubra*. Appendix II notes this species synonymy. Minor typographical errors and discrepancies, such as the year of publication, and grammatically incorrect endings of species names (e.g., *-us* versus *-a*) are not included in Appendix II.

**Statistical analysis.**—Since this compilation represents “meta data” compiled from numerous sources and representing records originally amassed using various methodologies and for various purposes, no rigorous statistical analyses comparing richness or diversity among states were attempted. However, we did explore correlations of number of taxa that are now known from each state, with various basic properties of those states, including land area, population, and date that the state entered the union (as an index of how long the state has been intensively occupied by non-indigenous settlers). Properties of the states were obtained from the U.S. Census Bureau (2004). Relationships were explored using Pearson Correlation Coefficients (Systat 10, Systat, Inc., Evanston, IL). We also ran Chi-square tests to compare the number of species within each family with the region-wide average species-richness of each family, using Microsoft Excel. This was done to determine whether the composition of each state’s species assemblage differed from the entire region’s assemblage.

## RESULTS

**Species-richness analysis.**—To date, 900 spider species have been recorded from the

Table 1.—List of top 20 most speciose genera in the region of the Great Lakes states.

Rank	Family	Genus	Species in region
1	Thomisidae	<i>Xysticus</i>	25
2	Clubionidae	<i>Clubiona</i>	23
2	Philodromidae	<i>Philodromus</i>	23
4	Araneidae	<i>Araneus</i>	21
5	Linyphiidae	<i>Walckenaeria</i>	19
6	Linyphiidae	<i>Ceraticelus</i>	17
6	Lycosidae	<i>Pirata</i>	17
6	Theridiidae	<i>Theridion</i>	17
9	Gnaphosidae	<i>Drassyllus</i>	15
10	Lycosidae	<i>Pardosa</i>	14
11	Dictynidae	<i>Emblyna</i>	13
11	Salticidae	<i>Phidippus</i>	13
13	Dictynidae	<i>Dictyna</i>	12
13	Linyphiidae	<i>Meioneta</i>	12
13	Lycosidae	<i>Schizocosa</i>	12
13	Tetragnathidae	<i>Tetragnatha</i>	12
17	Linyphiidae	<i>Eperigone</i>	11
17	Salticidae	<i>Habronattus</i>	11
17	Theridiidae	<i>Robertus</i>	11

five-state region: 646 from Illinois, 383 from Indiana, 571 from Ohio, 479 from Wisconsin and 563 from Michigan. The 900 recorded spider species represent 284 genera and 40 families (Table 2). The most speciose family in the region is Linyphiidae, with 24% of species. This is over twice the species diversity of the next most diverse families, Salticidae (10.3%), Theridiidae (8.9%), Lycosidae (8.8%), and Araneidae (7.7%). Gnaphosidae and Thomisidae also make up 5% or more of the region's species; 10 other families make up 1% or more of the region's species, and the remaining 25 families each are represented by less than 1% of the total species (Table 2). The top 8 families contain over 75% of the region's species, and the top 13 families make up over 90%. The region's most speciose genera are listed in Table 1, and include *Xysticus* (25 species) followed by *Clubiona*, *Philodromus*, and *Araneus*, each represented by over 20 species. The ten most speciose genera mainly consist of globally speciose genera, including the type genera of four families (*Clubiona*, *Philodromus*, *Araneus*, and *Theridion*). It is not surprising that such large genera are represented by a number of species in our region. Most of these genera are represented in our region by only 3–10% of their total known

species complement. One prominent exception is *Ceraticelus*; 47% of the world's species have been recorded from our region, making it a "hotspot" for the genus. Similar arguments could perhaps be made for *Pirata* and *Drassyllus* (our region includes 19% and 17% of the world's known species, respectively).

The number of species in each state varies from Indiana's 383 (42.5% of the region's total) to Illinois' 646 (71.7% of the region's total; Table 2). This shows that latitude and longitude do not predict the size of the current state lists, since the states with the highest and lowest numbers are both in the region's southern tier, and in fact are adjacent. Pearson correlation (Using Systat 10; Tables 3 and 4) shows that the number of species in each state is only weakly correlated with land area (0.609), but strongly correlated with the state's 2000 U.S. Census population (0.897). This supports our suggestion that the region's fauna is very incompletely known, and hence the size of the list is determined more by sampling effort (which has generally been higher in more populated states) than with biological or geographic differences between the states.

The number of families recorded from each state varied from 29 in Michigan and Wisconsin (72.5% of the region's total) to 39 in Illinois and Ohio (97.5% of the region's total). There is only a weak correlation between species and families recorded in each state (Pearson coefficient = 0.506), and a negative correlation between family richness and land area (-0.311). The correlation between state population size and family richness is weaker than with species (0.715). The strongest predictor of family richness in the region is clearly latitude; all three southern tier states (Illinois, Indiana, and Ohio) have recorded 4–10 more families than the two northern tier states (Michigan and Wisconsin). This suggests that several families reach their northernmost limits within our region, and that family level richness does indeed decrease with latitude across the region.

The proportional representation of species within families (i.e., species-rich versus species-poor families) within each state roughly reflects the region-wide pattern: A few diverse families contain most of the species. Linyphiidae and Salticidae are the most and second-most diverse families in all five states, and the region's top 6 most diverse families are the

top six in each state, although the order varies somewhat (Table 2). However, the proportional representation of species within families is statistically different from the region average in some states. Chi-square tests compared the number of species within each family with the average species-richness of each family for the region by scaling the species-within-family richness to match the region-wide average richness. For these tests, families with less than 1% of the region's species (families ranked 16–40) were pooled into a single "rare families" category (yielding  $df = 15$ ). The faunal structure of Ohio, Michigan, and Wisconsin did not statistically differ from this five-state average, but Illinois' fauna was different at  $P = 0.05$  and Indiana's fauna was different at  $P = 0.001$ . These differences may be due to historical particulars rather than reflecting biological differences. For example, Illinois' list contains proportionally more corinnid species and fewer species of the "rare families" than the region's average, whereas Indiana's list contains far fewer linyphiid and gnaphosid species and more species of the "rare families" than the region's average (Table 2). We think it is easier to explain these differences as attributable to different collection methods or different research objectives of past studies than to put forward a reasonable biological explanation for these patterns.

A total of 237 of the 900 species (26.3%) are recorded from all five of the states. Similarly, 244 species (27.1%) are known from only one of the five states. Smaller numbers of species are known from 2 to 4 states: 171 species (19%) from two states, 125 species (13.8%) from three states, and 123 species (13.6%) from four states (Table 8). This pattern is not unexpected, since many species are widespread and common, and often appear in all states surveyed, and other rarely collected species are likely to occur only once until much sampling is done.

Also not surprisingly, states with more recorded species tend to have more regionally-unique species: The most species-rich state, Illinois, had 80 regionally unique species, followed by Michigan (66), Ohio (55), Wisconsin (28), and Indiana (15). Note this is the same order as species-richness, except that Michigan and Ohio switched order.

**Gap analysis.**—One of the important potential uses of sets of internally consistent spe-

cies lists such as we present here is to predict the occurrence of species in areas from which they have not yet been recorded. Due to the region's history of repeated glaciation (which has resulted in a relatively newly colonized fauna in a topographically subtle region), spider species tend to have large ranges and few are narrowly endemic or endemic to small areas within this region. This empirical observation lends credence to our assumption that the geographic position of the states will tend to contain information about species distribution. For example, if a species occurs in states both east and west of a given state, it probably also occurs within that state. Similarly, if a species occurs in states with similar latitudes and other states with similar longitudes as the state in question, the species is also likely to occur in the state in question. Although it is certainly possible for a species to occur in any four of the states but not in a fifth, it is also true that such occurrences would usually necessitate very specific (and seemingly improbable) geographic distribution patterns. Thus, for many state occurrence combinations, we feel that a species is much more likely to exist within some unrecorded states than not to exist there. Using this sort of logic applied to our two-tiered, five state region (Fig. 1), we examined Table 8 and predicted occurrences of species within states from which they have not yet been recorded (Table 8); 'P' in a cell indicates a species is predicted to occur in a state, using the following criteria:

- 1) If a species has been recorded from 4 of the 5 states, we predict it also occurs in the fifth state. There were 123 such predicted occurrences.
- 2) Species found in 3 states should also occur in the others, except that (a) species found only in the southern tier states (Illinois, Indiana, and Ohio) are not predicted to occur in the northern tier states (Michigan and Wisconsin); (b) species found only in the western states (Illinois, Indiana, and Wisconsin) are not predicted to occur in the eastern states (Michigan and Ohio); and (c) species found only in the eastern states (Indiana, Michigan, and Ohio) are not predicted to occur in the western states (Illinois and Wisconsin). There were 182 such predicted occurrences.

Table 2.—Spider fauna comparison of the five Great Lakes states, ordered by regional species-richness of family. Explanation of columns. G = total number of genera of the particular family represented in the region. S = total number of species of the particular family represented in the region. IL = Illinois, IN = Indiana, OH = Ohio, MI = Michigan, and WI = Wisconsin. State Columns: number of species of the particular family represented in each state. Rank = species-richness rank within the region. Cum% = cumulative percentage of spider fauna of region. Region = family species percentage in the region. IL%, IN%, OH%, MI%, and WI%: family species percentage in the respective state. Explanation of bottom rows: Total genera, species and families: for the region and by state. Regional families: percentage of the total region's species and families represented in each state.

Spider family	G	S	IL	IN	OH	MI	WI	Rank	Cum %	Region	IL%	IN%	OH%	MI%	WI%
Linyphiidae	89	217	132	56	113	124	102	1	24.1%	24.1%	20.4%	14.6%	19.9%	22.1%	21.3%
Salticidae	34	93	73	44	67	56	61	2	34.4%	10.3%	11.3%	11.5%	11.8%	10.0%	12.8%
Theridiidae	23	80	60	34	54	44	44	3	43.3%	8.9%	9.3%	8.9%	9.5%	7.8%	9.2%
Lycosidae	14	79	56	41	49	58	41	4	52.1%	8.8%	8.7%	10.7%	8.6%	10.3%	8.6%
Araneidae	22	68	54	35	54	38	39	5	59.7%	7.6%	8.4%	9.1%	9.5%	6.8%	8.2%
Gnaphosidae	16	63	48	24	40	47	34	6	66.7%	7.0%	7.4%	6.3%	7.0%	8.4%	7.1%
Thomisidae	8	45	30	23	28	34	26	7	71.7%	5.0%	4.6%	6.0%	4.9%	6.0%	5.4%
Dictynidae	7	43	26	23	24	28	22	8	76.4%	4.8%	4.0%	6.0%	4.2%	5.0%	4.6%
Corinnidae	8	34	29	12	18	16	11	9	80.2%	3.8%	4.5%	3.1%	3.2%	2.8%	2.3%
Philodromidae	4	34	25	16	16	30	21	10	84.0%	3.8%	3.9%	4.2%	2.8%	5.3%	4.4%
Clubionidae	2	24	16	7	13	17	14	11	86.7%	2.7%	2.5%	1.8%	2.3%	3.0%	2.9%
Tetragnathidae	7	23	19	16	17	17	16	12	89.2%	2.6%	2.9%	4.2%	3.0%	3.0%	3.3%
Amaurobiidae	5	12	7	7	9	11	6	13	90.6%	1.3%	1.1%	1.8%	1.6%	2.0%	1.3%
Pisauridae	2	10	10	8	8	7	5	14	91.7%	1.1%	1.5%	2.1%	1.4%	1.2%	1.0%
Anypheidae	4	9	9	5	6	5	4	15	92.7%	1.0%	1.4%	1.3%	1.1%	0.9%	0.8%
Agelenidae	2	8	7	4	6	6	7	16		0.9%	1.1%	1.0%	1.1%	1.1%	1.5%
Hahniidae	5	8	6	4	6	4	5	17		0.9%	0.9%	1.0%	1.1%	1.1%	1.0%
Mimetidae	2	7	4	3	6	4	5	18		0.8%	0.6%	0.8%	1.1%	0.7%	1.0%
Atypidae	1	4	3	1	3	1	1	19		0.4%	0.3%	0.3%	0.5%	0.2%	0.2%
Antrodiaetidae	2	3	2	0	2	2	0	20		0.3%	0.3%	0.0%	0.4%	0.0%	0.0%
Liocranidae	1	3	2	2	2	2	2	21		0.3%	0.3%	0.5%	0.4%	0.4%	0.4%
Miturgidae	2	3	3	1	3	1	1	22		0.3%	0.5%	0.3%	0.5%	0.2%	0.2%
Nesticidae	2	3	1	2	1	0	1	23		0.3%	0.2%	0.0%	0.2%	0.0%	0.2%
Oxyopidae	1	3	3	1	2	2	2	24		0.3%	0.5%	0.3%	0.4%	0.4%	0.4%
Uloboridae	3	3	3	3	3	2	2	25		0.3%	0.5%	0.8%	0.5%	0.4%	0.4%
Cybaeidae	2	2	1	0	1	1	0	26		0.2%	0.2%	0.0%	0.2%	0.2%	0.0%
Mysmenidae	2	2	2	0	2	0	0	27		0.2%	0.3%	0.0%	0.4%	0.0%	0.0%
Oecobiidae	1	2	1	0	2	0	0	28		0.2%	0.2%	0.0%	0.4%	0.0%	0.0%
Pholcidae	2	2	2	2	2	1	2	29		0.2%	0.3%	0.5%	0.4%	0.2%	0.4%
Sicariidae	1	2	2	1	2	0	0	30		0.2%	0.3%	0.3%	0.4%	0.0%	0.0%
Titanocidae	1	2	2	2	2	1	1	31		0.2%	0.3%	0.5%	0.4%	0.2%	0.2%
Ctenidae	1	1	1	1	1	0	0	32		0.1%	0.2%	0.3%	0.2%	0.0%	0.0%
Ctenizidae	1	1	1	0	0	0	0	33		0.1%	0.2%	0.0%	0.0%	0.0%	0.0%



Table 2.—Continued.

Spider family	G	S	IL	IN	OH	MI	WI	Rank	Cum %	Region	IL%	IN%	OH%	MI%	WI%
Dysderidae	1	1	1	1	1	0	1	34		0.1%	0.2%	0.3%	0.2%	0.0%	0.2%
Oonopidae	1	1	1	0	1	1	0	35		0.1%	0.2%	0.0%	0.2%	0.2%	0.0%
Scytodidae	1	1	1	1	1	1	1	36		0.1%	0.2%	0.3%	0.2%	0.2%	0.2%
Segestridae	1	1	1	1	1	0	0	37		0.1%	0.2%	0.3%	0.2%	0.0%	0.0%
Tengellidae	1	1	0	0	1	0	0	38		0.1%	0.0%	0.0%	0.2%	0.0%	0.0%
Theridiosomatidae	1	1	1	1	1	1	1	39		0.1%	0.2%	0.3%	0.2%	0.2%	0.2%
Zoridae	1	1	1	1	1	0	0	40		0.1%	0.2%	0.3%	0.2%	0.0%	0.0%
Total genera	284									100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total species		900	646	383	571	563	479								
Total families		40	39	33	39	29	29								
% Regional families			97.5%	82.5%	97.5%	72.5%	72.5%								
% Regional species			71.7%	42.5%	63.2%	62.4%	53.1%								

- 3) We considered that species found in two states could predict occurrences in other states in certain circumstances (refer to Fig. 1). (a) Species from Illinois and Ohio should occur in Indiana. (b) Species from Illinois and Michigan should occur in Indiana. (c) Species from Indiana and Wisconsin should occur in Illinois. (d) Species from Ohio and Wisconsin should occur in the other three states.

Combinations we felt were not likely to be predictive of other state occurrences were: Illinois and Indiana; Illinois and Wisconsin; Indiana and Ohio; Indiana and Michigan; Ohio and Michigan; and Michigan and Wisconsin. There were 86 predicted occurrences using pairs of state occurrences.

Altogether, using 2642 recorded species occurrences, we predict 385 occurrences of species in states in which they are not yet recorded. If all these predictions are correct, this would increase the region's average state richness from 528 to 605 species, and raise individual state species totals by about 5% to about 53% (mean 17%, Table 5), even though the region's total species-richness would not increase with these additions. Note that the number of predicted occurrences in any one state depends both on having supposed gaps in species (inadequate sampling of a state) as well as the state's geographic position (peripheral areas benefit less than more central areas under our prediction criteria). Because of both of these factors, Indiana's fauna is predicted to increase the most using this gap analysis method; it is even predicted to have more species than Wisconsin, although this method does not predict all possible unrecorded species. Many areas (especially on the periphery of a region) may have unrecorded species that have not been recorded elsewhere in the region. Wisconsin, for example, may harbor unrecorded species that reach their southernmost limit within the state, and neither have been previously, nor in the future will be recorded in the southern tier of states. Note that we are not suggesting that predicted species do definitely occur in predicted states, only that it is more likely that they do occur there than that they do not. Until confirmed with specimens, our predictions should be considered to be hypotheses of species occurrence. Also note that failure to obtain a pre-

Table 3.—State statistics for the five Great Lakes states, comparing number of recorded spider species, land area and population. Data on land area, population, and date of statehood are from U.S. Census Bureau (2004).

State characteristics	Illinois	Indiana	Ohio	Michigan	Wisconsin
Species	646	383	571	563	479
Land area, km <sup>2</sup>	143,963	92,896	106,055	147,122	140,673
Land area, rank	24	38	35	22	25
Entered Union	1818	1816	1803	1837	1848
Entered Union, rank	21	19	17	26	30
Population (2000 census)	12,419,293	6,080,485	11,353,140	9,938,444	5,363,675
Population, rank	5	14	7	8	18

dicted occurrence does not mean that we predict a species will not occur in a state, but only that insufficient information exists in our matrix for us to venture a prediction.

**Biogeographic analysis.**—The known established spider fauna of the Great Lakes States is composed mainly of native Nearctic species (some of which may possibly actually be neotropical). In addition, 85 Holarctic species (9.4% of total, Table 8, denoted by 'H' in column D), common to both Old and New World temperate regions, count as native species. When referring to non-native taxa, we are generally discussing species that are not native to North America. New state or regional records, other than for most cosmopolitan and Palearctic taxa, are likely to be the result of new collecting efforts, rather than indicating range extensions for the respective species that are native to America and, occasionally, to southern Canada and northern Mexico.

However, in cases where specimens of native taxa are found great distances from their known ranges, accidental importation is often suspected. Whether or not a species has become established must be ascertained in order to define which species are actually representative of the spider fauna of a state or region. If a non-native species generates a reproducing population then it has become an integral part of the local community, regardless of the

consequences of its presence. On the other hand, particular spiders are occasionally imported with shipments of agricultural and/or ornamental plants but are unable either to reproduce or maintain viable populations in a given region; these spiders should not be included on state or regional lists.

Four species, recorded only from Ohio, were undoubtedly imported with shipments to the state and are excluded from our five-state list (see Appendix II): *Heteropoda venatoria* Linnaeus, *Cupiennius coccineus* F.O.P.-Cambridge, *Ctenus bilobatus* F.O.P.-Cambridge, and *Latrodectus hesperus* Chamberlin & Ivie. *Heteropoda venatoria* and *C. coccineus* are tropical species, the former considered pan-tropical, the latter naturally occurring in Costa Rica and Panama. Both species are occasionally imported to the U.S. with produce or other floral shipments but have never become established within the country (although reports suggest that *H. venatoria* has become established in Florida (e.g., Gertsch 1949, Edwards & Marshall 2001). *Ctenus bilobatus* is known from the female type from Mexico (F.O.P.-Cambridge 1900). It is most likely tropical as most of the *Ctenus* species are. If indeed the species was correctly identified, specimens were probably imported with produce shipments from Mexico. It is highly unlikely that the species would be able to establish in the

Table 4.—Pearson Correlation Matrix of state characteristics.

	Family	Species	Area	Union Date	Pop 2000
Species	0.506	1			
Area	-0.311	0.609	1		
Union date	-0.866	-0.176	0.674	-1	
Population 2000 census	0.715	0.897	0.247	-0.538	1

Table 5.—Predicted occurrences of species in states from which they are not currently recorded.

State	Recorded richness	Predicted occurrences	Predicted richness	% Change
Illinois	646	36	682	5.5%
Indiana	383	203	586	52.9%
Ohio	571	41	612	7.2%
Michigan	563	38	601	6.8%
Wisconsin	479	67	546	14.0%
Average:	528.4	77.0	605.4	17.3%
Sum:	2642	385		

north-central part of the USA. *Latrodectus hesperus* (western black widow) occurs west of the approximate mid-line through Texas, Oklahoma, and Kansas north to the Canadian provinces. This spider is also occasionally shipped with produce and other materials but there is no evidence, to date, that the species has become established in Ohio.

*Non-native species:* Non-native species consist of 17 cosmopolitan species (1.8% of total), seven Palearctic species (0.77% of total) inhabiting the Great Lakes region (Table 8, column D, indicated by 'C' and 'PA' respectively) and one species possibly intro-

duced from the Pacific region and Australia (P/Au). *Tegenaria domestica* (Clerck) is an introduced cosmopolitan species in the family Agelenidae with a widespread distribution in both the Old and New Worlds. On the North American continent, it occurs at least as far north as Ellesmere Island in northern Canada (Roth 1968). The species is well established in all five of the Great Lakes states. Collection records indicate that the species is generally found in human habitations.

Three Palearctic (non-native) araneids, *Aculepeira carbonaria*, *Araneus triguttatus*, and *Zygiella montana* were recorded from Wis-

Table 6.—Spider genera of the Great Lakes states which were recently transferred to other families.

Genus	From	To
<i>Agroeca</i> Westring 1861	Clubionidae	Liocranidae
<i>Anyphaena</i> Sundevall 1833	Clubionidae	Anyphaenidae
<i>Anyphaenella</i> Bryant 1931—see <i>Wulfila</i>	Clubionidae	Anyphaenidae
<i>Arachosia</i> O. P.-Cambridge 1882	Clubionidae	Anyphaenidae
<i>Aysha</i> Keyserling 1891	Clubionidae	Anyphaenidae
<i>Calymmaria</i> Chamberlin & Ivie 1937	Agelenidae	Hahniidae
<i>Castianeira</i> Keyserling 1879	Clubionidae	Corinnidae
<i>Cheiracanthium</i> C. L. Koch 1839 [= <i>Chiracanthium</i> ]	Clubionidae	Miturgidae
<i>Cicurina</i> Menge 1869	Agelenidae	Dictynidae
<i>Coelotes</i> Blackwall 1841	Agelenidae	Amaurobiidae
<i>Coras</i> Simon 1898	Agelenidae	Amaurobiidae
<i>Cybaeopsis</i> Strand 1907	Agelenidae	Amaurobiidae
<i>Cybaeus</i> L. Koch 1868	Agelenidae	Cybaeidae
<i>Meriola</i> Banks 1895	Clubionidae	Corinnidae
<i>Micaria</i> Westring 1851	Clubionidae	Gnaphosidae
<i>Phrurolithus</i> C. L. Koch 1839	Clubionidae	Corinnidae
<i>Phruronellus</i> Chamberlin 1921	Clubionidae	Corinnidae
<i>Phrurotimpus</i> Chamberlin & Ivie 1938	Clubionidae	Corinnidae
<i>Scotinella</i> Banks 1911	Clubionidae	Corinnidae
<i>Strotarchus</i> Simon 1888	Clubionidae	Miturgidae
<i>Titanoeca</i> Thorell 1869	Amaurobiidae	Titanoecidae
<i>Trachelas</i> L. Koch 1872	Clubionidae	Corinnidae
<i>Wadotes</i> Chamberlin 1925	Agelenidae	Amaurobiidae
<i>Wulfila</i> O. P.-Cambridge 1895	Clubionidae	Anyphaenidae

Table 7.—List of renamed spider families containing Great Lakes region species.

Previous name	Current name
Araneidae (in part)	Tetragnathidae
Argiopidae	Araneidae
Attidae	Salticidae
Clubionidae (in part)	Liocranidae
Clubionidae (in part)	Corinnidae
Clubionidae (in part)	Anyphaenidae
Drassidae	Gnaphosidae
Epeiridae	Araneidae
Erigonidae (= Micryphantidae)	Linyphiidae (in part)
Micaridae (Mikhailov & Fet 1986)	Gnaphosidae, see Platnick 2005 under Gnaphosidae
Micryphantidae (= Erigonidae)	Linyphiidae (in part)
Thomisidae (in part)	Philodromidae

consin; *Z. montana* is also reported from Michigan. The former two species are known from high elevations in the European mountains. Chamberlin & Ivie (1942) removed *Aculepeira verae* from the synonymy of *A. carbonaria* and both Levi (1951) and Levi & Field (1954) suggested that the specimen(s) collected from Wisconsin may have been *A. verae* (= *A. packardi*). Levi (1973) stated that there was no evidence that *A. triguttatus* occurs in the USA because the illustrated specimens of *Epeira mayo* (= *A. triguttatus*) were undoubtedly mislabeled. Since the original publication by Levi & Field (1954) linking these species to the Wisconsin fauna, no additional specimens have apparently been collected within the state and no voucher specimens have been located; we have removed the two species from our Great Lakes list (Appendix II). *Zygiella montana* is known from the European mountains at elevations above 1000 m. Most occurrences of the species in the USA are from mountainous areas or from northern latitudes. Voucher specimens of *Zygiella montana* are found at Michigan State University Entomological collection and in the Milwaukee Public Museum in Wisconsin. The species is also reported from Maine, North Carolina, and the Adirondacks and White Mountains. There seems to be little doubt that *Z. montana* is established in both Michigan and Wisconsin (Table 8, Appendix I). Two additional Palearctic araneid species, *Araniella cucurbitina* Clerck and *Araneus angulatus* Clerck, are reported only from Michigan; there are no known voucher specimens of either species. Snider (1991) notes that the former species is probably *A. displicata*

(Hentz); and Levi (1971), in his revision of the *diadematus* Group, stated that no specimens of *angulatus* were in collections coming from North America and that the literature records of *angulatus* referred to large specimens of various other native species (Appendix II). In light of the above, we have considered these records doubtful and have excluded the species from our list of the Great Lakes spider fauna. *Larinioides sclopetarius* (Clerck) is listed as Holarctic in Platnick (2005), but Levi (1974) judges it to be introduced into North America by its anthropochorous habitats here. It should be noted that since Levi's (1974) publication, the species seems to have become much more abundant in the Great Lakes region (Table 8 and M. Draney, unpubl. observ.). It is widely distributed in Eurasia (Levi 1974).

The Banded Argiope, *Argiope trifasciata*, is considered a cosmopolitan species although it is found in many non-disturbed areas throughout the USA. According to Levi (1968), the distribution of the species is not known but is nearly worldwide exclusive of regions occupied by the Eurasian species, *A. bruennichi*. Populations of *A. trifasciata* thrive in the five-state Great Lakes region. *Gea heptagon* may be an introduced species, possibly from the Pacific region or Australia (Levi, 2004).

The cosmopolitan wood-louse (Order Iso-poda) specialist, *Dysdera crocata* C. L. Koch is widely distributed within the U.S. The species thrives in the more mesic habitats where there is an ample supply of isopods (most of which are also exotic according to Jass & Klausmeier 2000). To date, it is the only *Dysdera* species known from the U.S. Well-established

Table 8.—Spider fauna in five Great Lakes states, species occurrence by state. Year: gives the year of first description. The state columns (IL = Illinois, IN = Indiana, OH = Ohio, WI = Wisconsin, MI = Michigan) note the absence or presence of the species in that state. 'P' in cells in state columns indicates predicted occurrences of species in those states, based on the presence of the species in other states, see text (Gap analysis); '?' indicates uncertain records. The column 'S' gives the number of states from which the species is recorded. The last column, 'D' notes the distribution or biogeographic origin of species: Cosmopolitan (C), Holarctic (H), introduced (P/Au), Palearctic (PA), Asian (A); and possible misidentifications (M?).

Species	IL	IN	OH	WI	MI	S	D
<b>Agelenidae</b>							
<i>Agelenopsis emertoni</i> Chamberlin & Ivie 1935	1	P	1	1	1	4	
<i>Agelenopsis kastoni</i> Chamberlin & Ivie 1941	1	P	1			2	
<i>Agelenopsis naevia</i> (Walckenaer 1842)	1	1	1	1	1	5	
<i>Agelenopsis oklahoma</i> (Gertsch 1936)				1		1	
<i>Agelenopsis pennsylvanica</i> (C. L. Koch 1843)	1	1	1	1	1	5	
<i>Agelenopsis potteri</i> (Blackwall 1846)	1	P	P	1	1	3	
<i>Agelenopsis utahana</i> (Chamberlin & Ivie 1933)	1	1	1	1	1	5	
<i>Tegenaria domestica</i> (Clerck 1757)	1	1	1	1	1	5	C
<b>Amaurobiidae</b>							
<i>Amaurobius borealis</i> Emerton 1909				1	1	2	
<i>Amaurobius ferox</i> (Walckenaer 1830)	1	1	1	1	1	5	H
<i>Callobius bennetti</i> (Blackwall 1846)	1	1	1	1	1	5	
<i>Coras juvenilis</i> (Keyserling 1881)	1	1	1	P	1	4	
<i>Coras lamellosus</i> (Keyserling 1887)	1	1	1	1	1	5	
<i>Coras medicinalis</i> (Hentz 1821)	1	1	1	P	1	4	
<i>Coras montanus</i> (Emerton 1890)	P	P	1	1	1	3	
<i>Coras taugynus</i> Chamberlin 1925	1					1	
<i>Cybaeopsis tibialis</i> (Emerton 1888)			1		1	2	
<i>Wadotes calcaratus</i> (Keyserling 1887)	1	1	1	1	1	5	
<i>Wadotes hybridus</i> (Emerton 1890)		1	1		1	3	
<i>Wadotes tennesseensis</i> Gertsch 1936					1	1	
<b>Antrodiaetidae</b>							
<i>Antrodiaetus robustus</i> (Simon 1891)			1			1	
<i>Antrodiaetus unicolor</i> (Hentz 1842)	1	P	1			2	
<i>Atypoides hadros</i> Coyle 1968	1					1	?
<b>Anyphaenidae</b>							
<i>Anyphaena celer</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Anyphaena fraterna</i> (Banks 1896)	1	1	1			3	
<i>Anyphaena maculata</i> (Banks 1896)	1					1	
<i>Anyphaena pectorosa</i> L. Koch 1866	1	1	1	1	1	5	
<i>Arachosia cubana</i> (Banks 1909)	1	P	1	P	1	3	
<i>Hibana cambridgei</i> (Bryant 1931)	1					1	
<i>Hibana gracilis</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Wulfila albens</i> (Hentz 1847)	1					1	
<i>Wulfila saltabundus</i> (Hentz 1847)	1	1	1	1	1	5	
<b>Araneidae</b>							
<i>Acacesia hamata</i> (Hentz 1847)	1	1	1	P	1	4	
<i>Acanthepeira cherokee</i> Levi 1976	1					1	
<i>Acanthepeira marion</i> Levi 1976	1					1	
<i>Acanthepeira stellata</i> (Walckenaer 1805)	1	1	1	1	1	5	
<i>Araneus alboventris</i> (Emerton 1884)			1			1	
<i>Araneus bicentenarios</i> (McCook 1888)	1	1		1	1	4	
<i>Araneus bonsallae</i> (McCook 1894)	1					1	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Araneus cavaticus</i> (Keyserling 1882)	P	P	1	1	1	3	
<i>Araneus cingulatus</i> (Walckenaer 1842)	1	P	1			2	
<i>Araneus corticarius</i> (Emerton 1884)	P	1	P	1	1	3	
<i>Araneus diadematus</i> Clerck 1757	P	P	1	1	1	3	H
<i>Araneus gemmoides</i> Chamberlin & Ivie 1935	1			1		2	
<i>Araneus guttulatus</i> (Walckenaer 1842)	1			1	1	3	
<i>Araneus iviei</i> (Archer 1951)					1	1	
<i>Araneus juniperi</i> (Emerton 1884)	1	P	1			2	
<i>Araneus marmoreus</i> Clerck 1757	1	1	1	1	1	5	H
<i>Araneus miniatus</i> (Walckenaer 1842)			1			1	
<i>Araneus niveus</i> (Hentz 1847)	1	P	1			2	
<i>Araneus nordmanni</i> (Thorell 1870)	P	P	1	1	1	3	H
<i>Araneus partitus</i> (Walckenaer 1842)	1	P	1			2	
<i>Araneus pegnia</i> (Walckenaer 1842)	1	1	1	P	1	4	
<i>Araneus pratensis</i> (Emerton 1884)	1	1	1	1	1	5	
<i>Araneus saevus</i> (L. Koch 1872)	1	P	1	1	1	4	H
<i>Araneus thaddeus</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Araneus trifolium</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Araniella displicata</i> (Hentz 1847)	1	1	1	1	1	5	H
<i>Argiope aurantia</i> Lucas 1833	1	1	1	1	1	5	
<i>Argiope trifasciata</i> (Forskål 1775)	1	1	1	1	1	5	C
<i>Cercidia prominens</i> (Westring 1851)	1	P	1	1	1	4	H
<i>Cyclosa conica</i> (Pallas 1772)	1	P	1	1	1	4	H
<i>Cyclosa turbinata</i> (Walckenaer 1842)	1	1	1	1	1	5	
<i>Eustala anastera</i> (Walckenaer 1842)	1	1	1	1	1	5	
<i>Eustala cepina</i> (Walckenaer 1842)	1	1	1	1	1	5	
<i>Eustala emertoni</i> (Banks 1904)	1	P	1			2	
<i>Gea heptagon</i> (Hentz 1850)	1	P	1	P	1	3	P/Au
<i>Hypsosinga funebris</i> (Keyserling 1892)	1	P	1			2	
<i>Hypsosinga pygmaea</i> (Sundevall 1831)	1	1	1	1	1	5	H
<i>Hypsosinga rubens</i> (Hentz 1847)	1	1	1	P	1	4	
<i>Larinia borealis</i> Banks 1894	1	P	1	1	1	4	
<i>Larinia directa</i> (Hentz 1847)			1			1	
<i>Larinioides cornutus</i> (Clerck 1757)	1	1	1	1	1	5	H
<i>Larinioides patagiatus</i> (Clerck 1757)	1	1	1	1	1	5	H
<i>Larinioides sclopetarius</i> (Clerck 1757)	1	1	1	1	1	5	PA
<i>Mangora gibberosa</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Mangora maculata</i> (Keyserling 1865)	1	1	1	P	1	4	
<i>Mangora placida</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Mastophora bisaccata</i> (Emerton 1884)	1	1	1	P	1	4	
<i>Mastophora cornigera</i> (Hentz 1850)		1				1	
<i>Mastophora hutchinsoni</i> Gertsch 1955	1	1	1			3	
<i>Mastophora phrynosoma</i> Gertsch 1955	1					1	
<i>Metazygia calix</i> (Walckenaer 1842)	1	P	1			2	
<i>Metepeira labyrinthea</i> (Hentz 1847)	1	1	1		1	5	
<i>Metepeira palustris</i> Chamberlin & Ivie 1942				1		1	
<i>Micrathena gracilis</i> (Walckenaer 1805)	1	1	1	1	1	5	
<i>Micrathena mitrata</i> (Hentz 1850)	1	1	1	1	P	4	
<i>Micrathena sagittata</i> (Walckenaer 1842)	1	1	1	1	1	5	
<i>Neoscona arabesca</i> (Walckenaer 1842)	1	1	1	1	1	5	
<i>Neoscona crucifera</i> (Lucas 1839)	1	1	1	1	1	5	
<i>Neoscona domiciliorum</i> (Hentz 1847)	1	1	1	1	P	4	
<i>Neoscona oaxacensis</i> (Keyserling 1864)		1				1	
<i>Neoscona pratensis</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Ocrepeira ectypa</i> (Walckenaer 1842)	1	P	1			2	
<i>Ocrepeira georgia</i> (Levi 1976)			1			1	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Singa eugeni</i> Levi 1972	1	P	1	1	1	4	
<i>Singa keyserlingi</i> McCook 1894	1	P	1	1	P	3	
<i>Verrucosa arenata</i> (Walckenaer 1842)	1	1	1	1	P	4	
<i>Zygiella montana</i> (C. L. Koch 1834)				1	1	2	PA
<i>Zygiella nearctica</i> Gertsch 1964					1	1	H
Atypidae							
<i>Sphodros atlanticus</i> Gertsch & Platnick 1980	1					1	
<i>Sphodros coylei</i> Gertsch & Platnick 1980			1			1	
<i>Sphodros niger</i> (Hentz 1842)	1	1	1	1	P	4	
<i>Sphodros rufipes</i> (Latreille 1829)	1	P	1	P	1	3	
Clubionidae							
<i>Clubiona abboti</i> L. Koch 1866	1	1	1	1	1	5	
<i>Clubiona bishopi</i> Edwards 1958	1					1	
<i>Clubiona bryantae</i> Gertsch 1941	1	P			1	2	
<i>Clubiona canadensis</i> Emerton 1890	P	P	1	1	1	3	
<i>Clubiona catawba</i> Gertsch 1941	1	P	1	P	1	3	
<i>Clubiona chippewa</i> Gertsch 1941				1	1	2	
<i>Clubiona johnsoni</i> Gertsch 1941	1	P	1	1	1	4	
<i>Clubiona kastoni</i> Gertsch 1941	1	P	1	1	1	4	
<i>Clubiona kiowa</i> Gertsch 1941					1	1	
<i>Clubiona kulczynskii</i> Lessert 1905					1	1	H
<i>Clubiona maritima</i> L. Koch 1867	1	1	1	1	1	5	
<i>Clubiona mixta</i> Emerton 1890	1	P	1	1	1	4	
<i>Clubiona moesta</i> Banks 1896	1	P	P	1	1	3	
<i>Clubiona norvegica</i> Strand 1900	1					1	H
<i>Clubiona obesa</i> Hentz 1847	1	1	1	1	1	5	
<i>Clubiona pikei</i> Gertsch 1841	1	P	1			2	
<i>Clubiona pygmaea</i> Banks 1892	1	1	1	1	1	5	
<i>Clubiona quebecana</i> Dondale & Redner 1976				1		1	
<i>Clubiona rileyi</i> Gertsch 1941		1				1	
<i>Clubiona riparia</i> L. Koch 1866	1	1	1	1	1	5	
<i>Clubiona saltitans</i> Emerton 1919	1					1	
<i>Clubiona spiralis</i> Emerton 1909			1			1	
<i>Clubiona trivialis</i> C. L. Koch 1843				1	1	2	H
<i>Elaver excepta</i> (L. Koch 1866)	1	1	1	1	1	5	
Corinnidae							
<i>Castianeira alata</i> Muma 1945	1					1	
<i>Castianeira amoena</i> (C. L. Koch 1841)	1					1	
<i>Castianeira cingulata</i> (C. L. Koch 1841)	1	1	1	1	1	5	
<i>Castianeira crocata</i> (Hentz 1847)	1	1				2	
<i>Castianeira descripta</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Castianeira gertschi</i> Kaston 1945	1	P	1	P	1	3	
<i>Castianeira longipalpa</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Castianeira trilineata</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Castianeira variata</i> Gertsch 1942	1	P	1	P	1	3	
<i>Meriola decepta</i> Banks 1895	1	1	1	P	1	4	
<i>Myrmecotypus lineatus</i> (Emerton 1909)					1	1	
<i>Phrurolithus concisus</i> Gertsch 1941			1			1	
<i>Phrurolithus emertoni</i> (Gertsch 1935)	1					1	
<i>Phrurolithus goodnighti</i> (Muma 1945)	1					1	
<i>Phrurolithus similis</i> Banks 1895	1	1	P	P	1	3	
<i>Phruronellus formica</i> (Banks 1895)	1					1	
<i>Phruronellus formidabilis</i> Chamberlin & Gertsch 1930					1	1	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Phrurotimpus alarius</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Phrurotimpus borealis</i> (Emerton 1911)	1	1	1	1	1	5	
<i>Phrurotimpus certus</i> Gertsch 1941	1					1	
<i>Phrurotimpus dulcineus</i> Gertsch 1941	1					1	
<i>Phrurotimpus illudens</i> Gertsch 1941	1					1	
<i>Phrurotimpus minutus</i> (Banks 1892)	1	1	1	1	P	4	
<i>Scotinella britcheri</i> (Petrunkevitch 1910)	1	1	1			3	
<i>Scotinella brittoni</i> (Gertsch 1941)	1	P	1	P	1	3	
<i>Scotinella deleta</i> (Gertsch 1941)	1					1	
<i>Scotinella divesta</i> (Gertsch 1941)	1	P			1	2	
<i>Scotinella fratrella</i> (Gertsch 1935)	1	P	1			2	
<i>Scotinella madisonia</i> Levi 1951	1	P	1	1	P	3	
<i>Scotinella manitou</i> Levi 1951				1		1	
<i>Scotinella minnetonka</i> (Chamberlin & Ivie 1930)				1		1	
<i>Scotinella pugnata</i> (Emerton 1890)	1	P	1	P	1	3	
<i>Scotinella redempta</i> (Gertsch 1941)	1	P	1			2	
<i>Trachelas tranquillus</i> (Hentz 1847)	1	1	1	1	1	5	
Ctenidae							
<i>Anahita punctulata</i> (Hentz 1844)	1	1	1			3	
Ctenizidae							
<i>Ummidia tuobita</i> (Chamberlin 1917)	1	?				1	
Cybaeidae							
<i>Cybaeota calcarata</i> (Emerton 1911)					1	1	
<i>Cybaeus giganteus</i> Banks 1892	1	P	1			2	
Dictynidae							
<i>Argenna obesa</i> Emerton 1911	1	P	1	1	P	3	
<i>Cicurina arcuata</i> Keyserling 1887	1	1	1	1	1	5	
<i>Cicurina brevis</i> (Emerton 1890)	1	1	1	1	1	5	
<i>Cicurina cavealis</i> Bishop & Crosby 1926	1	1				2	
<i>Cicurina itasca</i> (Chamberlin & Ivie 1940)				1		1	
<i>Cicurina ludoviciana</i> Simon 1889	1	1				2	
<i>Cicurina minima</i> Chamberlin & Ivie 1940	1	1				2	
<i>Cicurina minnesota</i> Chamberlin & Ivie 1940	1	1	P	P	1	3	
<i>Cicurina pallida</i> Keyserling 1887	1	1	1	P	1	4	
<i>Cicurina placida</i> Banks 1892	1	1	P	1	1	4	
<i>Cicurina robusta</i> Simon 1886	1	1	1	1	1	5	
<i>Dictyna arundinacea</i> (Linnaeus 1758)					1	1	H
<i>Dictyna bellans</i> Chamberlin 1919	1	P	1	P	1	3	
<i>Dictyna bostoniensis</i> Emerton 1888	1	1	1	1	1	5	
<i>Dictyna brevitarsa</i> Emerton 1915			1		1	2	
<i>Dictyna coloradensis</i> Chamberlin 1919	1	1	P	1	1	4	
<i>Dictyna foliacea</i> (Hentz 1850)	1	1	1	1	1	5	
<i>Dictyna formidolosa</i> Gertsch & Ivie 1936	1	1	1			3	
<i>Dictyna longispina</i> Emerton 1888	1	P	1	1	P	3	
<i>Dictyna minuta</i> Emerton 1888	1	1	1	1	1	5	
<i>Dictyna sancta</i> Gertsch 1946				1	1	2	
<i>Dictyna terrestris</i> Emerton 1911					1	1	
<i>Dictyna volucripes</i> Keyserling 1881	1	1	1	1	1	5	
<i>Emblyna altamira</i> (Chamberlin & Gertsch 1958)					1	1	
<i>Emblyna angulata</i> (Emerton 1915)	1	1				2	
<i>Emblyna annulipes</i> (Blackwall 1846)	1	1	1	1	1	5	H
<i>Emblyna consulta</i> (Gertsch & Ivie 1936)					1	1	
<i>Emblyna cruciata</i> (Emerton 1888)	1	1	1	1	1	5	
<i>Emblyna decaprini</i> (Kaston 1945)			1			1	



Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Emblyna hentzi</i> (Kaston 1945)	1	P	1	1	1	4	
<i>Emblyna manitoba</i> (Ivie 1947)	1			1		2	
<i>Emblyna maxima</i> (Banks 1892)					1	1	
<i>Emblyna phylax</i> (Gertsch & Ivie 1936)				1		1	
<i>Emblyna roscida</i> (Hentz 1850)			1		1	2	
<i>Emblyna sublata</i> (Hentz 1850)	1	1	1	1	1	5	
<i>Emblyna zaba</i> (Barrows & Ivie 1942)			1			1	
<i>Iviella ohioensis</i> (Chamberlin & Ivie 1935)			1			1	
<i>Lathys foxi</i> (Marx 1891)	P	1	1	1	1	4	
<i>Lathys immaculata</i> Chamberlin & Ivie 1944	1					1	
<i>Lathys maculina</i> Gertsch 1946		1				1	
<i>Lathys pallida</i> (Marx 1891)	P	1	1	1	1	4	
<i>Phantyna bicornis</i> Emerton 1915	1	1	1	1	1	5	
<i>Phantyna pixi</i> (Chamberlin & Gertsch 1958)					1	1	
Dysderidae							
<i>Dysdera crocata</i> C. L. Koch 1838	1	1	1	1	P	4	C
Gnaphosidae							
<i>Callilepis imbecilla</i> (Keyserling 1887)	1	1	1	1	1	5	
<i>Callilepis pluto</i> Banks 1896	1	P	1	1	1	4	
<i>Cesonia bilineata</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Drassodes auriculoides</i> Barrows 1919	P	P	1	1	1	3	
<i>Drassodes gosiutus</i> Chamberlin 1919			1		1	2	
<i>Drassodes neglectus</i> (Keyserling 1887)	1	1	P	1	1	4	H
<i>Drassodes saccatus</i> Emerton 1889	1	P			1	2	
<i>Drassyllus aprilinus</i> (Banks 1904)	1	1	1		1	4	
<i>Drassyllus covensis</i> Exline 1962	1					1	
<i>Drassyllus creolus</i> Chamberlin & Gertsch 1940	1	1	1	P	1	4	
<i>Drassyllus depressus</i> (Emerton 1890)	1	1	1	1	1	5	
<i>Drassyllus dixinus</i> Chamberlin 1922	1					1	
<i>Drassyllus eremitus</i> Chamberlin 1922	1	P	1	1	1	4	
<i>Drassyllus eremophilus</i> Chamberlin & Gertsch 1940					1	1	
<i>Drassyllus fallens</i> Chamberlin 1922	1	P	1	1	1	4	
<i>Drassyllus frigidus</i> (Banks 1892)	1	P	1	P	1	3	
<i>Drassyllus gynosaphes</i> Chamberlin 1936					1	1	
<i>Drassyllus lepidus</i> (Banks 1899)	1					1	
<i>Drassyllus nannellus</i> Chamberlin & Gertsch 1940			1			1	
<i>Drassyllus niger</i> (Banks 1896)	1	P	P	1	1	3	
<i>Drassyllus novus</i> Banks 1895	1	1	1	1	1	5	
<i>Drassyllus rufulus</i> (Banks 1892)	1	1	1	1	1	5	
<i>Gnaphosa brumalis</i> Thorell 1875					1	1	
<i>Gnaphosa fontinalis</i> Keyserling 1887	1	P	1	1	P	3	
<i>Gnaphosa muscorum</i> (L. Koch 1866)				1	1	2	H
<i>Gnaphosa parvula</i> Banks 1896	1	1	1	1	1	5	
<i>Gnaphosa sericata</i> (L. Koch 1866)	1	1	1	1	1	5	
<i>Haplodrassus bicornis</i> (Emerton 1909)	1	1	1	1	1	5	
<i>Haplodrassus hiemalis</i> (Emerton 1909)	1	P	1	1	1	4	H
<i>Haplodrassus mimus</i> Chamberlin 1922	1					1	
<i>Haplodrassus signifer</i> (C. L. Koch 1839)	1	1	1	1	1	5	H
<i>Herpyllus ecclesiasticus</i> Hentz 1832	1	1	1	1	1	5	
<i>Litopyllus temporarius</i> Chamberlin 1922	1	1	1	P	1	4	
<i>Micaria elizabethae</i> Gertsch 1942	1	1	1	P	1	4	
<i>Micaria emertoni</i> Gertsch 1935					1	1	
<i>Micaria gertschi</i> Barrows & Ivie 1942	1	P	1	P	1	3	
<i>Micaria laticeps</i> Emerton 1909	1	P			1	2	
<i>Micaria longipes</i> Emerton 1890	1	P	1	1	1	4	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Micaria longispina</i> Emerton 1911				1	1	2	
<i>Micaria pulicaria</i> (Sundevall 1831)	1	P	1	1	1	4	H
<i>Micaria riggsi</i> Gertsch 1942	1	P	1	1	1	4	
<i>Nodocion floridanus</i> (Banks 1896)	P	1		1		2	
<i>Sergiolus bicolor</i> Banks 1900			1		1	2	
<i>Sergiolus capulatus</i> (Walckenaer 1837)	1	1	1	1	1	5	
<i>Sergiolus decoratus</i> Kaston 1945	1	P	1	P	1	3	
<i>Sergiolus lowelli</i> Chamberlin & Woodbury 1929			1			1	
<i>Sergiolus minutus</i> (Banks 1898)	1			1		2	
<i>Sergiolus montanus</i> (Emerton 1890)	1	1	1	1	1	5	
<i>Sergiolus ocellatus</i> (Walckenaer 1837)	1	P	1	1	1	4	
<i>Sergiolus tennesseeensis</i> Chamberlin 1922	1	1	P	P	1	3	
<i>Sergiolus unimaculatus</i> Emerton 1915					1	1	
<i>Sosticus insularis</i> (Banks 1895)	1	1	1	1	1	5	
<i>Sosticus loricatus</i> (L. Koch 1866)	1			1		2	H
<i>Synaphosus paludis</i> (Chamberlin & Gertsch 1940)	1					1	
<i>Talanites echinus</i> (Chamberlin 1922)			1			1	
<i>Talanites exlineae</i> (Platnick & Shadab 1976)	1					1	
<i>Urozelotes rusticus</i> (L. Koch 1872)	1	P	1	1	P	3	C
<i>Zelotes duplex</i> Chamberlin 1922	1	1	1	P	1	4	
<i>Zelotes exiguoides</i> Platnick & Shadab 1983	1					1	
<i>Zelotes fratris</i> Chamberlin 1920	1	1	1	1	1	5	H
<i>Zelotes hentzi</i> Barrows 1945	1	1	1	1	1	5	
<i>Zelotes laccus</i> (Barrows 1919)	1	1	1			3	
<i>Zelotes puritanus</i> Chamberlin 1922				1	1	2	H
<b>Hahniidae</b>							
<i>Antistea brunnea</i> (Emerton 1909)	1	P	P	1	1	3	
<i>Calymmaria cavicola</i> (Banks 1896)	1	1	1			3	
<i>Cryphoea montana</i> Emerton 1909			1		1	2	
<i>Hahnia cinerea</i> Emerton 1889	1	1	1	1	1	5	
<i>Hahnia flaviceps</i> Emerton 1913	1	P	1			2	
<i>Neoantistea agilis</i> (Keyserling 1887)	1	1	1	1	1	5	
<i>Neoantistea magna</i> (Keyserling 1887)	1	1	1	1	1	5	
<i>Neoantistea riparia</i> (Keyserling 1887)				1	1	2	
<b>Linyphiidae</b>							
<i>Agyneta olivacea</i> (Emerton 1882)					1	1	H
<i>Allomengea dentisetis</i> (Grube 1861)				1		1	H
<i>Baryphyma longitarsum</i> (Emerton 1882)				1	1	2	
<i>Baryphyma trifrons affine</i> (Schenkel 1930)			1			1	H
<i>Bathyphantes alboventris</i> (Banks 1892)	1	P	1	1	P	3	
<i>Bathyphantes brevis</i> (Emerton 1911)	P	P	1	1	1	3	
<i>Bathyphantes canadensis</i> (Emerton 1882)			1			1	
<i>Bathyphantes pallidus</i> (Banks 1892)	1	1	1	1	1	5	
<i>Bathyphantes weyeri</i> (Emerton 1875)	P	1	1	1	P	3	
<i>Blestia sarcocoon</i> (Crosby & Bishop 1927)			1			1	
<i>Centromerus cornupalpis</i> (O. P.-Cambridge 1875)	1	1	1	1	1	5	
<i>Centromerus denticulatus</i> (Emerton 1909)					1	1	
<i>Centromerus latidens</i> (Emerton 1882)	1	1	1	P	1	4	
<i>Centromerus longibulbus</i> (Emerton 1882)					1	1	
<i>Centromerus persolutus</i> (O. P.-Cambridge 1875)				1	1	2	
<i>Centromerus sylvaticus</i> (Blackwall 1841)	1	P	1	1	1	4	H
<i>Centromerus tennapex</i> (Barrows 1940)			1			1	
<i>Ceraticelus alticeps</i> (Fox 1891)	1	P			1	2	
<i>Ceraticelus atriceps</i> (O. P.-Cambridge 1874)	1	P	1	1	1	4	
<i>Ceraticelus bryantae</i> Kaston 1945			1			1	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Ceraticelus bulbosus</i> (Emerton 1882)	1	P	1	P	1	3	H
<i>Ceraticelus carinatus</i> (Emerton 1911)			1			1	
<i>Ceraticelus creolus</i> Chamberlin 1925	1					1	
<i>Ceraticelus emertoni</i> (O. P.-Cambridge 1874)	1	1	1	1	1	5	
<i>Ceraticelus fissiceps</i> (O. P.-Cambridge 1874)	1	1	1	1	1	5	
<i>Ceraticelus laetabilis</i> (O. P.-Cambridge 1874)	1	P	P	1	1	3	
<i>Ceraticelus laetus</i> (O. P.-Cambridge 1874)	1	1	P	1	1	4	
<i>Ceraticelus laticeps</i> (Emerton 1894)	1	P	P	1	1	3	
<i>Ceraticelus limnologicus</i> Crosby & Bishop 1925	1	1				2	
<i>Ceraticelus micropalpis</i> (Emerton 1882)	1	P			1	2	
<i>Ceraticelus minutus</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Ceraticelus paschalis</i> Crosby & Bishop 1925			1			1	
<i>Ceraticelus pygmaeus</i> (Emerton 1882)	1	P	1	P	1	3	
<i>Ceraticelus similis</i> (Banks 1892)	1	P	1	1	P	3	
<i>Ceratinella brunnea</i> Emerton 1882	1	1	1	1	1	5	
<i>Ceratinops annulipes</i> (Banks 1892)	1			1		2	
<i>Ceratinops crenatus</i> (Emerton 1882)	1	P	1	1	1	4	
<i>Ceratinops latus</i> (Emerton 1882)	P	P	1	1	P	2	
<i>Ceratinops rugosus</i> (Emerton 1909)	1	1	1	1	P	4	
<i>Ceratinopsidis formosa</i> (Banks 1892)	1	P	1	1	P	3	
<i>Ceratinopsis atolma</i> Chamberlin 1925	1	P	1			2	
<i>Ceratinopsis auriculata</i> Emerton 1909	1			1		2	
<i>Ceratinopsis interpres</i> (O. P.-Cambridge 1874)		1	1		1	3	
<i>Ceratinopsis laticeps</i> Emerton 1882	1	P	1			2	
<i>Ceratinopsis nigriceps</i> Emerton 1882	1	P	1	1	1	4	
<i>Ceratinopsis nigripalpis</i> Emerton 1882	1	P	1			2	
<i>Ceratinopsis sutoris</i> Crosby & Bishop 1930	1					1	
<i>Ceratinopsis xanthippe</i> (Keyserling 1886)	1	P	1			2	
<i>Ceratinopsis yola</i> Chamberlin & Ivie 1939	1					1	
<i>Cheniseo fabulosa</i> Bishop & Crosby 1935	1					1	
<i>Collinsia oxypaederoptipus</i> (Crosby 1905)		1	1		1	3	
<i>Collinsia plumosa</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Collinsia probata</i> (O. P.-Cambridge 1874)		1				1	
<i>Dicymbium elongatum</i> (Emerton 1882)			1			1	
<i>Diplocentria bidentata</i> (Emerton 1882)	1					1	H
<i>Diplocephalus cristatus</i> (Blackwall 1833)	1			1		2	H
<i>Diplocephalus subrostratus</i> (O. P.-Cambridge 1873)				1	1	2	H
<i>Diplostyla concolor</i> (Wider 1834)	1	1	1	1	1	5	H
<i>Disembolus corneliae</i> (Chamberlin & Ivie 1944)		1				1	
<i>Dismodicus decemocolatus</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Drapetisca alteranda</i> Chamberlin 1909	P	P	1	1	1	3	
<i>Eperigone antraea</i> (Crosby 1926)	1					1	
<i>Eperigone augustalis</i> Crosby & Bishop 1933	1			1		2	
<i>Eperigone bryantae</i> Ivie & Barrows 1935	1					1	
<i>Eperigone entomologica</i> (Emerton 1911)					1	1	
<i>Eperigone eschatologica</i> (Crosby 1924)	1					1	
<i>Eperigone fradeorum</i> (Berland 1932)	1					1	C
<i>Eperigone index</i> (Emerton 1914)				1		1	
<i>Eperigone maculata</i> (Banks 1892)	1	P	1	1	1	4	
<i>Eperigone tridentata</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Eperigone trilobata</i> (Emerton 1882)	1	P	1	1	1	4	H
<i>Eperigone undulata</i> (Emerton 1914)	1	1				2	
<i>Epiceraticelus fluvialis</i> Crosby & Bishop 1930			1			1	
<i>Eridantes erigonoides</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Eridantes utibilis</i> Crosby & Bishop 1933	1	1	1	1	P	4	
<i>Erigone aletris</i> Crosby & Bishop 1928		1				1	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Erigone alsaida</i> Crosby & Bishop 1928				1	1	2	
<i>Erigone atra</i> Blackwall 1833	1	1	1	1	1	5	H
<i>Erigone autumnalis</i> Emerton 1882	1	1	1	P	1	4	
<i>Erigone blaesa</i> Crosby & Bishop 1928	1	1	1	1	1	5	
<i>Erigone dentigera</i> O. P.-Cambridge 1874	1	1	1	1	1	5	H
<i>Erigone infernalis</i> Keyserling 1886	1	1				2	
<i>Erigone praeursora</i> Chamberlin & Ivie 1939	1					1	
<i>Erigone zographica</i> Crosby & Bishop 1928					1	1	
<i>Estrandia grandaeva</i> (Keyserling 1886)			1			1	H
<i>Floricomus bishopi</i> Ivie & Barrows 1935			1			1	
<i>Floricomus plumalis</i> (Crosby 1905)	1	P	P	1	1	3	
<i>Floricomus rostratus</i> (Emerton 1882)	1	P	1			2	
<i>Florinda coccinea</i> (Hentz 1850)	1	1	1			3	
<i>Frontinella communis</i> (Hentz 1850)	1	1	1	1	1	5	
<i>Gnathonaroides pedalis</i> (Emerton 1923)	1			1		2	
<i>Gonatium crassipalpus</i> Bryant 1933	1	P	1	1	1	4	
<i>Goneatara nasutus</i> (Barrows 1943)			1			1	
<i>Goneatara plathyrinus</i> Crosby & Bishop 1927	1	P	1			2	
<i>Grammonota gentilis</i> Banks 1898	P	P	1	1	1	3	
<i>Grammonota gigas</i> (Banks 1896)	1	P			1	2	
<i>Grammonota inornata</i> Emerton 1882	1	1	1	P	1	4	
<i>Grammonota ornata</i> (O. P.-Cambridge 1875)			1		1	2	
<i>Grammonota pictilis</i> (O. P.-Cambridge 1875)	1	P	1	1	1	4	
<i>Grammonota vittata</i> Barrows 1919	P	P	1	1	P	2	
<i>Graphomoa theridioides</i> Chamberlin 1924	1					1	
<i>Helophora insignis</i> (Blackwall 1841)	P	P	1	1	1	3	H
<i>Hybauchenidium cymbadentatum</i> (Crosby & Bishop 1935)				1		1	
<i>Hypomma marxi</i> (Keyserling 1886)					1	1	
<i>Hypselistes florens</i> (O. P.-Cambridge 1875)	1	1	1	1	1	5	
<i>Idionella formosa</i> (Banks 1892)			1		1	2	
<i>Idionella rugosa</i> (Crosby 1905)	1				1	2	
<i>Idionella sclerata</i> (Ivie & Barrows 1935)	1	P			1	2	
<i>Incestophantes calcaratus</i> (Emerton 1909)					1	1	
<i>Incestophantes duplicatus</i> (Emerton 1913)					1	1	
<i>Islandiana flaveola</i> (Banks 1892)	1	P	1	P	1	3	
<i>Islandiana flavoides</i> Ivie 1965	1					1	
<i>Islandiana longisetosa</i> (Emerton 1882)	1	1	1	P	1	4	
<i>Islandiana speophila</i> Ivie 1965			1			1	
<i>Kaestneria pullata</i> (O. P.-Cambridge 1863)	1	P	P	1	1	3	H
<i>Lepthyphantes intricatus</i> (Emerton 1911)				1		1	
<i>Lepthyphantes leprosus</i> (Ohlert 1865)	1	P	1	1	1	4	H
<i>Lepthyphantes minutus</i> (Blackwall 1883)					1	1	
<i>Lepthyphantes turbatrix</i> (O. P.-Cambridge 1877)	P	P	1	1	1	3	
<i>Macrargus multesimus</i> (O. P.-Cambridge 1875)	P	P	1	1	1	3	H
<i>Maso sundevalli</i> (Westring 1851)				1	1	2	H
<i>Megalepthyphantes nebulosus</i> (Sundevall 1830)	1	1	1	1	1	5	H
<i>Meioneta angulata</i> (Emerton 1882)			1		1	2	
<i>Meioneta barrowsi</i> Chamberlin & Ivie 1944	1	P	1			2	
<i>Meioneta brevipes</i> (Keyserling 1886)			1			1	
<i>Meioneta evadens</i> (Chamberlin 1925)	1					1	
<i>Meioneta fabra</i> (Keyserling 1886)	1	1	1	P	1	4	
<i>Meioneta leucophora</i> Chamberlin & Ivie 1944	1					1	
<i>Meioneta micaria</i> (Emerton 1882)	1	1	1			3	
<i>Meioneta officiosa</i> (Barrows 1940)			1			1	
<i>Meioneta serrata</i> (Emerton 1909)					1	1	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Meioneta simplex</i> (Emerton 1926)	1	P			1	2	
<i>Meioneta unimaculata</i> (Banks 1892)	1	1	1	1	1	5	
<i>Meioneta zygia</i> (Keyserling 1886)	1					1	
<i>Microlinyphia pusilla</i> (Sundevall 1830)	1	P	1	P	1	3	H
<i>Microlinyphia impigra</i> (O. P.-Cambridge 1871)	1	P	1			2	H
<i>Microlinyphia mandibulata</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Microneta viaria</i> (Blackwall 1841)	1	P	1	1	1	4	H
<i>Mythoplastoides exiguus</i> (Banks 1892)		1				1	
<i>Neriere clathrata</i> (Sundevall 1830)	1	1	1	1	1	5	H
<i>Neriere radiata</i> (Walckenaer 1842)	1	1	1	1	1	5	H
<i>Neriere variabilis</i> (Banks 1892)	1	1	1	1	1	5	
<i>Oedothorax maximus</i> (Emerton 1882)			1			1	
<i>Oedothorax montifer</i> (Emerton 1882)		1				1	
<i>Oedothorax trilobatus</i> (Banks 1896)	1	P	P	1	1	3	
<i>Oreonetides rotundus</i> (Emerton 1913)					1	1	
<i>Oreonetides vaginatus</i> (Thorell 1872)					1	1	H
<i>Origanates rostratus</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Paracornicularia bicapillata</i> Crosby & Bishop 1931	1					1	
<i>Pelecopsis bishopi</i> Kaston 1945		1			1	2	
<i>Pelecopsis moesta</i> (Banks 1892)			1		1	2	
<i>Phanetta subterranea</i> (Emerton 1875)	1	1				2	
<i>Pityohyphantes costatus</i> (Hentz 1850)	1	1	1	1	1	5	
<i>Pityohyphantes limitaneus</i> (Emerton 1915)					1	1	
<i>Pocadicnemus americana</i> Millidge 1976	1	P	P	1	1	3	
<i>Poeciloneta bihamata</i> (Emerton 1882)					1	1	
<i>Poeciloneta furcata</i> (Emerton 1913)				1		1	
<i>Poeciloneta theridiformis</i> (Emerton 1911)	1					1	H
<i>Porrhomma cavernicola</i> (Keyserling 1886)	1	1				2	
<i>Porrhomma terrestre</i> (Emerton 1882)	1	P	1	1	1	4	
<i>Satilatlas arenarius</i> (Emerton 1911)	1	P	1	1	1	4	
<i>Sciastes acuminatus</i> (Emerton 1913)	1			1		2	
<i>Sciastes truncatus</i> (Emerton 1822)				1		1	
<i>Scirites pectinatus</i> (Emerton 1911)	1			1		2	
<i>Scironis tarsalis</i> (Emerton 1911)	1	P			1	2	
<i>Scotinotylus pallidus</i> (Emerton 1882)					1	1	
<i>Scotinotylus vernalis</i> (Emerton 1882)					1	1	
<i>Scylaceus pallidus</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Scyletria jona</i> Bishop & Crosby 1938	1					1	
<i>Sisicottus montanus</i> (Emerton 1882)					1	1	
<i>Sisicottus montigenus</i> Bishop & Crosby 1938					1	1	
<i>Sisicus penifusifer</i> Bishop & Crosby 1938				1	1	2	
<i>Sitalcas ruralis</i> Bishop & Crosby 1938	1					1	
<i>Souessa spinifera</i> (O. P.-Cambridge 1874)				1		1	
<i>Souessoula parva</i> (Banks 1899)	1					1	
<i>Sougambus bostoniensis</i> (Emerton 1882)				1		1	
<i>Soulgas corticarius</i> (Emerton 1909)	1			1	1	3	
<i>Stemonyphantes blauveltae</i> Gertsch 1951	1	1	1			3	
<i>Styloctetor purpurescens</i> (Keyserling 1886)	1	P	1	1	P	3	
<i>Tapinocyba emertoni</i> Barrows & Ivie 1942			1			1	
<i>Tapinocyba hortensis</i> (Emerton 1924)			1			1	
<i>Tapinocyba minuta</i> (Emerton 1909)				1	1	2	
<i>Tapinocyba scopulifera</i> (Emerton 1882)	1	P			1	2	
<i>Tapinocyba simplex</i> (Emerton 1882)				1	1	2	
<i>Tapinocyba sucra</i> Chamberlin 1949			1			1	
<i>Tapinopa bilineata</i> Banks 1893	1	P	1	1	1	4	
<i>Taranucnus ornithes</i> (Barrows 1940)			1			1	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Tennesseellum formica</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Tenuiphantes sabulosus</i> (Keyserling 1886)	1	P	1	1	1	4	
<i>Tenuiphantes zebra</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Thyreosthenius parasiticus</i> (Westring 1851)	P	P	1	1	P	2	H
<i>Tmeticus ornatus</i> (Emerton 1914)	1		P	1	1	3	
<i>Traematosisis bispinosus</i> (Emerton 1911)					1	1	
<i>Tunagyna debilis</i> (Banks 1892)				1	1	2	
<i>Tusukuru hartlandianus</i> (Emerton 1913)					1	1	
<i>Tutaibo anglicanus</i> (Hentz 1850)	1	1				2	
<i>Walckenaeria atrotibialis</i> (O. P.-Cambridge 1878)	1	P	P	1	1	3	H
<i>Walckenaeria auranticeps</i> (Emerton 1882)					1	1	
<i>Walckenaeria brevicornis</i> (Emerton 1882)	1	P	1	1	1	4	
<i>Walckenaeria castanea</i> (Emerton 1882)	1	P	1	1	1	4	
<i>Walckenaeria clavicornis</i> (Emerton 1882)	P	P	1	1	1	3	H
<i>Walckenaeria communis</i> (Emerton 1882)	1	P	1	1	1	4	
<i>Walckenaeria digitata</i> (Emerton 1913)	1					1	
<i>Walckenaeria directa</i> (O. P.-Cambridge 1874)	1	P	1	1	1	4	
<i>Walckenaeria exigua</i> Millidge 1983				1	1	2	
<i>Walckenaeria indirecta</i> (O. P.-Cambridge 1874)	1	P	P	1	1	3	
<i>Walckenaeria minuta</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Walckenaeria pallida</i> (Emerton 1882)	1	P	1	1	1	4	
<i>Walckenaeria palustris</i> Millidge 1983	1					1	
<i>Walckenaeria pinocchio</i> (Kaston 1945)					1	1	
<i>Walckenaeria redneri</i> Millidge 1983				1		1	
<i>Walckenaeria spiralis</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Walckenaeria subdirecta</i> Millidge 1983	1	1	P	P	1	3	
<i>Walckenaeria subpallida</i> Millidge 1983	1					1	
<i>Walckenaeria tibialis</i> (Emerton 1882)			1		1	2	
<i>Wubana drassoides</i> (Emerton 1882)	1	P	1			2	
<b>Liocranidae</b>							
<i>Agroeca minuta</i> (Banks 1895)	1	1	1			3	
<i>Agroeca ornata</i> Banks 1892	1	P	P	1	1	3	
<i>Agroeca pratensis</i> Emerton 1890	P	1	1	1	1	4	
<b>Lycosidae</b>							
<i>Allocosa funerea</i> (Hentz 1844)	1	1	1	P	1	4	
<i>Allocosa georgicola</i> (Walckenaer 1837)	1	1	P	P	1	3	
<i>Allocosa noctuabunda</i> (Montgomery 1904)		1				1	
<i>Allocosa sublata</i> (Montgomery 1902)		1				1	
<i>Alopecosa aculeata</i> (Clerck 1757)	P	P	1	1	1	3	H
<i>Alopecosa kochi</i> (Keyserling 1877)					1	1	
<i>Arctosa emertoni</i> Gertsch 1934	1	1	P	1	1	4	
<i>Arctosa littoralis</i> (Hentz 1844)	1	1	1	1	1	5	
<i>Arctosa raptor</i> (Kulczyński 1885)					1	1	
<i>Arctosa rubicunda</i> (Keyserling 1877)	P	1	1	1	1	4	
<i>Arctosa virgo</i> (Chamberlin 1925)			1		1	2	
<i>Geolycosa fatifera</i> (Hentz 1842)					1	1	
<i>Geolycosa missouriensis</i> (Banks 1895)	1	1	1	1	1	5	
<i>Geolycosa pikei</i> (Marx 1881)					1	1	
<i>Geolycosa sepulchralis</i> (Montgomery 1902)			1			1	
<i>Geolycosa turricola</i> (Treat 1880)			1		1	2	
<i>Geolycosa wrighti</i> (Emerton 1912)	1	1	1	1	1	5	
<i>Gladicosa bellamyi</i> (Gertsch & Wallace 1937)			1			1	
<i>Gladicosa gulosa</i> (Walckenaer 1837)	1	1	1	1	1	5	
<i>Gladicosa pulchra</i> (Keyserling 1877)	1	P	1			2	
<i>Hogna aspersa</i> (Hentz 1844)	1	1	1	1	1	5	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Hogna baltimoriana</i> (Keyserling 1877)	1	1	1	1	1	5	
<i>Hogna carolinensis</i> (Walckenaer 1805)	1	1	1	1	1	5	
<i>Hogna frondicola</i> (Emerton 1885)	1	1	1	1	1	5	
<i>Hogna helluo</i> (Walckenaer 1837)	1	1	1	1	1	5	
<i>Hogna lenta</i> (Hentz 1844)			1			1	
<i>Hogna permunda</i> (Chamberlin 1904)	1					1	
<i>Pardosa distincta</i> (Blackwall 1846)	1	P	1	1	1	4	
<i>Pardosa fuscata</i> (Thorell 1875)	1	1	P	1	1	4	
<i>Pardosa glacialis</i> (Thorell 1872)			1		1	2	H
<i>Pardosa groenlandica</i> (Thorell 1872)				1	1	2	
<i>Pardosa hyperborea</i> (Thorell 1872)					1	1	H
<i>Pardosa lapidicina</i> Emerton 1885	1	1	1	1	1	5	
<i>Pardosa littoralis</i> Banks 1896					1	1	
<i>Pardosa mackenziana</i> (Keyserling 1877)				1	1	2	
<i>Pardosa milvina</i> (Hentz 1844)	1	1	1	1	1	5	
<i>Pardosa modica</i> (Blackwall 1846)	1	1	1	1	1	5	
<i>Pardosa moesta</i> Banks 1892	1	1	1	1	1	5	
<i>Pardosa saxatilis</i> (Hentz 1844)	1	P	1	1	1	4	
<i>Pardosa sternalis</i> (Thorell 1877)					1	1	
<i>Pardosa xerampelina</i> (Keyserling 1877)	1	1	1	1	1	5	
<i>Pirata alachuus</i> Gertsch & Wallace 1935	1	1	1			3	
<i>Pirata apalacheus</i> Gertsch 1940	1	1				2	
<i>Pirata aspirans</i> Chamberlin 1904	1	1	1	1	1	5	
<i>Pirata cantralli</i> Wallace & Exline 1978				1	1	2	
<i>Pirata giganteus</i> Gertsch 1934	1			1		2	
<i>Pirata indigenus</i> Wallace & Exline 1978				1		1	
<i>Pirata insularis</i> Emerton 1885	1	1	1	1	1	5	H
<i>Pirata minutus</i> Emerton 1885	1	1	1	1	1	5	
<i>Pirata montanoides</i> Banks 1892	1	P			1	2	
<i>Pirata montanus</i> Emerton 1885	1	1	1	1	1	5	
<i>Pirata piraticus</i> (Clerck 1757)	1	1	1	P	1	4	H
<i>Pirata sedentarius</i> Montgomery 1904	1	1	1	1	1	5	
<i>Pirata seminolus</i> Gertsch & Wallace 1935					1	1	
<i>Pirata spiniger</i> (Simon 1898)	1					1	
<i>Pirata sylvanus</i> Chamberlin & Ivie 1944	1					1	
<i>Pirata triens</i> Wallace & Exline 1978	1					1	
<i>Pirata zelotes</i> Wallace & Exline 1978	1	P	1	1	1	4	
<i>Rabidosa hentzi</i> Banks 1904	1					1	
<i>Rabidosa punctulata</i> (Hentz 1844)	1	1	1	P	1	4	
<i>Rabidosa rabida</i> (Walckenaer 1837)	1	1	1	P	1	4	
<i>Schizocosa aulonia</i> Dondale 1969	1	1				2	
<i>Schizocosa avida</i> (Walckenaer 1837)	1	1	1	1	1	5	
<i>Schizocosa bilineata</i> (Emerton 1885)	1	1	1	1	1	5	
<i>Schizocosa crassipalata</i> Roewer 1951	1	1	1	1	1	5	
<i>Schizocosa crassipes</i> (Walckenaer 1837)	1			1	1	3	
<i>Schizocosa duplex</i> Chamberlin 1925			1		1	2	
<i>Schizocosa mccooki</i> (Montgomery 1904)	1	P	P	1	1	3	
<i>Schizocosa ocreata</i> (Hentz 1844)	1	1	1	1	1	5	
<i>Schizocosa retrorsa</i> (Banks 1911)	1	P	1			2	
<i>Schizocosa rovneri</i> Uetz & Dondale 1979	1	P	1			2	
<i>Schizocosa saltatrix</i> (Hentz 1844)	1	1	1	1	1	5	
<i>Schizocosa stridulans</i> Stratton 1984	1	P	1			2	
<i>Trabeops aurantiacus</i> (Emerton 1885)	1	1	1	1	1	5	
<i>Trebacosa marxi</i> (Stone 1890)	1	1	1	P	1	4	
<i>Trochosa ruricola</i> (DeGeer 1778)	1					1	H
<i>Trochosa terricola</i> Thorell 1856	1	1	1	1	1	5	H

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Varacosa avara</i> (Keyserling 1877)	1	1	1	1	1	5	
<i>Varacosa shenandoa</i> (Chamberlin & Ivie 1942)	1					1	
Mimetidae							
<i>Ero canionis</i> Chamberlin & Ivie 1935	P	P	1	1	P	2	
<i>Ero leonina</i> (Hentz 1850)	1	1	1	1	1	5	
<i>Mimetus epeiroides</i> Emerton 1882	1	1	1	1	1	5	
<i>Mimetus nelsoni</i> Archer 1950			1			1	
<i>Mimetus notius</i> Chamberlin 1923	1			1		2	
<i>Mimetus puritanus</i> Chamberlin 1923	1	1	1	1	1	5	
<i>Mimetus syllepsicus</i> Hentz 1832			1		1	2	
Miturgidae							
<i>Cheiracanthium inclusum</i> (Hentz 1847)	1	1	1	P	1	4	
<i>Cheiracanthium mildei</i> L. Koch 1864	1	P	1	1	P	3	PA
<i>Strotarchus piscatorius</i> (Hentz 1847)	1	P	1			2	
Mysmenidae							
<i>Maymena ambita</i> (Barrows 1940)	1	P	1			2	
<i>Microdipoena guttata</i> Banks 1895	1		1			2	
Nesticidae							
<i>Eidmannella pallida</i> (Emerton 1875)	1	P	1	1	P	3	C
<i>Nesticus bishopi</i> Gertsch 1984		1				1	
<i>Nesticus carteri</i> Emerton 1875		1				1	
Oecobiidae							
<i>Oecobius cellariorum</i> (Dugès 1836)	1	P	1			2	C
<i>Oecobius navus</i> Blackwall 1859			1			1	C
Oonopidae							
<i>Orchestina saltitans</i> Banks 1894	1	P	1	P	1	3	
Oxyopidae							
<i>Oxyopes aglossus</i> Chamberlin 1929	1					1	
<i>Oxyopes salticus</i> Hentz 1845	1	1	1	1	1	5	
<i>Oxyopes scalaris</i> Hentz 1845	1	P	1	1	1	4	
Philodromidae							
<i>Ebo iviei</i> Sauer & Platnick 1972					1	1	
<i>Ebo latithorax</i> Keyserling 1884	1	1	1	1	1	5	
<i>Ebo pepinensis</i> Gertsch 1933	1	1	P	P	1	3	
<i>Philodromus alascensis</i> Keyserling 1884	1	1	P	P	1	3	H
<i>Philodromus bimuricatus</i> Dondale & Redner 1968	1					1	
<i>Philodromus cespitum</i> (Walckenaer 1802)	1	1	1	1	1	5	H
<i>Philodromus exilis</i> Banks 1892				1	1	2	
<i>Philodromus histrio</i> (Latreille 1819)				1	1	2	H
<i>Philodromus imbecillus</i> Keyserling 1880	1	1	1	1	1	5	
<i>Philodromus infuscatus</i> Keyserling 1880	1	P	1	1	1	4	
<i>Philodromus keyserlingi</i> Marx 1890	1	1	1	1	1	5	
<i>Philodromus marxi</i> Keyserling 1884	1	1	1	1	1	5	
<i>Philodromus mineri</i> Gertsch 1933					1	1	
<i>Philodromus minutus</i> Banks 1892	1	1	1	1	1	5	
<i>Philodromus montanus</i> Bryant 1933	1					1	
<i>Philodromus oneida</i> Levi 1951	1	P	P	1	1	3	
<i>Philodromus peninsulanus</i> Gertsch 1934					1	1	
<i>Philodromus pernix</i> Blackwall 1846	1	P	P	1	1	3	
<i>Philodromus placidus</i> Banks 1892	1	1	1	1	1	5	
<i>Philodromus praelustris</i> Keyserling 1880	1	1	P	1	1	4	



Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Philodromus pratariae</i> (Scheffer 1904)	1					1	
<i>Philodromus rufus</i> Walckenaer 1826	1	1	1	1	1	5	H
<i>Philodromus rufus quartus</i> Dondale & Redner 1968					1	1	
<i>Philodromus rufus vibrans</i> Dondale 1964	1	P	P	1	1	3	
<i>Philodromus satullus</i> Keyserling 1880	P	P	1	1	1	3	
<i>Philodromus vulgaris</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Thanatus coloradensis</i> Keyserling 1880					1	1	H
<i>Thanatus formicinus</i> (Clerck 1757)	1	1	1	1	1	5	H
<i>Thanatus rubicellus</i> Mello-Leitao 1929	1	P			1	2	
<i>Thanatus striatus</i> C. L. Koch 1845	1	P	P	1	1	3	H
<i>Thanatus vulgaris</i> Simon 1870			1			1	H
<i>Tibellus duttoni</i> (Hentz 1847)	1	1	1	P	1	4	
<i>Tibellus maritimus</i> (Menge 1875)	1	1	1	1	1	5	H
<i>Tibellus oblongus</i> (Walckenaer 1802)	1	1	1	1	1	5	H
Pholcidae							
<i>Pholcus phalangioides</i> (Fuesslin 1775)	1	1	1	1	1	5	C
<i>Spermophora senoculata</i> (Dugès 1836)	1	1	1	1	P	4	C
Pisauridae							
<i>Dolomedes albineus</i> Hentz 1845	1					1	
<i>Dolomedes scriptus</i> Hentz 1845	1	1	1	1	1	5	
<i>Dolomedes striatus</i> Giebel 1869	1	1	1	1	1	5	
<i>Dolomedes tenebrosus</i> Hentz 1844	1	1	1	1	1	5	
<i>Dolomedes triton</i> (Walckenaer 1837)	1	1	1	1	1	5	
<i>Dolomedes vittatus</i> Walckenaer 1837	1	1	1	P	1	4	
<i>Pisaurina brevipes</i> (Emerton 1911)	1	1	1	P	1	4	
<i>Pisaurina dubia</i> (Hentz 1847)	1	P	1			2	
<i>Pisaurina mira</i> (Walckenaer 1837)	1	1	1	1	1	5	
<i>Pisaurina undulata</i> (Keyserling 1846)	1	1				2	
Salticidae							
<i>Admetina tibialis</i> (C. L. Koch 1846)	1	1	1	1	1	5	
<i>Admetina wheeleri</i> Peckham & Peckham 1888				1	1	2	
<i>Agassa cyaena</i> (Hentz 1846)	1	1	1			3	
<i>Attidops youngi</i> (Peckham & Peckham 1888)	1	P	1	1	P	3	
<i>Chinattus parvulus</i> (Banks 1895)	1	P	1	1	P	3	
<i>Eris aurantia</i> (Lucas 1833)	1	1	1			3	
<i>Eris flava</i> (Peckham & Peckham 1888)	1			1		2	
<i>Eris floridana</i> (Banks 1904)			1			1	
<i>Eris militaris</i> (Hentz 1845)	1	1	1	1	1	5	
<i>Eris pinea</i> (Kaston 1945)	1	1	1			3	
<i>Euophrys monadnock</i> Emerton 1891	P	P	1	1	P	2	
<i>Evarcha hoyi</i> (Peckham & Peckham 1883)	1	1	1	1	1	5	
<i>Ghelna barrowsi</i> (Kaston 1973)			1			1	
<i>Ghelna canadensis</i> (Banks 1897)	1	1	1	1	1	5	
<i>Habronattus agilis</i> (Banks 1893)	1	1	1	P	1	4	M?
<i>Habronattus borealis</i> (Banks 1895)	1	1	1	1	1	5	
<i>Habronattus calcaratus</i> (Banks 1904)	1	1	1	P	1	4	
<i>Habronattus captiosus</i> (Gertsch 1934)				1	1	2	
<i>Habronattus coecatus</i> (Hentz 1846)	1	P	1	P	1	3	
<i>Habronattus cognatus</i> (Peckham & Peckham 1901)	1	1	1	P	1	4	
<i>Habronattus conjunctus</i> (Banks 1898)	1					1	
<i>Habronattus decorus</i> (Blackwall 1846)	1	P	1	1	1	4	
<i>Habronattus orbus</i> Griswold 1987			1			1	
<i>Habronattus texanus</i> (Chamberlin 1924)	1	P	1	P	1	3	
<i>Habronattus viridipes</i> (Hentz 1846)	1	P	1	1	1	4	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Hasarius adansoni</i> (Audouin 1826)	1	1		1		3	C
<i>Hentzia mitrata</i> (Hentz 1846)	1	1	1	1	1	5	
<i>Hentzia palmarum</i> (Hentz 1832)	1	1	1	1	1	5	
<i>Maevia inclemens</i> (Walckenaer 1837)	1	1	1	1	1	5	
<i>Marpissa bina</i> (Hentz 1846)	1	P	P	1	1	3	
<i>Marpissa dentoides</i> Barnes 1958			1			1	
<i>Marpissa formosa</i> (Banks 1892)	1	1	1	1	1	5	
<i>Marpissa grata</i> (Gertsch 1936)	1	P	P	1	1	3	
<i>Marpissa lineata</i> (C. L. Koch 1846)	1	1	1	1	1	5	
<i>Marpissa pikei</i> (Peckham & Peckham 1888)	1	1	1	1	1	5	
<i>Metacryba taeniola</i> (Hentz 1846)	1			1		2	
<i>Myrmarachne formicaria</i> (DeGeer 1778)			1			1	PA
<i>Naphrys pulex</i> (Hentz 1846)	1	1	1	1	1	5	
<i>Neon ellamae</i> Gertsch & Ivie 1955				1		1	
<i>Neon nelli</i> Peckham & Peckham 1888	1	P	1	1	1	4	
<i>Neon plutonus</i> Gertsch & Ivie 1955	1					1	
<i>Paradamoetas fontanus</i> (Levi 1951)				1		1	
<i>Peckhamia americana</i> (Peckham & Peckham 1892)	1	1	1			3	
<i>Peckhamia picata</i> (Hentz 1846)	1	P	1	1	1	4	
<i>Peckhamia scorpionia</i> (Hentz 1846)			1		1	2	
<i>Pelegrina chalceola</i> Maddison 1996	1					1	
<i>Pelegrina exigua</i> (Banks 1892)	1	P	1			2	
<i>Pelegrina flaviceps</i> (Kaston 1973)				1		1	
<i>Pelegrina flavipes</i> (Peckham & Peckham 1888)	1	1	P	1	1	4	
<i>Pelegrina galathea</i> (Walckenaer 1837)	1	1	1	1	1	5	
<i>Pelegrina insignis</i> (Banks 1892)	1	1	1	1	1	5	
<i>Pelegrina montana</i> (Emerton 1891)				1	1	2	M?
<i>Pelegrina peckhamorum</i> (Kaston 1973)			1			1	
<i>Pelegrina proterva</i> (Walckenaer 1837)	1	1	1	1	1	5	
<i>Pellenes longimanus</i> Emerton 1913					1	1	
<i>Phidippus apacheanus</i> Chamberlin & Gertsch 1929				1		1	
<i>Phidippus audax</i> (Hentz 1845)	1	1	1	1	1	5	
<i>Phidippus borealis</i> Banks 1895				1	1	2	
<i>Phidippus cardinalis</i> (Hentz 1845)	1	1	1	1	1	5	
<i>Phidippus clarus</i> Keyserling 1885	1	1	1	1	1	5	
<i>Phidippus insignarius</i> C. L. Koch 1846	1	P	1	1	1	4	
<i>Phidippus mystaceus</i> (Hentz 1846)	1	P	1	P	1	3	
<i>Phidippus pius</i> Scheffer 1905	1	P	1	P	1	3	
<i>Phidippus princeps</i> (Peckham & Peckham 1883)	1	1	1	1	1	5	
<i>Phidippus purpuratus</i> Keyserling 1885	1	1	1	1	1	5	
<i>Phidippus putnami</i> (Peckham & Peckham 1883)	1	1	1			3	
<i>Phidippus whitmani</i> Peckham & Peckham 1909	1	1	1	1	1	5	
<i>Phlegra hentzi</i> (Marx 1890)	1	1	1	1	1	5	
<i>Platycryptus undatus</i> (DeGeer 1778)	1	1	1	1	1	5	
<i>Salticus scenicus</i> (Clerck 1757)	1	1	1	1	1	5	PA
<i>Sarinda hentzi</i> (Banks 1913)	1	P	1			2	
<i>Sassacus papenhoei</i> Peckham & Peckham 1895	1	P	1	1	P	3	
<i>Sibianor aemulus</i> (Gertsch 1934)				1		1	
<i>Sitticus concolor</i> (Banks 1895)	1			1		2	
<i>Sitticus dorsatus</i> (Banks 1895)	1					1	
<i>Sitticus fasciger</i> (Simon 1880)	1			1		2	A
<i>Sitticus floricola palustris</i> (Peckham & Peckham 1883)	1	1	1	1	1	5	
<i>Sitticus striatus</i> Emerton 1911				1		1	H
<i>Synageles canadensis</i> Cutler 1988					1	1	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Synageles noxiosus</i> (Hentz 1850)	1	P	1	1	1	4	
<i>Synageles occidentalis</i> Cutler 1988	1			1		2	
<i>Synemosyna formica</i> Hentz 1846	1	1	1	1	1	5	
<i>Talavera minuta</i> (Banks 1895)	1	1	1	1	1	5	
<i>Thiodina puerpera</i> (Hentz 1846)	1		1			2	
<i>Thiodina sylvana</i> (Hentz 1846)	1	1	1			3	
<i>Tutelina elegans</i> (Hentz 1846)	1	1	1	1	1	5	
<i>Tutelina formicaria</i> (Emerton 1891)	1	P	1	P	1	3	
<i>Tutelina harti</i> (Peckham in Emerton 1891)	1	1	1	1	1	5	
<i>Tutelina similis</i> (Banks 1895)	1	1	1	1	1	5	
<i>Zygoballus nervosus</i> (Peckham 1888)	1	1	1	1	1	5	
<i>Zygoballus rufipes</i> Peckham & Peckham 1885	1	1	1	1	1	5	
<i>Zygoballus sexpunctatus</i> (Hentz 1845)	1	P	1			2	
Scytodidae							
<i>Scytodes thoracica</i> (Latreille 1802)	1	1	1	1	1	5	H
Segestriidae							
<i>Ariadna bicolor</i> (Hentz 1842)	1	1	1			3	
Sicariidae							
<i>Loxosceles reclusa</i> Gertsch & Mulaik 1940	1	1	1			3	
<i>Loxosceles rufescens</i> (Dufour 1820)	1	P	1			2	C
Tengellidae							
<i>Liocranoides tennesseensis</i> (Platnick 1999)			1			1	
Tetragnathidae							
<i>Dolichognatha pentagona</i> (Hentz 1850)	1					1	
<i>Glenognatha foxi</i> (McCook 1894)	1	1	1	1	P	4	
<i>Leucauge venusta</i> (Walckenaer 1842)	1	1	1	1	1	5	
<i>Meta ovalis</i> (Gertsch 1933)	1	1	1	1	P	4	
<i>Metellina curtisi</i> (McCook 1893)				1		1	
<i>Pachygnatha autumnalis</i> Marx 1884	1	P	1	P	1	3	
<i>Pachygnatha brevis</i> Keyserling 1884	1	1	1	P	1	4	
<i>Pachygnatha dorothea</i> McCook 1894	1	P	1	1	1	4	
<i>Pachygnatha furcillata</i> Keyserling 1884		1	1			2	
<i>Pachygnatha tristriata</i> C. L. Koch 1845	1	1	1	1	1	5	
<i>Pachygnatha xanthostoma</i> C. L. Koch 1845	1	1	1	1	1	5	
<i>Tetragnatha caudata</i> Emerton 1884	1	1	1	1	1	5	
<i>Tetragnatha dearmata</i> Thorell 1873	1			1	1	3	H
<i>Tetragnatha elongata</i> Walckenaer 1842	1	1	1	1	1	5	
<i>Tetragnatha extensa</i> (Linnaeus 1758)		1			1	2	H
<i>Tetragnatha guatemalensis</i> O. P.-Cambridge 1889	1	1	1	1	1	5	
<i>Tetragnatha laboriosa</i> Hentz 1850	1	1	1	1	1	5	
<i>Tetragnatha pallescens</i> FO.P.-Cambridge 1903	1	1	1	1	1	5	
<i>Tetragnatha shoshone</i> Levi 1981	1	P	1			2	
<i>Tetragnatha straminea</i> Emerton 1884	1	1	1	1	1	5	
<i>Tetragnatha vermiformis</i> Emerton 1884	1	1	P	1	1	4	
<i>Tetragnatha versicolor</i> Walckenaer 1842	1	1	1	1	1	5	
<i>Tetragnatha viridis</i> Walckenaer 1842					1	1	
Theridiidae							
<i>Achaeareanea conjuncta</i> (Gertsch & Mulaik 1936)			1			1	
<i>Achaeareanea globosa</i> (Hentz 1850)	1	P	1	1	1	4	
<i>Achaeareanea porteri</i> (Banks 1896)	1	1	1			3	
<i>Achaeareanea rupicola</i> (Emerton 1882)	1	1	1	1	P	4	
<i>Achaeareanea tabulata</i> Levi 1980	1					1	PA

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Achaearanea tepidariorum</i> (C. L. Koch 1841)	1	1	1	1	1	5	C
<i>Anelosimus studiosus</i> (Hentz 1850)	1	P			1	2	
<i>Argyrodes elevatus</i> Taczanowski 1873	1					1	
<i>Crustulina altera</i> Gertsch & Archer 1942	1	1	1	1	1	5	
<i>Crustulina sticta</i> (O. P.-Cambridge 1861)	1	1	1	1	1	5	H
<i>Dipoena buccalis</i> Keyserling 1886			1		1	2	
<i>Dipoena nigra</i> (Emerton 1882)	1	P	1	1	1	4	
<i>Enoplognatha caricis</i> (Fickert 1876)	1	P	1	1	1	4	H
<i>Enoplognatha intrepida</i> (Sørensen 1898)	1	P	P	1	1	3	
<i>Enoplognatha joshua</i> Chamberlin & Ivie 1942	1					1	
<i>Enoplognatha marmorata</i> (Hentz 1850)	1	1	1	1	1	5	
<i>Enoplognatha ovata</i> (Clerck 1757)	1	P	1	1	1	4	PA
<i>Episinus amoenus</i> Banks 1911			1			1	
<i>Euryopis argentea</i> Emerton 1882	1	1	1	1	1	5	
<i>Euryopis funebris</i> (Hentz 1850)	1	1	1	1	1	5	
<i>Euryopis gertschi</i> Levi 1951	1	1				2	
<i>Euryopis pepini</i> Levi 1954	P	P	1	1	P	2	
<i>Euryopis quinquemaculata</i> Banks 1900	1	P	1			2	
<i>Euryopis saukea</i> Levi 1951				1		1	H
<i>Faiditus cancellatus</i> (Hentz 1850)	1	P	1			2	
<i>Keijia alabamensis</i> Gertsch & Archer 1942	1	1	1	1	P	4	
<i>Keijia antoni</i> Keyserling 1884	1	P	1			2	
<i>Keijia punctosparsa</i> Emerton 1882	1	1	1	1	1	5	
<i>Lasaeola prona</i> (Menge 1868)	1					1	H
<i>Latrodectus mactans</i> (Fabricius 1775)	1	1	1	P	1	4	
<i>Latrodectus variolus</i> Walckenaer 1837	1	1	1	1	1	5	
<i>Neospintharus trigonum</i> (Hentz 1850)	1	1	1	1	1	5	
<i>Pholcomma hirsutum</i> Emerton 1882	1	1	1	1	P	4	
<i>Phoroncidia americana</i> (Emerton 1882)	1	1	1	P	1	4	
<i>Rhomphaea fictilium</i> (Hentz 1850)	1	P	1			2	
<i>Robertus banksi</i> (Kaston 1946)				1		1	
<i>Robertus borealis</i> (Kaston 1946)					1	1	
<i>Robertus eremophilus</i> (Chamberlin in Chamberlin & Gertsch 1928)	1			1		2	
<i>Robertus frontatus</i> (Banks 1892)	1	P	1			2	
<i>Robertus fuscus</i> (Emerton 1894)				1	1	2	
<i>Robertus laticeps</i> (Keyserling 1884)	1	P	P	1	1	3	
<i>Robertus longipalpus</i> (Kaston 1946)	1			1		2	
<i>Robertus pumilis</i> (Emerton 1909)		1				1	
<i>Robertus riparius</i> (Keyserling 1886)	1	1	1	1	1	5	
<i>Robertus similis</i> (Kaston 1946)					1	1	
<i>Robertus spinifer</i> (Emerton 1909)				1	1	2	
<i>Rugathodes aurantius</i> (Emerton 1915)				1	1	2	H
<i>Rugathodes sexpunctatus</i> (Emerton 1882)	P	P	1	1	1	3	
<i>Spintharus flavidus</i> Hentz 1850	1	P	1			2	
<i>Steatoda albomaculata</i> (DeGeer 1778)	1	1	1	1	1	5	C
<i>Steatoda americana</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Steatoda borealis</i> (Hentz 1850)	1	1	1	1	1	5	
<i>Steatoda grossa</i> (C. L. Koch 1838)		1	1			2	C
<i>Steatoda triangulosa</i> (Walckenaer 1802)	1	1	1	1	1	5	C
<i>Stemmops ornatus</i> (Bryant 1933)	1	P	1			2	
<i>Takayus lyricus</i> (Walckenaer 1842)	1	1	1	1	1	5	H
<i>Theonoe stridula</i> Crosby 1906				1	1	2	
<i>Theridion albidum</i> Banks 1895	1	1	1	1	1	5	
<i>Theridion cheimatos</i> Gertsch & Archer 1942			1			1	
<i>Theridion differens</i> Emerton 1882	1	1	1	1	1	5	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Theridion dividuum</i> Gertsch & Archer 1942				1		1	
<i>Theridion flavonotatum</i> Becker 1879	1	P	1			2	
<i>Theridion frondeum</i> Hentz 1850	1	1	1	1	1	5	
<i>Theridion glaucescens</i> Becker 1879	1	1	1	1	1	5	
<i>Theridion hemerobium</i> (Simon 1914)	1	P	1	1	1	4	
<i>Theridion llano</i> Levi 1957	1					1	
<i>Theridion montanum</i> Emerton 1882					1	1	
<i>Theridion murarium</i> Emerton 1882	1	1	1	1	1	5	
<i>Theridion neshamini</i> Levi 1957	1	P	1			2	
<i>Theridion pennsylvanicum</i> Emerton 1913	1	1	1			3	
<i>Theridion petraeum</i> L. Koch 1872					1	1	H
<i>Theridion pictipes</i> Keyserling 1884	1	P	1			2	
<i>Theridion pictum</i> (Walckenaer 1802)	1	1	P	1	1	4	H
<i>Theridion rabuni</i> Chamberlin & Ivie 1944	1					1	
<i>Theridula emertoni</i> Levi 1954	1	P	1	1	1	4	
<i>Theridula opulenta</i> (Walckenaer 1842)	1	1	1	P	1	4	C
<i>Thymoites marxi</i> (Crosby 1906)			1			1	
<i>Thymoites pallidus</i> (Emerton 1913)	1	1				2	
<i>Thymoites unimaculatus</i> (Emerton 1882)	1	1	1	1	1	5	
<i>Wamba crispulus</i> (Simon 1895)	1	P	1			2	
Theridiosomatidae							
<i>Theridiosoma gemmosum</i> L. Koch 1877	1	1	1	1	1	5	
Thomisidae							
<i>Bassaniana floridana</i> Banks 1896			1			1	
<i>Bassaniana utahensis</i> (Gertsch 1932)	1	P			1	2	
<i>Bassaniana versicolor</i> (Keyserling 1880)	1	1	1	1	1	5	
<i>Misumena vatia</i> (Clerck 1757)	1	1	1	1	1	5	H
<i>Misumenoides formosipes</i> (Walckenaer 1837)	1	1	1	1	1	5	
<i>Misumenops asperatus</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Misumenops celer</i> (Hentz 1847)	1	P	1	P	1	3	
<i>Misumenops oblongus</i> (Keyserling 1880)	1	1	1	1	1	5	
<i>Ozyptila americana</i> Banks 1895	1	1	1	1	1	5	
<i>Ozyptila conspurcata</i> Thorell 1877	1	1	P	1	1	4	
<i>Ozyptila creola</i> Gertsch 1953			1			1	
<i>Ozyptila curvata</i> Dondale & Redner 1975			1			1	
<i>Ozyptila distans</i> Dondale & Redner 1975					1	1	
<i>Ozyptila georgiana</i> Keyserling 1880	1	P			1	2	
<i>Ozyptila modesta</i> (Scheffer 1904)	P	P	1	1	P	2	
<i>Ozyptila monroensis</i> Keyserling 1884	1	1	1	1	1	5	
<i>Synema parvulum</i> (Hentz 1847)	1	1	1			3	
<i>Tmarus angulatus</i> (Walckenaer 1837)	1	1	1	1	1	5	
<i>Tmarus minutus</i> Banks 1904			1			1	
<i>Tmarus rubromaculatus</i> Keyserling 1880		1				1	
<i>Xysticus alboniger</i> Turnbull, Dondale & Redner 1965	1	P	1	P	1	3	
<i>Xysticus ampullatus</i> Turnbull, Dondale & Redner 1965				1	1	2	
<i>Xysticus auctificus</i> Keyserling 1880	1	1	1	1	1	5	
<i>Xysticus banksi</i> Bryant 1933	1	1	P	P	1	3	
<i>Xysticus bicuspis</i> Keyserling 1887	1	1	1	1	1	5	
<i>Xysticus canadensis</i> Gertsch 1934					1	1	
<i>Xysticus chippewa</i> Gertsch 1953					1	1	H
<i>Xysticus cunctator</i> Thorell 1877	1					1	
<i>Xysticus discursans</i> Keyserling 1880	1	1	1	1	1	5	

Table 8.—Continued.

Species	IL	IN	OH	WI	MI	S	D
<i>Xysticus elegans</i> Keyserling 1880	1	1	1	1	1	5	
<i>Xysticus ellipticus</i> Turnbull, Dondale & Redner 1965					1	1	
<i>Xysticus emertoni</i> Keyserling 1880	1	P	1	1	1	4	
<i>Xysticus ferox</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Xysticus fervidus</i> Gertsch 1953	1					1	
<i>Xysticus fraternus</i> Banks 1895	1	1	1	1	1	5	
<i>Xysticus funestus</i> Keyserling 1880	1	1	1	1	1	5	
<i>Xysticus gulosus</i> Keyserling 1880	1	1	1	1	1	5	
<i>Xysticus luctans</i> (C. L. Koch 1845)	1	1	1	1	1	5	
<i>Xysticus luctuosus</i> (Blackwall 1836)				1	1	2	H
<i>Xysticus nevadensis</i> (Keyserling 1880)				1		1	
<i>Xysticus pallax</i> O. P.-Cambridge 1894	1	P	1	1	1	4	
<i>Xysticus posti</i> Sauer 1968					1	1	
<i>Xysticus punctatus</i> Keyserling 1880				1	1	2	
<i>Xysticus texanus</i> Banks 1904	1	1				2	
<i>Xysticus triguttatus</i> Keyserling 1880	1	1	1	1	1	5	
Titanocidae							
<i>Titanoeca americana</i> Emerton 1888	1	1	1	1	1	5	
<i>Titanoeca brunnea</i> Emerton 1888	1	1	1			3	
Uloboridae							
<i>Hyptiotes cavatus</i> (Hentz 1847)	1	1	1	1	1	5	
<i>Octonoba sinensis</i> (Simon 1880)	1	1	1			3	
<i>Uloborus glomus</i> (Walckenaer 1842)	1	1	1	1	1	5	
Zoridae							
<i>Zora pumila</i> (Hentz 1850)	1	1	1			3	
Total	646	383	571	479	583		

lished populations occur in southern Wisconsin, Illinois, Indiana, and Ohio, but the species has apparently not yet been collected in Michigan. Both the Field Museum in Illinois and the Milwaukee Public Museum in Wisconsin house voucher specimens.

Three non-native gnaphosid species, *Trachyzelotes lyonneti* (Audouin), *Urozelotes rusticus* (L. Koch), and *Zelotes subterraneus* C. L. Koch have been reported from one or more of the five Great Lakes states. In their revision of *Trachyzelotes* and *Urozelotes*, Platnick & Murphy (1984) examined only one female specimen of *T. lyonneti* from the five-state region; this specimen was taken from under a rock in a backyard in Alton, Madison County, Illinois. The species is not a synanthropic/cosmopolitan species and appears to be more tolerant of drier conditions than *U. rusticus*. Until additional specimens are discovered, the species' establishment in Illinois is doubtful; we have removed the species on our updated species list (Table 8, Appendix I, see Appen-

dix II). *Urozelotes rusticus* is considered a cosmopolitan species and reported from Wisconsin, Illinois, and Ohio. Platnick and Murphy (1984) examined material from both Wisconsin and Illinois but since that time, the species appears to have become established in Ohio as well. The Palearctic species *Zelotes subterraneus* is reported from all five states. However, Platnick & Shadab (1983) removed *Z. fratris* Chamberlin from the synonymy of *Z. subterraneus* and stated that the species was often misidentified as *Z. subterraneus* because of their similarity. The native species is very widely distributed in the USA except in the southeast and south-central parts of the country; it is known from the northern parts of Illinois, Indiana, and Ohio and is widely distributed in Wisconsin and Michigan. It is very unlikely that *Z. subterraneus* occurs in North America; and that, instead, its multiple listings were the result of misidentifications. It is not included on our updated list.

Eight Palearctic or European linyphiid spe-

cies were recorded from the five-state region. Five of these species were reported only from Michigan: *Agyreta cauta* (O.P.-Cambridge), *Bathyphantes nigrinus* (Westring), *Centromerus serratus* (O.P.-Cambridge), *Pityohyphantes phrygianus* (C.L. Koch), and *Walckenaeria acuminata* Blackwall. Voucher specimens of four of these species are in the Michigan State University Entomology Collection: *B. nigrinus*, *C. serratus*, *P. phrygianus*, *W. acuminata*. Since there are no voucher specimens of *A. cauta*, we regard the record as a misidentification. Records and voucher specimen(s) of *C. serratus* and *W. acuminata* are from only one locality each and voucher specimen(s) of *B. nigrinus* from only one locality; the *Walckenaeria acuminata* specimen was actually from Europe and inadvertently listed by Snider (1991) (Snider pers. comm.). If specimens attributed to *B. nigrinus* and *C. serratus* were even identified correctly, it is highly unlikely that they have become established; no other specimens have surfaced since Snider's publication. Consequently, we removed these latter three species and *A. cauta* from the Great Lakes species list. Snider (1991) lists several localities for *Pityohyphantes phrygianus* but does not list *P. costatus* (Hentz), which has been consistently misidentified as *P. phrygianus*. We treat the records of *P. phrygianus* as records of *P. costatus* in Table 8 and Appendix I.

The Palearctic species *Gonatium rubens* Blackwall has been recorded from Wisconsin, Illinois, and Michigan. Millidge (1981), however, stated that all North American specimens labeled '*G. rubens*' in the American Museum of Natural History were, without exception, specimens of *G. crassipalpus* Bryant. This endemic species is widely distributed on the North American continent except in the extreme southern parts. In our region of concern, the latter species has been recorded from only Illinois and Ohio. It seems a reasonable assumption that the *G. rubens* specimens from the three states were probably misidentified and that the species does not occur in North America. We removed *G. rubens* from Table 8 and Appendix I and attribute its records to *G. crassipalpus*. A similar case of misidentification applies to Great Lakes records of *Pocadicnemis pumila* (Blackwall). The species was formerly widely reported in eastern North America, but Millidge (1975) demon-

strated that two closely related species, *P. americana* Millidge and *P. occidentalis* Millidge were confused with *P. pumila*. Millidge only found one *bona fide* *P. pumila* record from northeastern North America. Wisconsin and Michigan records of *P. pumila* before 1975 are suspect, and here we consider them to be records of *P. americana*. Unless new specimens are collected, we do not consider that it occurs in our region.

*Eperigone fradeorum* (Berland) is considered a cosmopolitan species; its origin is unknown. In his revision of *Eperigone*, Millidge (1987) suggested that the species "may" be endemic to the eastern seaboard (particularly Florida). He further stated that *E. fradeorum* has undergone widespread dispersal, at least partially through the agency of human travel. It appears that the species has become established in the southern portion of Illinois but has not been recorded yet in Indiana or Ohio. *Maso gallicus* Simon (Europe to Azerbaijan) and *Stemonyphantes lineatus* (Linnaeus) (Palearctic) are recorded from Wisconsin, the latter also from Michigan. There are no voucher specimens of the former species and no additional reports of the species since its listing by Levi et al. (1958). It was long believed that the American species, *S. blauveltae* Gertsch, was the same as the Palearctic species *S. lineatus*; and specimens of the former species have repeatedly been misidentified as *S. lineatus*. The Wisconsin and Michigan records of *S. lineatus* are regarded as misidentifications. *Maso gallicus* and *S. lineatus* are, consequently, removed from our updated species list (see Appendix II).

The Palearctic lycosid species, *Arctosa cinerea* (Fabricius), was recorded in 10 regions, all of which are in the state of Michigan. However, prior to 1976 (Roth & Brown 1976) when *A. littoralis* (Hentz) was removed from the synonymy of *A. cinerea*, specimens of the former species were generally misidentified as *A. cinerea*. On the Michigan list (Snider 1991) localities for both species are identical with the exception of one additional Chickering record (year not provided) of *A. cinerea* from Cheboygan County. Furthermore, voucher specimens are indicated for all *A. littoralis* localities but are lacking for the identical *A. cinerea* localities. In light of the above, we consider the records of the Palearctic species *A.*

*cinerea* to be instead, duplicate records of *A. littoralis*.

*Ero furcata* (Villers), the Palearctic mimitid species, was recorded from all five Great Lakes states. However, Kaston (1977) realized that our species was different from the Palearctic species and removed *E. leonina* (Hentz) from the synonymy of *E. furcata* with which it had been confused for so long. The native *E. leonina* is only recorded in our region from Wisconsin and Michigan. Snider (1991) commented that the Michigan record of the Palearctic species was a misidentification and referred to Kaston (1981). Therefore, we consider the records of the Palearctic species *E. furcata* as misidentifications and note that the native species occurs in all five states.

The miturgid *Cheiracanthium mildei* is listed in Platnick (2005) as Holarctic, but it is a Mediterranean native. It has spread throughout most of the eastern United States since it was first found there in 1949 (Bryant 1951), and is recorded from Illinois, Ohio, and Wisconsin in our region.

The nestigid, *Eidmannella pallida* (Emerton) is a cosmopolitan species known from Wisconsin, Illinois, Indiana (Gertsch 1984), and Ohio. Reports from the four states indicate that the species is well established. The species is known also from other northern localities in New Jersey, Massachusetts, Oregon, and Ontario, Canada. Two cosmopolitan species of the family Oecobiidae, *Oecobius cellariorum* (Dugès) and *O. navus* Blackwall are recorded from Ohio; the former species is also known from Illinois. Both species are believed to be established but appear to be restricted to indoor habitats. In the more southern regions, both species can be found both in and outside of buildings.

Records for the Palearctic philodromid species *Philodromus aureolus* (Clerck) include Illinois, Wisconsin, and Michigan. However, Dondale (1961) elevated *P. cespiticolis* Walckenaer from a subspecies of *P. aureolus*. In his publication, *P. aureolus*, referred to by Levi & Field (1954) and by Chickering (1940), was synonymized with *P. cespiticolis*, which was later placed in the synonymy of *P. cespitum* (Walckenaer) (Dondale & Redner 1976). LaSar & Unzicker (1978) listed the Palearctic species as also occurring in Illinois but there are no voucher specimens. There-

fore, we regard the records of *P. aureolus* from the three states as misidentifications.

Two pholcid species, *Pholcus phalangioides* (Fuesslin) and *Spermophora senoculata* (Dugès), are recorded from the Great Lakes region; both species have apparently been introduced into the Great Lakes states. Considered a cosmopolitan species, *P. phalangioides* occurs in all five states and, throughout its range in this region, has become well established, primarily in houses and other buildings. Populations also occur in several additional northern states. *Spermophora senoculata* (Dugès) has been found in all of the Great Lakes states except Michigan. This species is listed by Platnick (2005) as Holarctic. However, it appears that within the Great Lakes region, the species has a strictly anthropochorous distribution, residing in or on houses and other buildings, and is assumed to be introduced (Huber 2000).

The Palearctic jumping spider *Evarcha falcata* (Clerck) was listed as occurring only in Michigan (Snider 1991). Because of the close similarity of *E. hoyi* and *E. falcata* and the fact that there are no voucher specimens for the Ohio record of *E. falcata*, we consider the listing of this Palearctic species as a misidentification. *Hasarius adansoni* (Audouin) is an introduced synanthropic species with known populations in several northern states including Wisconsin, Illinois, Indiana, New York, and Massachusetts (Cutler 1990). *Myrmarchne formicaria* (DeGeer) is a Palearctic species that was recorded in Ohio alone among the Great Lakes states. To our knowledge, this has been the only record of the species from the USA; and there are apparently no voucher specimens verifying the Ohio record. Therefore, we consider *M. formicaria* a doubtful record, but maintain this species for the time being as a member of the Great Lakes fauna. The Palearctic salticid species, *Phlegra fasciata* (Hahn) was recorded from Wisconsin and Michigan. However, Chickering's (1944) specimens of *P. hentzi* from Michigan were misidentified as *P. fasciata*, as were Levi & Field's (1954) specimens from Wisconsin (see Platnick 2005). The latter authors referred to *P. fasciata* as "leopard spider", *Attus leopardus* Hentz, a synonym of *P. hentzi*. *Phlegra hentzi* (Marx) was removed from the synonymy of *P. fasciata* by Logunov & Koponen (2002). We list *Phlegra hentzi* as a Midwest



spider species and removed *Phlegra fasciata* from the Midwest spider list. *Sitticus fasciger* (Simon), possibly of Asian origin, is established in Quebec, Canada and in several states in the USA, including Wisconsin and Illinois. Platnick (2005) lists the species as occurring in Russia, China, Korea, Japan, and USA. The Zebra Jumping Spider, *Salticus scenicus* (Clerck) is listed as Holarctic in Platnick (2005), but is also apparently introduced to North America (Gertsch 1949). It is now recorded from all five states in our region.

The sicariid species, *Loxosceles rufescens* (DuFour) is considered a cosmopolitan species, and its occurrence in the USA is strictly confined to buildings (R. Vetter, pers. communication). Within the Great Lakes region, the species appears to be established in the Argus Building on the University of Michigan campus, in at least one building in the Cincinnati region of Ohio, and was collected in 2002 by the senior author in basements of buildings in downtown Chicago.

*Meta menardi* (Latreille), a Eurasian tetragnathid species, is reported from all Great Lakes states except Michigan. However, Marusik & Koponen (1992) recognized that within the Holarctic distribution of *M. menardi* there were three allopatric species involved, one of which occurred in North America, *M. americana* Marusik & Koponen, which Dondale (1995) synonymized with *M. ovalis* (Gertsch 1933). Consequently, the *M. menardi* records in Wisconsin, Illinois, Indiana, and Ohio were actually records of *M. ovalis* and are treated in our tables as such.

Seven introduced species in the family Theridiidae are well established in two or more of the five Great Lakes states. Three of the seven species are in the genus *Steatoda*: *S. albomaculata* (De Geer), *S. grossa* (C. L. Koch), and *S. triangulosa* (Walckenaer). *Steatoda albomaculata* and *S. triangulosa* occur in all five states, *S. grossa* is found only in Indiana and Ohio. *Achaearanea tepidariorum* (C. L. Koch) and *Theridula opulenta* (Walckenaer) are also prevalent in four of the five states (Levi & Field 1954; see discussion below under *Theridula emertoni*). *Enoplognatha ovata* (Clerck) is listed as Holarctic in Platnick (2005), but is apparently introduced to North America from Europe, as suggested by Levi (1957). Further evidence of recent introduction is that the distribution map for the

species in Levi (1957) showed only four records for eastern North America, and none from our five-state region. Today, *E. ovata* is one of the most abundant species in the understory of deciduous woods throughout our region (M. Draney, pers. obs.). In light of this recent and dramatic expansion, its status as introduced is all but confirmed. Finally, *Achaearanea tabulata* Levi is also listed as Holarctic in Platnick (2005), but Dondale et al. (1994) consider it to be introduced. It is now recorded from Illinois as well as Ontario.

The 25 species that were removed from our five-state species list, either because the taxon had not become established (i.e., *Heteropoda venatoria*), or were misidentified (i.e., *Philodromus aureolus*), or constitute doubtful records (i.e., *Centromerus serratus*) are listed in our Spider Species Name Concordance Table (Appendix II).

*Native species misidentifications:* In light of the taxonomic advances within the past quarter century, misidentifications are often discovered when reviewing some of the older literature. Three particular species that were listed in the Great Lakes states are in question: *Crustulina guttata*, *Euryopsis californicus*, and *Uloborus glomosus*. *Crustulina altera* was not described until 1942, and Chickering obviously recognized the difference between the species he called *guttata* in 1933 and the one he recorded as *sticta* in 1935. The abdominal colorations of *altera* and *guttata* are more alike than those of *guttata* and *sticta* (T.P. personal observation in California). By process of elimination we believe that the Chickering specimens identified as *C. guttata* were *C. altera*.

The species that Levi & Field referred to as *Euryopsis californica* was, with little doubt, *E. pepini*. The Levi & Field publication was dated April 1954 and the Levi revision of *Euryopsis* came out in June 1954. *Euryopsis pepini* (Pepin County, Wisconsin) was described in the June issue and, of course, was not listed in Levi & Field 1954. Pepin was one of the same localities that Levi & Field stipulated for *E. californica*; also in *E. pepini* the conductor of the palp has an elbow as in *californica*, which was mentioned in the Levi & Field publication. Therefore we attribute the Wisconsin specimens of this species to *E. pepini*. Levi & Field (1954) listed *Theridula sphaerula* (now considered a synonym of the cos-

mopolitan *Theridula opulenta*, see above) as a member of the Wisconsin spider fauna, but identified these specimens as the native *Theridula emertoni* Levi 1954 in a later publication (Levi et al. 1958).

The salticid *Habronattus agilis*, reported by several sources for four of the five states (see Table 8 and Appendix I), represents a possible misidentification for *H. cognatus* (pers. communication B. Cutler). According to Griswold (1987), *H. agilis* is restricted to the eastern seaboard of the U.S. The records of *Pelegrina montana* reported from the Milwaukee Public Museum and by Chickering for Michigan may represent misidentifications of *P. insignis* (B. Cutler, pers. communication). The distribution for this species given by Maddison (1996) supports this assumption. *Uloborus glomus* is the name that supplanted *U. americanus*, an unavailable name according to the rules of the ICZN; Muma & Gertsch (1964) were fairly clear on this issue in their publication.

#### DISCUSSION

The known spider fauna of the Great Lakes States includes 2.4% of the 38,834 known species worldwide, and 7.9% of the 3593 genera (Platnick 2005). This may seem like a tiny fraction of the world fauna unless the region's land area is taken into account: The Great Lakes states make up only about 0.5% of the world's ice-free land area. The region is actually quite diverse considering its latitude, topography and glaciation history.

Although we here report that only about 3% of the established species in the region are exotic species, we are certain this represents an underestimate of the total proportion of introduced species. Many taxa are insufficiently well known, in terms of their ecology, distribution, and systematics, to be able to evaluate their biogeographic origins with any certainty, and many simply have not been evaluated at all. Arachnological faunistic works have traditionally given scant attention to biogeographic origin, a situation which will hopefully change as arachnologists come to appreciate the critical importance of the native/non-native distinction in conservation contexts, as well as in understanding the ecology and evolution of these animals.

The known spider fauna varies among the Great Lakes states. These differences can be attributed to several environmental factors,

such as climate, habitats and the varying extent of undisturbed habitats. Such factors affect the actual spider fauna present in any region at a particular point in time. Climate changes, and more recently, various and extensive habitat alterations through human activity cause faunal changes. Unfortunately, we can neither observe nor measure faunal changes, because our current lists of 'known' spider species records are not complete. Instead they reflect the varying degree of past and ongoing faunistic work in the Midwest states. Especially the low documented diversity of the Indiana spider fauna appears to be attributable to lack of collecting and research effort, as this fact has been documented in numerous faunal studies (Palmer et al. 2002). Our results above demonstrate clearly the impact of past research efforts by individual arachnologists such as Chickering for Michigan, Levi for Wisconsin and Beatty for Illinois. Ongoing faunistic studies are still being supported by a few individuals, such as Draney and Bradley for Wisconsin and Ohio.

However imperfect our current spider species lists may be, these lists are the starting point of biodiversity, biogeography, systematic and evolutionary research. In fact the generation of such species lists, taxonomically updated and available online, is demanded as an essential global resource (Knapp et al. 2005) by a variety of end-users, such as environmental agencies, governmental bodies and researchers far beyond the taxon-specialist (Steenkamp & Smith 2003). Perfecting and updating such legacy species lists is of central importance for their utility and several recent studies suggest a holistic approach, incorporating a variety of different data sources for the improvement of species lists. Current species lists and species gaps (such as we defined above) guide sampling efforts in under-sampled habitats or regions (Palmer et al. 2002). Disparate data sets from different types of surveys can be combined (Crosier & Stohlgren 2004). Bieler & Mikkelsen (2004, see above) demonstrated the value of critically analyzing grey literature, such as governmental technical reports and amateur lists, in combination with focused field work and mining museum collections.

For invertebrates and especially for arthropods, natural history collections represent a vast, yet largely untapped biodiversity infor-

mation source, as it is now widely recognized e.g., by NSF initiatives such as LINNE (<http://www.flmnh.ufl.edu/linne/news.htm>). Whereas vertebrate collections, and to a certain degree mollusk collections are computerized, terrestrial arthropod collections lag far behind, mainly due to the sheer number of specimens in these collections. Data models and database development have come a long way (e.g., BIOTA, Ke-EMu [<http://www.kesoftware.com/emu/>], Specify and others). However, the main hurdle remains the enormous and as of yet unfunded task of data entry. In numerous taxon groups, we may not even know where the specimen collections are housed, e.g., see Sierwald & Reft 2004. The U.S. spider fauna is a case in point; specimens are housed in various U.S. collections, but tracing the U.S. spider fauna of a particular region is almost impossible, since none of the U.S. spider collections are computerized.

We attempted to locate spider collections containing a significant proportion of species from the Great Lakes Region. The following collections are likely to harbor at least some Midwest spider material: Field Museum of Natural History, Chicago (curator Petra Sierwald); Milwaukee Public Museum, Milwaukee (curator Joan Jass); Illinois Natural History Survey (collection manager C. Farvet); Illinois State Museum (curator E.D. Cashatt); Purdue University, Entomology Dept. (curator Arwin Provonsha); Earlham College (Leslie Bishop); Emporia State University, Emporia, KS (curator John Richard); Snow Entomological Museum, University of Kansas (collection manager Z.H. Falin); Ball State University (Gary Dodson); Entomology Museum of Michigan State University (about 5500 lots, adjunct professor Dr. R. J. Snider). Chickerling's collection of Michigan spiders was deposited at the Museum of Comparative Zoology at Harvard. The University of Michigan Museum of Zoology does not contain a substantial spider collection. H.K. Wallace made a list of spiders from the George Reserve of Michigan University, but there are no voucher specimens from this study. The majority of the University of Michigan Museum's spider collection was transferred to the Florida State Collection of Arthropods, Gainesville (*vide* N. I. Platnick). Private collections: J. A. Beatty (Carbondale, Southern Illinois University); J. L. Kaspar (Oshkosh, Wisconsin); R.A. Brad-

ley (The Ohio State University, Marion Campus); M.L. Draney (University of Wisconsin-Green Bay).

In the near future, we will continue to maintain the database and concordance table online and include documented changes submitted by users. Ultimately, this database will become more useful in more varied contexts by its planned expansion along several axes. First, species will continue to be added as we capture the remaining legacy data from published spider species lists, and as identification of newly collected and museum specimens proceeds. Clearly, we have recorded only a fraction (albeit probably a substantial fraction) of the species that occur in each of these states. Secondly, our existing database framework can be extended to adjacent states in our region, and eventually may come to encompass much or all of North America. Lastly, we plan to improve the spatial resolution of much of the data. Almost all of our data can be tracked to county level, and its input into the database can provide much finer spatial information about spider distribution across the region. The centroid location of each county can be used as a location index for many biogeographic purposes. Additionally, many of the more recent records have latitude and longitude data attached (or can be geo-referenced post-hoc with a fair degree of accuracy). Fine-scale location data on at least a subset of the recorded records can be used to address landscape-scale questions about entire assemblages of organisms. Extensive regional-scale spatial data on the complete complement of a region's species has never existed for spiders. We want to make such data publicly accessible because the potential applications of such a dataset are limited only by the imaginations of researchers.

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list of the entire Midwest spider collection at the Survey available to us. Dr. Richard Bradley kindly permitted us to use his spider species data from Ohio. Clearly, such efforts as the one presented above depend heavily on the work of others and the collaboration between taxonomists. Dr. R. Waltz (State Entomologist, Division of Entomology & Plant Pathology, Indianapolis), Dr. Gail Stratton (University of Mississippi, Mississippi), Dr. D. H. Cameron (University of Michigan, Ann Arbor), L. Leibensperger (Museum of Comparative Zoology, Harvard University) and Dr. James Berry assisted us in locating spider collections harboring Midwest spiders. The Cook County Oak Savannah survey 1996–1999 was organized through the Environmental and Conservation Program (ECP) at the Field Museum of Natural History, and funded through grants by the Illinois Department of Natural Resources (administered through the Chicago Wilderness Coalition), with collecting permits issued by the Illinois Nature Preserves Commission and the Cook County Forest Preserve District. Reviews by Drs. B. Cutler and C. D. Dondale greatly improved the manuscript.

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## APPENDIX I

Literature sources and vouchers for spider species records of the five state region. S = lists the literature sources for the record, V = indicates a vouchered specimen in the Field Museum of Natural History (FMNH), the Milwaukee Public Museum (MPM), the Illinois State Museum (ISM), and the collection of the Illinois Natural History Survey (INHSC). The literature codes (e.g., BEA, Brad, c33, etc.) are given in 'Literature Cited.'

Species	Illinois		Indiana		Ohio		Wisconsin		Michigan		Michigan
	S	V	S	V	S	V	S	V	S	V	V
<i>Agelenidae</i>											
<i>Agelenopsis emertoni</i>	B&N; BEA; INHSD			Brad			BJK	MPM		DR67; sni	
<i>Agelenopsis kastoni</i>	B&N; BEA; INHSD; L&U	INHSC		Brad							
<i>Agelenopsis naevia</i>	KBJ; BEA; INHSD	ISM, INHSC	BEA	Brad			L&F	MPM		c32; sni	
<i>Agelenopsis oklahoma</i>	KBJ; BEA; INHSD	FMNH, ISM	BEA	Brad			L&F L&F			DR67; sni	INHSC
<i>Agelenopsis pennsylvanica</i>	KBJ; BEA; INHSD	FMNH, ISM, INHSC					L&F	MPM		DR67; sni	
<i>Agelenopsis potteri</i>	KBJ; BEA; INHSD		BEA	Brad			L&F; BJK	MPM		DR67; sni; bbs	
<i>Agelenopsis utahana</i>	KBJ; BEA; INHSD						L&F	MPM		c34; sni	
<i>Tegenaria domestica</i>	KBJ; BEA; INHSD	INHSC; ISM	BEA	Brad			L&F	MPM			
<i>Amaurobiidae</i>											
<i>Amaurobius borealis</i>							L&F; LLK			c34; DR67; sni	
<i>Amaurobius ferox</i>	KBJ; BEA; INHSD		BEA	Brad				MPM		c35; sni	
<i>Callobius bennetti</i>	KBJ; BEA; INHSD		BEA	Brad			L&F			c32; DR67; sni; bbs	
<i>Coras juvenilis</i>	KBJ; BEA; INHSD		BEA	Brad						c32; c33; sni; bbs	
<i>Coras lamellosus</i>	KBJ; BEA; INHSD	FMNH	BEA	Brad			L&F	MPM		sni	MPM
<i>Coras medicinalis</i>	KBJ; BEA; INHSD	ISM	BEA	Brad						c&b; sni	



## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Coras montanus</i>				Brad		L&F		c33; DR67; sni	
<i>Coras taugynus</i>	B&N; BEA; INHSD								
<i>Cybaeopsis tibialis</i>				Brad				sni	
<i>Wadotes calcaratus</i>	KBJ; BEA; INHSD	FMNH	BEA	Brad Brad	MPM	L&F		c33; DR67; sni; bbs c&b; sni sni	
<i>Wadotes hybridus</i>			BEA	Brad	MPM				
<i>Wadotes tennesseensis</i>									
Antrodiaetidae									
<i>Antrodiaetus robustus</i>				Brad					
<i>Antrodiaetus unicolor</i>	B&N; BEA; INHSD			Brad					
<i>Atypoides hadros</i>	B&N; BEA; INHSD								
Anyphaenidae									
<i>Anyphaena celer</i>	B&N; BEA; INHSD	FMNH	BEA	Brad		L&F; LLK; DRD		c35; c39; sni; DRD	
<i>Anyphaena fraternata</i>	MBC; BEA; INHSD	FMNH, ISM	BEA	Brad					
<i>Anyphaena maculata</i>	B&N; BEA; INHSD	FMNH							
<i>Anyphaena pectorosa</i>	KBJ; BEA; L&U; BEA; INHSD; L&U	FMNH, MPM, ISM	BEA	Brad		L&F	MPM	c35; c39; sni; DRD SNA	
<i>Arachosia cubanum</i>	L&U; BEA; INHSD; L&U			Brad					
<i>Hibana cambridgei</i>	BEA			Brad					
<i>Hibana gracilis</i>	KBJ; BEA; INHSD; L&U	FMNH, ISM	BEA	Brad		L&F		c&b; c35; c39; DRD	
<i>Wulfilta albens</i>	B&N; BEA; INHSD								
<i>Wulfilta saltabundus</i>	KBJ; BEA; INHSD; L&U	FMNH, INHSC, ISM	BEA	Brad		R&R; DRD	MPM	DRE; sni; DRD	

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
Araneidae									
<i>Acacesia hamata</i>	KBJ; BEA; INHSD	ISM, INHSC	BEA	Brad				DRD	
<i>Acanthepeira cherokee</i>	B&N; BEA; INHSD								
<i>Acanthepeira marion</i>	B&N; BEA; INHSD								
<i>Acanthepeira stellata</i>	KBJ; BEA; INHSD; L&U	ISM, INHSC	BEA	Brad		L&F; BJK	MPM	DR67; sni	
<i>Araneus alboventris</i>				Brad					
<i>Araneus bicentenarius</i>	B&N; BEA; INHSD		BEA	Brad		LLK		DRPL	
<i>Araneus bonsallae</i>									
<i>Araneus cavaticus</i>	B&N; BEA; INHSD	FMNH		Brad			MPM	c32; sni	
<i>Araneus cingulatus</i>									
<i>Araneus corticarius</i>									
<i>Araneus diadematus</i>			BEA	Brad		L&F	MPM	c35; sni	
<i>Araneus gemmoides</i>	B&N; BEA; INHSD					L&F	MPM	DR67; sni	
<i>Araneus guttulatus</i>	B&N; BEA; INHSD; L&U					L&F; BJK	MPM		
<i>Araneus guttulatus</i>						L&F; LLK		DRPL	
<i>Araneus iviei</i>									MPM
<i>Araneus juniperi</i>	KBJ; BEA; INHSD			Brad				sni	
<i>Araneus marmoreus</i>	KBJ; BEA; INHSD	ISM, INHSC	BEA	Brad		L&F	MPM	c32; DR67; sni	
<i>Araneus miniatus</i>				Brad					
<i>Araneus niveus</i>	B&N; BEA; INHSD; MPM	MPM		Brad					
<i>Araneus nordmanni</i>				Brad		L&F		c33; DR67; sni	
<i>Araneus partitus</i>	B&N; BEA; INHSD			Brad					

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Araneus pegenia</i>	KBJ; BEA; INHSD		BEA	Brad				c33; sni	
<i>Araneus pratensis</i>	KBJ; BEA; INHSD	ISM, INHSC	BEA	Brad		L&F	MPM	c&b; sni	
<i>Araneus saevus</i>	KBJ; BEA; INHSD			Brad		L&F		DR67; sni	
<i>Araneus thaddeus</i>	KBJ; BEA; INHSD	ISM	BEA	Brad		L&F; LLK		c32; DR67; sni	
<i>Araneus trifolium</i>	KBJ; BEA; INHSD	ISM, INHSC	BEA	Brad		L&F; BJK	MPM	c33; DR67; sni	
<i>Araniella displicata</i>	KBJ; BEA; INHSD; L&U	FMNH, ISM, INHSC	BEA	Brad		L&F; R&R	MPM	DR67; sni	
<i>Argiope aurantia</i>	KBJ; BEA; INHSD	ISM, INHSC	BEA	Brad		L&F; BJK	MPM	c33; sni	
<i>Argiope trifasciata</i>	KBJ; BEA; INHSD; L&U	ISM, INHSC	BEA	Brad		L&F; BJK	MPM	c32; DR67; sni	
<i>Cercidia prominens</i>	KBJ; BEA; INHSD			Brad		L&F		c35; sni	
<i>Cyclosa conica</i>	KBJ; BEA; INHSD	INHSC		Brad		L&F; BJK	MPM	c32; DR67; sni	
<i>Cyclosa turbinata</i>	KBJ; BEA; INHSD	ISM, INHSC	BEA	Brad		L&F		sni	
<i>Eustala anastera</i>	KBJ; BEA; INHSD	FMNH, ISM	BEA	Brad		L&F		c32; DR67; sni	
<i>Eustala cepina</i>	BEA	FMNH	BEA	Brad		DRPL		sni	
<i>Eustala emertoni</i>	BEA	ISM, INHSC		Brad					
<i>Gea heptagon</i>	KBJ; BEA; INHSD			Brad					
<i>Hypsosinga funebris</i>	B&N; BEA; INHSD			Brad					
<i>Hypsosinga pygmaea</i>	KBJ; BEA; INHSD	ISM, INHSC	BEA	Brad		LLK; BJK		c32; sni	
<i>Hypsosinga rubens</i>	KBJ; BEA; INHSD		BEA	Brad				c32; sni	

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Larinia borealis</i>	KBJ; BEA; INHSD			Brad		L&F; LLK		c&b; DR67; sni	
<i>Larinia directa</i>				Brad					
<i>Larinioides cornutus</i>	KBJ; BEA; INHSD	FMNH, ISM	BEA	Brad		L&F	MPM	c32; DR67; sni	
<i>Larinioides patagiatus</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad		L&F	MPM	c32; DR67; sni	
<i>Larinioides scolopetarius</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad		DRPL	MPM	c&b; DR67; sni	
<i>Mangora gibberosa</i>	KBJ; BEA; INHSD	ISM, INHSC	BEA	Brad		L&F; BJK	MPM	c33; DR67; sni	
<i>Mangora maculata</i>	KBJ; BEA; INHSD	FMNH, ISM, INHSC	BEA	Brad				sni	
<i>Mangora placida</i>	KBJ; BEA; INHSD	FMNH, ISM, INHSC	BEA	Brad	INHSC	L&F; BJK	MPM	sni	
<i>Mastophora bisaccata</i>	B&N; BEA; INHSD		BEA	Brad				c35; sni	
<i>Mastophora cornigera</i>			BEA						
<i>Mastophora hutchinsoni</i>	KBJ; BEA; INHSD		DRPL	Brad					
<i>Mastophora phrynosoma</i>	B&N; BEA; INHSD								
<i>Metazygia calix</i>	B&N; BEA; INHSD	ISM, INHSC		Brad					
<i>Metepeira labyrinthea</i>	KBJ; BEA; INHSD	ISM	BEA	Brad		L&F		c32; sni	
<i>Metepeira palustris</i>									
<i>Micrathena gracilis</i>	BEA; INHSD	FMNH, ISM, INHSC	BEA	Brad		L&F L&F		sni	
<i>Micrathena mitrata</i>	KBJ; BEA; INHSD	ISM, INHSC	BEA	Brad		L&F	MPM		
<i>Micrathena sagittata</i>	KBJ; BEA; INHSD	ISM, INHSC	BEA	Brad		L&F	MPM	sni	MPM
<i>Neoscona arabesca</i>	KBJ; BEA; INHSD; L&U; MBC	ISM, INHSC	BEA	Brad		L&F; BJK	MPM	c32; DR67; sni	



## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Clubiona johnsoni</i>	KBJ; BEA; INHSD	FMNH, ISM, INHSC		Brad		BJK; R&R	MPM	DRD; sni	
<i>Clubiona kastoni</i>	B&N; BEA; INHSD	FMNH		Brad		L&F; LLK; BJK	MPM	DRD; sni; DRD	
<i>Clubiona kiowa</i>								DRE; DRD	
<i>Clubiona kulczynskii</i>	KBJ; BEA; INHSD	ISM	BEA	Brad		DRD; BJK	MPM	sni c&b; c39; sni; DRD	
<i>Clubiona maritima</i>		INHSC		Brad		L&F; LLK; DRD; BJK	MPM	c39; DR67; sni; DRD	
<i>Clubiona mixta</i>						L&F; DRD	MPM	c33; c39; DR67; sni	
<i>Clubiona moesta</i>	B&N; BEA; INHSD								
<i>Clubiona norvegica</i>		FMNH							
<i>Clubiona obesa</i>	KBJ; BEA; INHSD	FMNH, ISM, INHSC	BEA	Brad		L&F; DRD	MPM	c32; c39; DR67; sni; DRD	MPM
<i>Clubiona pikei</i>		INHSC		Brad					
<i>Clubiona pygmaea</i>	MBC; BEA; INHSD	FMNH	BEA	Brad		L&F		c39; sni; DRD	
<i>Clubiona quebecana</i>						DRD			
<i>Clubiona rileyi</i>			BEA						
<i>Clubiona riparia</i>	BEA; INHSD		BEA	Brad		L&F; BJK	MPM	c32; c34; c39; DR67; sni; DRD	
<i>Clubiona saltitans</i>	KBJ; BEA; INHSD								
<i>Clubiona spiralis</i>				Brad		LLK; DRD		c39; DR67;	
<i>Clubiona trivialis</i>								sni	
<i>Elaver excepta</i>	KBJ; BEA; INHSD	FMNH, ISM	BEA	Brad		L&F; DRD		c33; DR67; sni	
Corinnidae									
<i>Castianeira alata</i>	BEA								
<i>Castianeira amoena</i>	B&N; BEA; INHSD							c33; DR67; sni	

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Castianeira cingulata</i>	KBJ; BEA; INHSD	FMNH, INHSC	BEA	Brad		L&F; DRD	MPM	c32; c39; DR67; sni; bbs; DRD	
<i>Castianeira crocata</i>	B&N; BEA; INHSD		BEA						
<i>Castianeira descripta</i>	KBJ; BEA; INHSD; L&U	ISM, INHSC	BEA	Brad		L&F; DRD	MPM	c33; c39; DR67; sni; DRD	
<i>Castianeira gertschi</i>	MBC; BEA; INHSD	FMNH, INHSC		Brad				DRD; sni; DRD	
<i>Castianeira longipalpa</i>	KBJ; BEA; INHSD	FMNH, ISM, INHSC	BEA	Brad	MPM	L&F		c33; c39; sni; DRD	
<i>Castianeira trilineata</i>	KBJ; BEA; INHSD	FMNH	BEA	Brad	MPM	L&F; BJK; DRD	MPM	DRD; sni	
<i>Castianeira variata</i>	B&N; BEA; INHSD			Brad	MPM			sni	
<i>Meriola decepta</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad				DRD	
<i>Myrmecorypus lineatus</i>									
<i>Phrurolithus concisus</i>								sni	
<i>Phrurolithus emertoni</i>									
<i>Phrurolithus goodnighti</i>	KBJ; BEA; INHSD			Brad					
<i>Phrurolithus similis</i>	B&N, KBJ; BEA; INHSD		BEA					sni	
<i>Phruonellus formica</i>	KBJ; BEA; INHSD								
<i>Phruonellus formidabilis</i>									
<i>Phruotimpus alarius</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad	MPM	L&F; BJK; DRD		c39; sni c32; c39; DR67; sni; bbs	
<i>Phruotimpus borealis</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad	MPM	L&F; LLK; R&R		c39; DR67; sni; bbs	
<i>Phruotimpus certus</i>									
<i>Phruotimpus dulcineus</i>									
<i>Phruotimpus illudens</i>	B&N; BEA; INHSD	FMNH							

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Phrurotimpus minutus</i>	BEA; INHSD	INHSC	BEA	Brad		R&R			
<i>Scotinella britcheri</i>	B&N; BEA; INHSD		BEA	Brad					
<i>Scotinella brittoni</i>		FMNH		Brad				sni	
<i>Scotinella deleta</i>		FMNH							
<i>Scotinella divesta</i>		FMNH		Brad				sni	
<i>Scotinella fratrella</i>	BEA	FMNH		Brad		L&F; LLK; DRD			
<i>Scotinella madisonia</i>		FMNH		Brad		L&F; L&F; LLK			
<i>Scotinella manitou</i>									
<i>Scotinella minnetonka</i>	KBJ; BEA; INHSD	FMNH; INHSC		Brad				c33; sni	
<i>Scotinella pugnata</i>	KBJ; BEA; INHSD			Brad					
<i>Scotinella redempta</i>	KBJ; BEA; INHSD	FMNH; INHSC, ISM	BEA	Brad		L&F; DRD	MPM	c&b; c39; sni; DRD	
<i>Trachelas tranquilus</i>									
Ctenidae									
<i>Anahita punctulata</i>	B&N; BEA; INHSD		BEA	Brad					
Ctenizidae									
<i>Ummidia tuobita</i>	KBJ; BEA; INHSD								
Cybaeidae									
<i>Cybaeota calcarata</i>	B&N; BEA; INHSD			Brad				sni; c35	
<i>Cybaeus giganteus</i>									
Dictynidae									
<i>Argenna obesa</i>	B&N; BEA; INHSD; L&U BEA	FMNH, INHSC		Brad		L&F			
<i>Cicurina arcuata</i>		FMNH, INHSC	BEA	Brad	MPM	L&F; LLK		c35; DR67; sni	
<i>Cicurina brevis</i>	INHSD	FMNH, ISM, INHSC	BEA	Brad		L&F		c34; DR67; sni	





## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Emblyna cruciata</i>	B&N; BEA; INHSD		BEA	Brad		L&F		sni	
<i>Emblyna decaprina</i>	B&N; BEA;			Brad					
<i>Emblyna henzi</i>	INHSD	INHSC		Brad		L&F; LLK		sni	
<i>Emblyna manitoba</i>	KBJ; BEA; INHSD					L&F			
<i>Emblyna maxima</i>						SNA		DR67; sni	
<i>Emblyna phylax</i>									
<i>Emblyna roscida</i>									
<i>Emblyna sublata</i>	KBJ; BEA; INHSD	FMNH; ISM; INHSC	BEA	Brad Brad Brad		L&F; BJK	MPM	sni c32; DR67; sni	
<i>Emblyna zaba</i>				Brad					
<i>Iviella ohioensis</i>			BEA	Brad		L&F; LLK; BJK	MPM	c34; DR67; sni	
<i>Lathys foxi</i>				Brad					
<i>Lathys immaculata</i>	B&N; BEA; INHSD								
<i>Lathys maculina</i>			BEA						
<i>Lathys pallida</i>			BEA	Brad		L&F; LLK		c34; DR67; sni	
<i>Phantyna bicornis</i>	KBJ; BEA; INHSD		BEA	Brad		L&F		sni	
<i>Phantyna pixi</i>								SNA	
Dysderidae									
<i>Dysdera crocata</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad		L&F	MPM		
Gnaphosidae									
<i>Callilepis imbecilla</i>	KBJ; BEA; INHSD; p&d		BEA; p&d	Brad		L&F; R&R		bbs	
<i>Callilepis pluto</i>	B&N; BEA; INHSD	FMNH, INHSC		Brad		p&d		sni; p&d	
<i>Cesonia bilineata</i>	KBJ; BEA; INHSD	ISM; INHSC	BEA	Brad		L&F; LLK; p&d		c35; sni; p&d	
<i>Drassodes auriculoides</i>				Brad		L&F; LLK; p&d		sni; p&d	
<i>Drassodes gosiutus</i>				Brad; p&d				p&d	

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Drassodes neglectus</i>	KBJ; BEA; INHSD		BEA			L&F; p&d		c32; DR67; sni; p&d	
<i>Drassodes saccatus</i>	KBJ; BEA	INHSC	BEA	Brad				p&d	
<i>Drassyllus apriltinus</i>	KBJ; BEA; INHSD	FMNH						bbs; p&d	
<i>Drassyllus covensis</i>	B&N; BEA; INHSD								
<i>Drassyllus creolus</i>	B&N; BEA; INHSD	INHSC	BEA	Brad				p&d	
<i>Drassyllus depressus</i>	KBJ; BEA; INHSD; L&U	INHSC	BEA	Brad		L&F		c33; sni; bbs	
<i>Drassyllus dixinus</i>	BEA								
<i>Drassyllus eremitus</i>	KBJ; BEA; INHSD			Brad		LLK; p&d		p&d	
<i>Drassyllus eremophilus</i>	B&N; BEA;	INHSC		Brad				p&d	
<i>Drassyllus fallens</i>	INHSD					L&F; p&d		p&d	
<i>Drassyllus frigidus</i>	B&N; BEA; INHSD			Brad				p&d	
<i>Drassyllus gynosphes</i>	BEA							sni	
<i>Drassyllus lepidus</i>	BEA	FMNH		Brad		L&F; LLK; p&d		c34; DR67; sni; p&d	
<i>Drassyllus nannellus</i>	BEA					L&F; p&d		bbs; p&d	
<i>Drassyllus niger</i>	KBJ; BEA; INHSD	FMNH	BEA	Brad					
<i>Drassyllus novus</i>	BEA	INHSC	BEA	Brad		L&F; LLK; p&d		p&d	
<i>Drassyllus rufulus</i>								c33; sni	
<i>Gnaphosa brunalis</i>	B&N; BEA; INHSD			Brad		L&F; LLK; p&d			
<i>Gnaphosa fontinalis</i>						L&F; p&d	MPM	c32; DR67; sni; p&d	
<i>Gnaphosa muscorum</i>								c34; sni; bbs; p&d	
<i>Gnaphosa parvula</i>	KBJ; BEA; INHSD; L&U	FMNH; INHSC	BEA	Brad; p&d		p&d	MPM	sni; p&d	
<i>Gnaphosa sericata</i>			BEA	Brad		L&F; p&d; R&R		sni; p&d	

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Haplodrassus bicornis</i>	B&N; BEA; INHSD		BEA	Brad		L&F; p&d		c34; sni; bbs; p&d sni; p&d	
<i>Haplodrassus hiemalis</i>		FMNH		Brad		L&F; LLK; p&d			
<i>Haplodrassus mimus</i>	KBJ; BEA; INHSD					L&F; p&d; R&R		c&b; DR67; sni; bbs; p&d	
<i>Haplodrassus signifer</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad					
<i>Herpyllus ecclestasticus</i>	KBJ; BEA; INHSD	FMNH; ISM; INHSC	BEA	Brad	INHSC	L&F; p&d; BJK	MPM	c32; DR67; sni; p&d p&d	
<i>Litopyllus temporarius</i>	B&N; BEA; INHSD		BEA	Brad					
<i>Micaria elizabethae</i>		FMNH; INHSC	BEA; p&d	Brad				p&d	
<i>Micaria emertoni</i>								DR67; sni; p&d	
<i>Micaria gertschi</i>	B&N; BEA; INHSD	FMNH		Brad				DR67; p&d c35	
<i>Micaria laticeps</i>	KBJ; BEA; INHSD	INHSC		Brad		L&F; LLK	MPM	p&d; DR67; sni	
<i>Micaria longipes</i>									
<i>Micaria longispina</i>	KBJ; BEA; INHSD	FMNH; INHSC		Brad		L&F	MPM	p&d	
<i>Micaria pulicaria</i>		FMNH	BEA	Brad		L&F; LLK	MPM	c35; sni; bbs	
<i>Micaria riggsi</i>						p&d		p&d	
<i>Nodocion floridanus</i>						L&F; LLK; p&d			
<i>Sergiolus bicolor</i>	KBJ; BEA; INHSD; L&U	FMNH; ISM; INHSC	BEA	Brad		L&F; p&d; BJK; R&R;	MPM	p&d sni; p&d	
<i>Sergiolus capulatus</i>									
<i>Sergiolus decoratus</i>	BEA	INHSC		Brad				sni	
<i>Sergiolus lowelli</i>				Brad					
<i>Sergiolus minutus</i>	BEA					L&F			
<i>Sergiolus montanus</i>	BEA		BEA	Brad		L&F; p&d		c&b; sni; p&d	
<i>Sergiolus ocellatus</i>	BEA	FMNH; INHSC		Brad		p&d		p&d	



## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Neoamistea magna</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad		R&R		sni; bbs	
<i>Neoamistea riparia</i>					MPM	L&F		c63; DR67	
Linyphiidae									
<i>Agyneta olivacea</i>								c35	
<i>Allomengea dentisetis</i>						SNA L&F		sni	
<i>Baryphyma longitarsum</i>				Brad		L&F			
<i>Baryphyma trifrons affine</i>				Brad		L&F			
<i>Bathypantes alboventris</i>	KBJ; BEA; INHSD	FMNH				L&F		c35; sni	
<i>Bathypantes brevis</i>				Brad		L&F			
<i>Bathypantes canadensis</i>				Brad		L&F; LLK		DR67; sni	
<i>Bathypantes pallidus</i>	KBJ; BEA	FMNH; INHSC	BEA	Brad		LLK			
<i>Bathypantes weyeri</i>			BEA	Brad		LLK			
<i>Blestia sarcocoon</i>			BEA	Brad		LLK		c35; DR67;	
<i>Centromerus cornupalpis</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad		LLK		sni	
<i>Centromerus denticulatus</i>								DR67; sni	
<i>Centromerus latidens</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad				sni	
<i>Centromerus longibulbus</i>								sni	
<i>Centromerus persolutus</i>						L&F; BJK	MPM	c35; DR67;	
<i>Centromerus sylvaticus</i>		FMNH		Brad		L&F; BJK	MPM	sni	
<i>Centromerus tennapex</i>				Brad		L&F; BJK	MPM	sni	
<i>Ceraticelus alticeps</i>	KBJ; BEA; INHSD	FMNH		Brad		L&F; LLK		DR67; sni	
<i>Ceraticelus atriceps</i>				Brad				c35; DR67;	
<i>Ceraticelus bryantae</i>				Brad				sni	
<i>Ceraticelus bulbosus</i>	KBJ; BEA; INHSD			Brad				sni	
<i>Ceraticelus carinatus</i>				Brad					
<i>Ceraticelus creolus</i>	B&N; BEA; INHSD			Brad					

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Ceraticelus emertoni</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad	Brad	L&F; R&R		DR67; sni	
<i>Ceraticelus fissiceps</i>	KBJ; BEA; INHSD	FMNH	BEA	Brad	Brad	L&F; BJK	MPM	c33; DR67; sni	
<i>Ceraticelus laetabilis</i>	KBJ; BEA; INHSD					L&F; LLK		DR67; sni	
<i>Ceraticelus laetus</i>	KBJ; BEA; INHSD	FMNH	BEA			L&F; LLK		sni	
<i>Ceraticelus laticeps</i>	KBJ; BEA; INHSD					R&R		sni	
<i>Ceraticelus limnologicus</i>	KBJ; BEA; INHSD		BEA					sni	
<i>Ceraticelus micropalpis</i>	B&N; BEA; INHSD							sni	
<i>Ceraticelus minutus</i>	B&N; BEA; INHSD	INHSC	BEA	Brad	Brad	L&F; LLK		DR67; sni	
<i>Ceraticelus paschalis</i>	KBJ; BEA; INHSD	INHSC		Brad	Brad			sni	
<i>Ceraticelus pygmaeus</i>	KBJ; BEA; INHSD			Brad	Brad	LLK		sni	
<i>Ceraticelus similis</i>	KBJ; BEA; INHSD							c35; DR67; sni	
<i>Ceratinella brunnea</i>	KBJ; BEA; INHSD	FMNH	BEA	Brad	Brad	L&F; LLK		sni	
<i>Ceratinops annulipes</i>	KBJ; BEA; INHSD	FMNH				L&F; LLK; R&R		sni	
<i>Ceratinops crenatus</i>	KBJ; BEA; INHSD	INHSC		Brad	Brad	L&F; LLK	MPM		
<i>Ceratinops latus</i>	KBJ; BEA; INHSD; L&U			Brad	Brad	L&F			
<i>Ceratinops rugosus</i>	B&N; BEA; INHSD		BEA	Brad	Brad	L&F; LLK			
<i>Ceratinopsidius formosa</i>	B&N; INHSD			Brad	Brad	L&F			
<i>Ceratinopsis atolma</i>	B&N; INHSD			Brad	Brad	L&F			
<i>Ceratinopsis auriculata</i>	B&N; BEA; INHSD; L&U;	FMNH	BEA	Brad	Brad	L&F		sni	
<i>Ceratinopsis interpres</i>	B&N; BEA; INHSD; L&U;			Brad	Brad				
<i>Ceratinopsis laticeps</i>	L&U			Brad	Brad				





## APPENDIX I—Continued.

Species	Illinois		Indiana		Ohio		Wisconsin		Michigan	
	S	V	S	V	S	V	S	V	S	V
<i>Eperigone tridentata</i>	KBJ; BEA; INHSD; L&U	FMNH; INHSC	BEA	Brad	LLK		sni			
<i>Eperigone trilobata</i>	KBJ; BEA; INHSD; L&U	FMNH; INHSC		Brad	L&F		DR67; sni			
<i>Eperigone undulata</i>	BEA		BEA	Brad						
<i>Epiceratocelus fluviatilis</i>	KBJ; BEA; INHSD	FMNH, INHSC	BEA	Brad	L&F		sni			
<i>Eridantes erigonoides</i>	KBJ; BEA; INHSD	FMNH	BEA	Brad	LLK					
<i>Eridantes utibilis</i>			BEA							
<i>Erigone aletris</i>	KBJ; BEA; INHSD; L&U		BEA	Brad	LLK		DR67; sni			
<i>Erigone alsaida</i>	KBJ; BEA; INHSD; L&U	FMNH; INHSC	BEA	Brad	L&F; LLK		DR67; sni			
<i>Erigone autumnalis</i>	KBJ; BEA; INHSD		BEA	Brad			sni			
<i>Erigone blaesae</i>	KBJ; BEA; INHSD		BEA	Brad	L&F; LLK		sni			
<i>Erigone dentigera</i>	KBJ; BEA; INHSD		BEA	Brad	L&F		DR67; sni			
<i>Erigone infernalis</i>	BEA	FMNH	BEA							
<i>Erigone praecursora</i>										
<i>Erigone zographica</i>										
<i>Estrandia grandaeva</i>										
<i>Floricomus bishopi</i>	KBJ; BEA; INHSD			Brad			sni			
<i>Floricomus plumalis</i>	KBJ; BEA; INHSD			Brad	L&F		DR67; sni			
<i>Floricomus rostratus</i>	B&N; BEA; INHSD			Brad						
<i>Florinda coccinea</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad						
<i>Frontinella communis</i>	KBJ; BEA; L&U	ISM; INHSC	BEA	Brad	L&F; BJK		c32; DR67; sni			MPM
<i>Gnathonaroides pedalis</i>	B&N; BEA; INHSD	FMNH		Brad						
<i>Gonatium crassipalpus</i>				Brad	L&F L&F; LLK		c34; sni			

## APPENDIX I—Continued.

Species	Illinois		Indiana		Ohio		Wisconsin		Michigan	
	S	V	S	V	S	V	S	V	S	V
<i>Goneatara nasutus</i>	BEA			Brad						
<i>Goneatara plathyrinus</i>				Brad						
<i>Grammonota gentilis</i>		FMNH		Brad		LLK		MPM		DR67; sni
<i>Grammonota gigas</i>	B&N; BEA;		BEA	Brad					sni	sni
<i>Grammonota inornata</i>	INHSD; L&U			Brad					sni	DR67; sni
<i>Grammonota ornata</i>	B&N; BEA;	INHSC		Brad		L&F				
<i>Grammonota pictilis</i>	INHSD			Brad		L&F				
<i>Grammonota vittata</i>	BEA			Brad		L&F; R&R				c33; DR67;
<i>Graphomoa theridioides</i>				Brad						sni
<i>Helophora insignis</i>						L&F; LLK				
<i>Hybauchenidium cymbaden-</i> <i>tatum</i>										
<i>Hypomma marxi</i>										
<i>Hypselistes florens</i>	KBJ; BEA;	FMNH;	BEA	Brad		L&F; BJK;	MPM		SNA	c&b; c35; sni
	INHSD	INHSC				R&R				
<i>Idionella formosa</i>				Brad						sni
<i>Idionella rugosa</i>		INHSC								sni
<i>Idionella sclerata</i>	FMNH	FMNH								sni
<i>Incestophantes calcaratus</i>										sni
<i>Incestophantes duplicatus</i>										sni
<i>Islandiana flaveola</i>	KBJ; BEA;	FMNH		Brad						
	INHSD									
<i>Islandiana flavoides</i>		FMNH		Brad						sni
<i>Islandiana longisetosa</i>	KBJ; BEA;		BEA	Brad						
	INHSD									
<i>Islandiana speophila</i>		FMNH		Brad						
<i>Kaestneria pullata</i>						L&F; LLK;	MPM			sni
						BJK				
<i>Lepthyphantes intricatus</i>		INHSC		Brad		SNA				sni
<i>Lepthyphantes leprosus</i>						L&F	MPM			c&b; sni
<i>Lepthyphantes minutus</i>				Brad						DR67; sni
<i>Lepthyphantes turbarix</i>				Brad		L&F				DR67; sni
<i>Macrargus multesimus</i>				Brad		LLK				DR67; sni

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Maso sundevalli</i>	KBJ; BEA; INHSD		BEA	Brad		LLK L&F; R&R	MPM	DR67; sni DR67; sni	
<i>Megalophthantes nebulosus</i>								sni	
<i>Meioneta angulata</i>		FMNH							
<i>Meioneta barrowsi</i>		FMNH							
<i>Meioneta brevipes</i>	KBJ; BEA; INHSD								
<i>Meioneta evadens</i>	L&U; BEA; INHSD; L&U	FMNH; INHSC	BEA	Brad				sni	
<i>Meioneta fabra</i>		FMNH							
<i>Meioneta leucophora</i>	KBJ; BEA; INHSD; L&U	FMNH	BEA	Brad					
<i>Meioneta micaria</i>		FMNH							
<i>Meioneta officiosa</i>				Brad				sni	
<i>Meioneta serrata</i>		FMNH, INHSC						sni	
<i>Meioneta simplex</i>	KBJ; BEA; INHSD; L&U	FMNH	BEA	Brad		LLK; R&R		sni	
<i>Meioneta unimaculata</i>		FMNH						sni	
<i>Meioneta zygia</i>								c32; sni	
<i>Microlinyphia pusilla</i>	L&U	FMNH		Brad					
<i>Microlinyphia impigra</i>	KBJ; BEA; INHSD	FMNH, ISM; INHSC	BEA	Brad		L&F; LLK		c32; DR67; sni	
<i>Microlinyphia mandibulata</i>	KBJ; BEA; INHSD	FMNH		Brad		L&F; LLK; R&R		c35; DR67; sni	
<i>Microneta varia</i>									
<i>Mythoplastoides exiguus</i>	KBJ; BEA	FMNH; INHSC	BEA BEA	Brad		BJK; L&F; BJK;	MPM	c33; DR67; sni	
<i>Neriene clathrata</i>						R&R			
<i>Neriene radiata</i>	KBJ; BEA; INHSD	FMNH, ISM; INHSC	BEA	Brad		L&F; BJK R&R	MPM	c32; DR67; sni	
<i>Neriene variabilis</i>	KBJ; BEA; INHSD	FMNH, ISM; INHSC	BEA	Brad		L&F	MPM	c33; sni	
<i>Oedotheorax maximus</i>									
<i>Oedotheorax montifer</i>		INHSC	BEA	Brad				sni	
<i>Oedotheorax trilobatus</i>								SNA	
<i>Oreonetides rotundus</i>						L&F; LLK			

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Oreometides vaginatus</i>								DR67; sni	
<i>Origanates rostratus</i>	KBJ; BEA; INHSD		BEA	Brad		L&F; LLK		sni	
<i>Paracormicularia bicapillata</i>	B&N; BEA; INHSD		BEA					sni	
<i>Pelecopsis bishopi</i>				Brad				DR67; sni	
<i>Pelecopsis moesta</i>	B&N; BEA;		BEA						
<i>Phanetta subterranea</i>	INHSD; NSE								
<i>Pityohyphantes costatus</i>	KBJ; BEA; INHSD	FMNH; ISM	BEA	Brad		L&F; BJK	MPM	c32; DR67	
<i>Pityohyphantes limitaneus</i>		FMNH;				LLK		sni	
<i>Pocadicnemus americana</i>		INHSC						DR67; sni	
<i>Poecilonea bihamata</i>						L&F		sni	
<i>Poecilonea furcata</i>									
<i>Poecilonea theridiformis</i>	BEA; NSE	INHSC	BEA						
<i>Porrhomma cavernicola</i>		FMNH		Brad		L&F; LLK		DR67; sni	
<i>Porrhomma terrestre</i>				Brad		L&F		sni	
<i>Satilatlas arenarius</i>	BEA; INHSD	FMNH				LLK			
<i>Sciastes acuminatus</i>		FMNH				LLK			
<i>Sciastes truncatus</i>		FMNH				LLK			
<i>Scirites pectinatus</i>		FMNH				LLK			
<i>Scironis tarsalis</i>		FMNH							
<i>Scotinotylus pallidus</i>								DR67; sni	
<i>Scotinotylus vernalis</i>								DR67; sni	
<i>Scylaceus pallidus</i>	KBJ; BEA; INHSD	FMNH	BEA	Brad		L&F; LLK; R&R		SNA sni	
<i>Scyletria jona</i>		FMNH							
<i>Sisicottus montanus</i>								DR67; sni	
<i>Sisicottus montigenus</i>								DR67; sni	
<i>Sisicottus penifusifer</i>								DR67; sni	
<i>Sitalcas ruralis</i>		FMNH				L&F; LLK			
<i>Souessa spinifera</i>									
<i>Souessoula parva</i>	KBJ; BEA; INHSD	FMNH				L&F	MPM		

## APPENDIX I—Continued.

Species	Illinois		Indiana		Ohio		Wisconsin		Michigan	
	S	V	S	V	S	V	S	V	S	V
<i>Sougambus bostoniensis</i>										
<i>Soulgas corticarius</i>		FMNH					L&F			
<i>Stemonyphantes blauveltae</i>	KBJ; BEA; INHSD		BEA	Brad			L&F; LLK		sni	
<i>Sylocetator purpurescens</i>	B&N; BEA; INHSD			Brad			L&F			
<i>Tapinocyba emertoni</i>				Brad						
<i>Tapinocyba hortensis</i>				Brad						
<i>Tapinocyba minuta</i>							LLK		DR67; smi	
<i>Tapinocyba scopulifera</i>	L&U; BEA; INHSD; L&U								sni	
<i>Tapinocyba simplex</i>							L&F; LLK		DR67; smi	
<i>Tapinocyba sucra</i>	B&N; BEA; INHSD			Brad			L&F		c33; smi	
<i>Tapinopa bilineata</i>				Brad						
<i>Taranucnus ornithes</i>				Brad						
<i>Tennesseillum formica</i>	KBJ; BEA; INHSD; L&U	INHSC	BEA	Brad			L&F; LLK		sni	
<i>Tenuiphantes sabulosus</i>	B&N; BEA; INHSD	FMNH; INHSC		Brad			L&F		sni; DR67	
<i>Tenuiphantes zebra</i>	BEA	FMNH	BEA	Brad			L&F; LLK		sni	
<i>Thyreosthenius parasiticus</i>				Brad			L&F		sni	
<i>Tmetiscus ornatus</i>	KBJ; BEA; INHSD						L&F		sni	
<i>Traematosia bispinosis</i>									sni	
<i>Tunagyna debilis</i>							L&F		c35; DR67; sni	
<i>Tusukuru hartlandianus</i>	KBJ; BEA; INHSD		BEA						DR67; smi	
<i>Tutaibo anglicanus</i>										
<i>Walckenaeria atrothibialis</i>		FMNH					MIL		MIL	
<i>Walckenaeria auranticeps</i>									MIL	
<i>Walckenaeria brevicornis</i>	KBJ; BEA; INHSD	FMNH		Brad			LLK		sni; MIL	
<i>Walckenaeria castanea</i>		FMNH		Brad			L&F		DR67; smi	
<i>Walckenaeria clavicornis</i>				Brad			L&F		DR67; smi	

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Walckenaeria communis</i>	BEA	FMNH		Brad		L&F; LLK; MIL		sni; MIL	
<i>Walckenaeria digitata</i>		FMNH							
<i>Walckenaeria directa</i>	KBJ; BEA; INHSD; MIL	FMNH		Brad		MIL		c35; sni; MIL	
<i>Walckenaeria exigua</i>									
<i>Walckenaeria indirecta</i>	KBJ; BEA; INHSD							MIL DR67; sni	
<i>Walckenaeria minuta</i>		FMNH	BEA	Brad		L&F; LLK; MIL		DR67; sni; MIL	
<i>Walckenaeria pallida</i>		FMNH		Brad;		L&F; LLK; MIL		c35; DR67; sni; MIL	
<i>Walckenaeria palustris</i>		FMNH		MIL					
<i>Walckenaeria pinocchio</i>		FMNH							
<i>Walckenaeria redneri</i>		FMNH							
<i>Walckenaeria spiralis</i>	KBJ; BEA; INHSD; L&U; MIL	FMNH; INHSC	MIL	Brad		MIL		sni	
<i>Walckenaeria subdirecta</i>	KBJ; BEA; INHSD; MIL	FMNH	BEA	Brad		L&F; LLK; R&R		DR67; sni; MIL	
<i>Walckenaeria subpallida</i>									
<i>Walckenaeria tibialis</i>				Brad					
<i>Wubana drassoides</i>		FMNH		Brad				sni; MIL	
Liocranidae									
<i>Agroeca minuta</i>	KBJ; BEA	FMNH	BEA	Brad					
<i>Agroeca ornata</i>	BEA					L&F		c34; c39; DR67; sni; bbs; DRD	
<i>Agroeca pratensis</i>				Brad		L&F; LLK		c34; c39; DR67; sni	
Lycosidae									
<i>Allocosa funerea</i>	KBJ; BEA; INHSD	FMNH, ISM	BEA	Brad				DRE; sni? bbs	
<i>Allocosa georgicola</i>	B&N; BEA; INHSD		BEA					DRE; c35; sni	
<i>Allocosa noctuabunda</i>			BEA						

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Allocosa subblata</i>			BEA	Brad		L&F; DRE		c33; DR67; sni; DRE	
<i>Alopecosa aculeata</i>								c35; sni; DRE	
<i>Alopecosa kochi</i>	KBJ; BEA; INHSD		BEA			L&F; LLK; DRE;	MPM	DRE; sni	
<i>Arctosa emertoni</i>						R&R			
<i>Arctosa littoralis</i>	KBJ; BEA; INHSD		BEA	Brad		L&F; LLK; DRE	MPM	DR67; sni; DRE	
<i>Arctosa raptor</i>								sni	
<i>Arctosa rubicunda</i>			BEA	Brad		L&F; LLK; DRE		DRE; sni	
<i>Arctosa virgo</i>				Brad				DRE	
<i>Geolycosa fatifera</i>								c33	
<i>Geolycosa missouriensis</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad		L&F; LLK		DR67; sni; DRE	
<i>Geolycosa pikei</i>								c33; sni	
<i>Geolycosa sepulchralis</i>									
<i>Geolycosa turricola</i>								c34	
<i>Geolycosa wrighti</i>	KBJ; BEA; INHSD	ISM; INHSC	BEA	Brad		LLK	MPM	DR67; sni; DRE	INHSC
<i>Gladicosa bellamyi</i>									
<i>Gladicosa gulosa</i>	KBJ; BEA; INHSD; DRE	FMNH, ISM	BEA; DRE	Brad		L&F; DRE	MPM	c32; sni; bbs; DRE	
<i>Gladicosa pulchra</i>	B&N; BEA; INHSD	ISM		Brad					
<i>Hogna aspersa</i>	KBJ; BEA; INHSD	ISM	BEA	Brad		L&F	MPM	c34; DRE	
<i>Hogna baltimoriana</i>	KBJ; BEA; INHSD; DRE	INHSC	BEA	Brad		L&F; DRE		DR67; DRE	
<i>Hogna carolinensis</i>	KBJ; BEA; INHSD	FMNH, ISM; INHSC	BEA	Brad		L&F		c32; DRE	
<i>Hogna frondicola</i>	KBJ; BEA; INHSD	FMNH, ISM; INHSC	BEA	Brad		L&F; BJK; R&R	MPM	c32; DR67; bbs; DRE	
<i>Hogna helluo</i>	KBJ; BEA; INHSD	FMNH, ISM; INHSC	BEA	Brad		L&F	MPM	c33; DR67; sni; DRE	

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Hogna lenta</i>				SNA					
<i>Hogna permunda</i>	SNA	FMNH;	Brad	Brad		L&F; BJK;	MPM	c32; DR67;	
<i>Pardosa distincta</i>	KBJ; BEA; INHSD	INHSC				R&R		smi; DRE; w81	
<i>Pardosa fuscula</i>	BEA		BEA			L&F; LLK;	MPM	c35; DR67;	
						DRE		smi; DRE; w81	
<i>Pardosa glacialis</i>				Brad		L&F; DRE		smi c35; smi; DRE;	
<i>Pardosa groenlandica</i>								w81	
<i>Pardosa hyperborea</i>				Brad		L&F; LLK		w81; smi; DRE	
<i>Pardosa lapidicina</i>	B&N; BEA; INHSD	ISM; INHSC	BEA	Brad		L&F; DRE		DR67; smi; DRE; w81	
<i>Pardosa littoralis</i>								smi	
<i>Pardosa mackenziana</i>								c34; DR67;	
								smi; DRE;	
<i>Pardosa milvina</i>	KBJ; BEA; INHSD; L&U	FMNH; ISM; INHSC	BEA; DRE	Brad;		L&F; DRE	MPM	w81	
								c32; DR67;	
<i>Pardosa modica</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad		L&F	MPM	smi; bbs; DRE; w81	
								DR67; smi; bbs; DRE;	
<i>Pardosa moesta</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad		L&F; BJK	MPM	w81	
								c32; DR67;	
<i>Pardosa saxatilis</i>	KBJ; BEA; INHSD; DRE	FMNH, ISM; INHSC	BEA	Brad;		L&F; DRE	MPM	smi; bbs; w81	
								c33; DR67;	
<i>Pardosa sternalis</i>	KBJ; BEA; INHSD	ISM	BEA	Brad		L&F	MPM	smi; bbs; DRE; w81	
<i>Pardosa xerampelina</i>	B&N; BEA; INHSD		BEA	Brad				smi	
<i>Pirata alachuus</i>	W&E; BEA; INHSD		BEA	Brad				c32; DR67;	MPM
<i>Pirata apalacheus</i>			BEA					smi; w81	



## APPENDIX I—Continued.

Species	Illinois		Indiana		Ohio		Wisconsin		Michigan	
	S	V	S	V	S	V	S	V	S	V
<i>Pirata aspirans</i>	KBJ; BEA; INHSD; DRE	INHSC	DRE	Brad; DRE	L&F; DRE	MPM	c32; DR67; sni; DRE			
<i>Pirata cantralli</i>	KBJ; BEA; INHSD; DRE	FMNH			DRE	MPM	DRE			
<i>Pirata giganteus</i>	KBJ; BEA; INHSD; DRE	FMNH								
<i>Pirata indigenus</i>	KBJ; BEA; INHSD	FMNH; ISM; INHSC	BEA	Brad	L&F; BJK	MPM	c33; c35; sni			
<i>Pirata insularis</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad	L&F; R&R	MPM	c33; DR67; sni; bbs; DRE			
<i>Pirata minutus</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad			DRE			
<i>Pirata montanoides</i>	W&E; BEA; INHSD; DRE									
<i>Pirata montanus</i>	KBJ; BEA; INHSD		BEA	Brad	L&F; BJK	MPM	c33; DR67; sni; bbs			
<i>Pirata piraticus</i>	KBJ; BEA; INHSD	FMNH	BEA	Brad			c32; DR67; sni			
<i>Pirata sedentarius</i>	MBC; BEA; INHSD	ISM; INHSC	BEA	Brad; DRE	L&F; DRE	MPM	c35; sni; DRE			
<i>Pirata seminolus</i>							DRE			
<i>Pirata spiniger</i>	B&N; BEA; INHSD									
<i>Pirata sylvanus</i>	W&E; BEA; INHSD									
<i>Pirata triens</i>	W&E; BEA; INHSD	FMNH								
<i>Pirata zelotes</i>	W&E; BEA; INHSD; DRE	INHSC		Brad	DRE	MPM	DRE			
<i>Rabidosa hentzi</i>	B&N; BEA; INHSD									
<i>Rabidosa punctulata</i>	KBJ; BEA; INHSD	ISM; INHSC	BEA	Brad		MPM	c35; DRE			
<i>Rabidosa rabida</i>	KBJ; BEA; INHSD	ISM; INHSC	BEA	Brad		MPM	DRE			
<i>Schizocosa aulonia</i>	BEA		BEA							
<i>Schizocosa avida</i>	KBJ; BEA; INHSD	FMNH; ISM; INHSC	BEA	Brad; DRE	L&F; R&R		c32; DR67; sni; DRE			

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Schizocosa bilineata</i>	KBJ; BEA; INHSD	FMNH; ISM; INHSC	BEA	Brad; DRE	MPM	L&F; DRE		c35; sni; bbs; DRE	
<i>Schizocosa crassipalpada</i>	BEA; DRE	FMNH; INHSC	BEA	Brad		L&F; BJK; R&R	MPM	DRE; sni; bbs; DRE	
<i>Schizocosa crassipes</i> <i>Schizocosa duplex</i>		INHSC		Brad	MPM	L&F		c32 DRE; bbs; DRE	
<i>Schizocosa mccooki</i>	BEA	FMNH					MPM	DRE	
<i>Schizocosa ocreata</i>	KBJ; BEA; INHSD; DRE	FMNH; ISM; INHSC	BEA; DRE	Brad; DRE		DRE	MPM	DRE	
<i>Schizocosa retrorsa</i>	KBJ; BEA; INHSD; DRE	FMNH; INHSC		Brad; DRE		BJK; DRE; BJK	MPM	DRE; sni; bbs; DRE	
<i>Schizocosa rovneri</i>	U&D; BEA; INHSD	INHSC		Brad; DRE					
<i>Schizocosa saltatrix</i>	KBJ; BEA; INHSD; DRE	FMNH; ISM; INHSC	BEA; DRE	Brad; DRE	MPM	L&F; DRE; R&R		c&b; sni; DRE	
<i>Schizocosa stridulans</i>	GS; BEA; INHSD			Brad; DRE					
<i>Trabeops aurantiacus</i>		FMNH	BEA	Brad; DRE		L&F; DRE		DRE	
<i>Trebacosa marxi</i>	KBJ; BEA; INHSD		BEA	Brad; DRE				DR67; sni; DRE	
<i>Trochosa ruricola</i>		FMNH							
<i>Trochosa terricola</i>	KBJ; BEA; INHSD; DRE	FMNH; INHSC	BEA; DRE	Brad; DRE		L&F; BJK; DRE; R&R	MPM	c33; DR67; sni; bbs; DRE	
<i>Varacosa avara</i>	KBJ; BEA; INHSD	ISM; INHSC	BEA	Brad	MPM	L&F; DRE	MPM	c35; sni; DRE	
<i>Varacosa shenandoa</i>	BEA; DRE	INHSC							
Mimetidae									
<i>Ero canionis</i>	B&N; BEA; INHSD	FMNH	BEA	Brad		LLK L&F		c35; DR67; sni	
<i>Ero leonina</i>	B&N; BEA; INHSD; L&U		BEA	Brad		L&F	MPM	DR67; sni	

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Mimetes nelsoni</i>			Brad						
<i>Mimetes notius</i>	KBJ; BEA; INHSD	FMNH; INHSC				L&F; LLK			
<i>Mimetes puritanus</i>	B&N; BEA; INHSD	INHSC	BEA	Brad	INHSC	L&F		sni	
<i>Mimetes syllepsicus</i>				Brad				c35; sni	
Miturgidae									
<i>Cheiracanthium inclusum</i>	KBJ; BEA; INHSD; L&U	ISM	BEA	Brad				DRD; DRE; sni	
<i>Cheiracanthium mildei</i>	B&N; BEA; INHSD; MPM; L&U	MPM, ISM, INHSC		Brad			MPM		
<i>Strotarchus piscatorius</i>	B&N; BEA; INHSD			Brad					
Mysmenidae									
<i>Maymena ambita</i>	B&N; BEA; INHSD			Brad					
<i>Microdipoena guttata</i>	B&N; BEA; INHSD			Brad					
Nesticidae									
<i>Eidmannella pallida</i>	KBJ; BEA; INHSD; NSE	FMNH; INHSC		Brad		L&F			
<i>Nesticus bishopi</i>			SNA BEA						
<i>Nesticus carteri</i>									
Oecobiidae									
<i>Oecobius cellariorum</i>	MBC; BEA; INHSD			Brad					
<i>Oecobius navus</i>				Brad					
Oonopidae									
<i>Orchestina saltitans</i>	B&N; BEA; INHSD			Brad				sni	

## APPENDIX I—Continued.

Species	Illinois		Indiana		Ohio		Wisconsin		Michigan	
	S	V	S	V	S	V	S	V	S	V
<i>Oxyopidae</i>										
<i>Oxyopes aglossus</i>	B&N; BEA; INHSD									
<i>Oxyopes salticus</i>	KBJ; BEA; INHSD; L&U	ISM; INHSC	BEA	Brad; DRE			L&F; BJK; DRE	MPM	c&b; sni; DRE	
<i>Oxyopes scalaris</i>	MBC; BEA; INHSD; L&U	ISM		Brad			L&F; LLK; DRE		DRE; sni	
<i>Philodromidae</i>										
<i>Ebo iviei</i>										
<i>Ebo latithorax</i>	KBJ; BEA; INHSD		BEA	Brad			LLK		DRC; sni c35; c40; DR67; sni	
<i>Ebo pepinensis</i>	KBJ; BEA; INHSD		BEA						sni	
<i>Philodromus alascensis</i>	KBJ; BEA; INHSD		BEA						sni	
<i>Philodromus bimuricatus</i>	B&N; BEA; INHSD									
<i>Philodromus cespitum</i>	KBJ; BEA; INHSD; DRB; L&U	INHSC	BEA; DRB	Brad; DRB			L&F; DRB; BJK	MPM	c34; c40; DR67; DRB	
<i>Philodromus exilis</i>										
<i>Philodromus histrio</i>										
<i>Philodromus imbecillus</i>	KBJ; BEA; DRA; INHSD	FMNH; INHSC	BEA	Brad			DRA DRC L&F; DRA		c35; c40 c35; sni; DRC c&b; c40; DR67; sni; DRA	
<i>Philodromus infuscatus</i>	B&N; BEA; INHSD			Brad			L&F; LLK		c35; c40; DR67; sni; DRC	
<i>Philodromus keyserlingi</i>	B&N; BEA; INHSD; DRB; L&U	FMNH	BEA; DRB	Brad			DRB		sni	
<i>Philodromus marxi</i>	KBJ; BEA; INHSD; DRA	FMNH; ISM; INHSC	BEA; DRA	Brad			L&F; DRA; DRC		c35; c40; sni; DRA	
<i>Philodromus mineri</i>									c35; c40; sni; DRA; DRC	

APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Philodromus minutus</i>	B&N; BEA; INHSD		BEA; DRA	Brad; DRA		DRA		c33; sni; DRA; DRC	
<i>Philodromus montanus</i>	B&N; BEA; INHSD								
<i>Philodromus oneida</i>	B&N; BEA; INHSD; DRA					L&F; DRA		DRA	
<i>Philodromus peninsulanus</i>		INHSC					MPM	DRA	
<i>Philodromus pernix</i>						L&F	MPM	c32; c40; DR67; sni	
<i>Philodromus placidus</i>	B&N; BEA; INHSD; DRA	ISM	BEA;	Brad;		L&F	MPM	DR67; sni; DRA	
<i>Philodromus praelustris</i>	B&N; BEA; INHSD		BEA; DRB	DRB		DRB		sni	
<i>Philodromus pratariæ</i>	B&N; BEA; INHSD								
<i>Philodromus rufus</i>	KBJ; BEA; INHSD	FMNH	BEA	Brad		L&F	MPM	c34; c40; DR67; sni	
<i>Philodromus rufus quartus</i>		FMNH						DRA	
<i>Philodromus rufus vibrans</i>				Brad;		BJK		DRA	
<i>Philodromus satullus</i>				DRB		L&F; LLK; DRA		c35; c40; sni	
<i>Philodromus vulgaris</i>	KBJ; BEA; INHSD	ISM, INHSC	BEA; DRB	Brad; DRB		DRB		sni	
<i>Thanatus coloradensis</i>		INHSC	BEA	Brad		L&F; R&R	MPM	c32; sni; c40; DR67;	MPM
<i>Thanatus formicinus</i>	KBJ; BEA; INHSD; L&U	FMNH						sni	INHSC
<i>Thanatus rubicellus</i>	B&N; BEA; INHSD	INHSC					MPM	sni	
<i>Thanatus striatus</i>		ISM; INHSC	BEA	Brad				c40; sni	
<i>Thanatus vulgaris</i>	KBJ; BEA; INHSD	INHSC		Brad					
<i>Tibellus duttoni</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad		L&F; BJK; R&R	MPM	c&b; c40; DR67; sni	
<i>Tibellus maritimus</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad					

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Tibellus oblongus</i>	KBJ; BEA; INHSD; L&U	ISM; INHSC	BEA	Brad		L&F; BJK; R&R	MPM	c32; c40; DR67; sni	
Pholcidae									
<i>Pholcus phalangioides</i>	KBJ; BEA; INHSD; NSE	ISM; INHSC	BEA	Brad		L&F; LLK; BJK	MPM	c&b; sni	
<i>Spermophora senoculata</i>	B&N; BEA; INHSD	INHSC	BEA	Brad		L&F			
Pisauridae									
<i>Dolomedes albineus</i>	B&N; BEA; INHSD	ISM; INHSC	BEA	Brad; DRE		L&F; DRE	MPM; INHSC	c35; DR67; sni; DRE	
<i>Dolomedes scriptus</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad		L&F; BJK	MPM	DRE; sni; DRE	
<i>Dolomedes striatus</i>	KBJ; BEA; INHSD; DRE	FMNH; ISM; INHSC	BEA; DRE	Brad; DRE		L&F; BJK	MPM; INHSC	DR67; c35; sni; DRE	
<i>Dolomedes tenebrosus</i>	BEA; INHSD; DRE	ISM; INHSC	BEA; DRE	Brad		L&F; BJK; DRE	MPM	c32; c33; c35; DR67; sni; DRE	
<i>Dolomedes triton</i>	KBJ; BEA; INHSD; DRE	ISM; INHSC	BEA; DRE	Brad		L&F; BJK; DRE	MPM	DR67; sni; DRE	
<i>Dolomedes vittatus</i>	KBJ; BEA; INHSD; NSE	ISM; INHSC	BEA	Brad				c&b; sni	
<i>Pisaurina brevipes</i>	KBJ; BEA; INHSD; DRE; L&U	INHSC	BEA	Brad; DRE				c&b; sni; DRE	
<i>Pisaurina dubia</i>	B&N; BEA; INHSD			Brad					
<i>Pisaurina mira</i>	KBJ; BEA; INHSD; DRE; L&U	FMNH; ISM; INHSC	BEA; DRE	Brad		L&F; BJK; DRE	MPM	c32; sni; bbs; DRE	
<i>Pisaurina undulata</i>	BEA; INHSD		BEA						
Salticidae									
<i>Admetina tibialis</i>	KBJ; BEA; INHSD		BEA	Brad		L&F	INHSC	c44; sni	

## APPENDIX I—Continued.

Species	Illinois		Indiana		Ohio		Wisconsin		Michigan	
	S	V	S	V	S	V	S	V	S	V
<i>Admetina wheeleri</i>										
<i>Agassa cyanea</i>	KBJ; BEA; INHSD; L&U	ISM	BEA	Brad					SNA	
<i>Artidops youngi</i>	B&N; BEA; INHSD	INHSC		Brad			L&F	MPM		
<i>Eris aurantia</i>	KBJ; BEA; INHSD; NSE BEA; INHSD	ISM; INHSC	BEA	Brad						
<i>Eris flava</i>							BJK			
<i>Eris floridana</i>	BEA	ISM	BEA	Brad			BJK		c33	
<i>Eris militaris</i>	L&U; BEA;		BEA	Brad						
<i>Eris pinea</i>	INHSD; L&U									
<i>Euophrys monadnock</i>										
<i>Evarcha hoyi</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad			LLK L&F; BJK; R&R		c33; DR67; c44	
<i>Ghelna barrowsi</i>										
<i>Ghelna canadensis</i>	KBJ; BEA; INHSD; NSE	FMNH; INHSC	BEA	Brad			L&F		c44; sni	
<i>Chinattus parvulus</i>	KBJ; BEA; INHSD	FMNH		Brad			LLK			
<i>Habronattus agilis</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad					c34; c44; DR67; sni	
<i>Habronattus borealis</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad			L&F		c34; c44; DR67; sni	
<i>Habronattus calcaratus</i>	KBJ; BEA; INHSD		BEA	Brad					DR67; sni	
<i>Habronattus captiosus</i>	MBC; BEA; INHSD	INHSC		Brad			SNA		SNA	
<i>Habronattus coecatus</i>	BEA		BEA	Brad					sni	
<i>Habronattus cognatus</i>	KBJ; INHSD			Brad					sni	
<i>Habronattus conjunctus</i>	B&N; BEA; INHSD	INHSC		Brad			L&F; LLK; R&R		c34; c44; sni	
<i>Habronattus decorus</i>										
<i>Habronattus orbis</i>				Brad						

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Habronattus texanus</i>	L&U; BEA; INHSD; L&U			Brad				sni	
<i>Habronattus viridipes</i>	KBJ; BEA; INHSD	INHSC		Brad		L&F		c34; c44; sni	
<i>Hasarius adansonii</i>	KBJ; BEA; INHSD		BEA			L&F			
<i>Hentzia mitrata</i>	KBJ; BEA; INHSD	ISM; INHSC	BEA	Brad		L&F		c44; sni	
<i>Hentzia palmarum</i>	KBJ; BEA; INHSD; NSE; L&U	ISM; INHSC	BEA	Brad	INHSC	L&F	MPM	c&b; c33; c44; DR67; sni	
<i>Maevia inclemens</i>	KBJ; BEA; INHSD	FMNH, ISM; INHSC	BEA	Brad		L&F; BJK	MPM	c&b; sni; bbs	
<i>Marpissa bina</i>	KBJ	INHSC		Brad		L&F		c44; sni	
<i>Marpissa denticoides</i>	BEA		BEA	Brad		BJK	MPM	sni	
<i>Marpissa formosa</i>	KBJ; BEA; INHSD		BEA	Brad		BJK	MPM	w84	
<i>Marpissa grata</i>									
<i>Marpissa lineata</i>	KBJ; BEA; INHSD; NSE	FMNH; ISM; INHSC	BEA	Brad		L&F; R&R	MPM	c44; sni; bbs	
<i>Marpissa pikei</i>	KBJ; BEA; INHSD; NSE	ISM; INHSC	BEA	Brad		L&F	MPM	w84	
<i>Metacyrba taeniola</i>	MBC; BEA; INHSD					L&F			
<i>Myrmarachne formicaria</i>									
<i>Naphrys pulex</i>	KBJ; BEA; INHSD; NSE	FMNH, ISM	BEA	Brad		L&F; R&R	MPM	c33; c44; DR67; sni; bbs	
<i>Neon ellamae</i>									
<i>Neon nelli</i>	KBJ; BEA; INHSD; NSE	FMNH; INHSC		Brad		SNA L&F		c&b; c44; DR67; sni; bbs	
<i>Neon plutonus</i>		FMNH							
<i>Paradamoetas fontanus</i>									
<i>Peckhamia americana</i>	MBC; BEA; INHSD		BEA	Brad		L&F			



## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Peckhamia picata</i>	BEA	INHSC		Brad		L&F	MPM	c44; sni c44	
<i>Peckhamia scorpionia</i>	BEA			Brad					
<i>Pelegrina chalcicola</i>	BEA			Brad					
<i>Pelegrina exigua</i>									
<i>Pelegrina flaviceps</i>	KBJ; BEA	INHSC	BEA			L&F	MPM	c34; DR67; sni	
<i>Pelegrina galathea</i>	KBJ; BEA; L&U	FMNH; ISM; INHSC	BEA	Brad		BJK	MPM	w84; sni	
<i>Pelegrina insignis</i>	KBJ; BEA	INHSC	BEA	Brad		L&F	MPM	w84; sni c&b	
<i>Pelegrina montana</i>				Brad			MPM		
<i>Pelegrina peckhamorum</i>	KBJ; BEA; L&U	FMNH; ISM; INHSC	BEA	Brad		BJK; L&F; R&R	MPM	c32; c34; DR67; sni	INHSC
<i>Pelegrina proterva</i>				Brad					
<i>Pellenes longimanus</i>									
<i>Phidippus apacheanus</i>	KBJ; BEA; INHSD; NSE; L&U	ISM; INHSC	BEA	Brad		L&F; LLK L&F; BJK	MPM	c&b; c44; sni	
<i>Phidippus borealis</i>									
<i>Phidippus cardinalis</i>	KBJ; B&N; BEA; INHSD	INHSC; ISM	BEA	Brad		L&F	MPM	c33 c34	
<i>Phidippus clarus</i>	KBJ; BEA; INHSD; NSE; MPM	MPM; ISM; INHSC	BEA	Brad		L&F; BJK	MPM	c32; c44; DR67; sni	INHSC
<i>Phidippus insignarius</i>	BEA	INHSC		Brad			MPM	c44; sni c35	
<i>Phidippus mystaceus</i>	KBJ; BEA; INHSD			Brad					
<i>Phidippus pius</i>	B&N; BEA; INHSD			Brad				c44; sni	
<i>Phidippus princeps</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad		L&F	MPM	c44; sni	
<i>Phidippus purpuratus</i>		ISM; INHSC	BEA	Brad		L&F	MPM	c33; c44; DR67; sni	



## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Tutelina formicaria</i>	KBJ; BEA; INHSD	INHSC		Brad				c33; c44; sni	
<i>Tutelina hartii</i>	KBJ; BEA; INHSD; NSE		BEA	Brad		L&F	MPM	c&b; c44; sni	
<i>Tutelina similis</i>	KBJ; BEA; INHSD; NSE	FMNH	BEA	Brad		L&F; BJK	MPM	c&b; c44; DR67; sni	
<i>Zygoballus nervosus</i>	KBJ; BEA; INHSD	ISM; INHSC	BEA	Brad		L&F; LLK	MPM	c&b; c44; sni	
<i>Zygoballus rufipes</i>	KBJ; BEA; INHSD	FMNH; ISM; INHSC	BEA	Brad		L&F; LLK; BJK	MPM	c&b; sni	
<i>Zygoballus sexpunctatus</i>	B&N; BEA; INHSD	ISM		Brad					
Scytodidae									
<i>Scytodes thoracica</i>	B&N; BEA; INHSD	INHSC	BEA	Brad		L&F	MPM	c&b; sni	
Segestriidae									
<i>Ariadna bicolor</i>	B&N; BEA; INHSD		BEA	Brad					
Sicariidae									
<i>Loxosceles reclusa</i>	B&N; BEA; INHSD	ISM; INHSC	BEA	Brad					
<i>Loxosceles rufescens</i>	B&N; BEA; INHSD	FMNH		Brad					
Tengellidae									
<i>Liocranoides tennesseensis</i>				Brad					
Tetragnathidae									
<i>Dolichognatha pentagona</i>	B&N; BEA; INHSD								
Tetragnathidae									
<i>Glenognatha foxi</i>	KBJ; BEA; INHSD; L&U; LEV	FMNH; INHSC	BEA; LEV	Brad; LEV		L&F; LEV			

## APPENDIX I—Continued.

Species	Illinois		Indiana		Ohio		Wisconsin		Michigan	
	S	V	S	V	S	V	S	V	S	V
<i>Leucage venusta</i>	BEA; INHSD; LEV	FMNH, ISM	BEA; LEV	Brad; LEV	L&F; LLK; LEV; BJK	MPM	c32; DR67; sni; LEV			
<i>Meta ovalis</i>	KBj; BEA; INHSD; LEV	ISM	BEA; LEV	Brad; LEV	L&F; LEV	MPM				
<i>Metellina curtsi</i>	BEA; LEV	FMNH; INHSC		Brad; MPM	LEV					
<i>Pachygnatha autumnalis</i>	B&N; BEA; INHSD; LEV		BEA; LEV	Brad						
<i>Pachygnatha brevis</i>	BEA; LEV			Brad; LEV	L&F; LLK; LEV; BJK; R&R	MPM	DR67; sni; LEV			
<i>Pachygnatha dorothea</i>	BEA; LEV			Brad; LEV						
<i>Pachygnatha furcillata</i>			BEA; LEV	Brad						
<i>Pachygnatha tristriata</i>	KBj; BEA; INHSD	ISM; INHSC	BEA	Brad; LEV	LLK; LEV	MPM	sni			
<i>Pachygnatha xanthostoma</i>	KBj; BEA; INHSD		BEA; LEV	Brad; LEV	LEV		sni; LEV			MPM
<i>Tetragnatha caudata</i>	KBj; BEA; INHSD	ISM	BEA	Brad	L&F; BJK	MPM	c&b; c59; sni			
<i>Tetragnatha dearmata</i>		ISM			L&F; LLK		c59; DR67;			MPM
<i>Tetragnatha elongata</i>	KBj; BEA; INHSD	ISM; INHSC	BEA	Brad	L&F	MPM	sni c32; c59; sni			
<i>Tetragnatha extensa</i>			BEA				c32; c59;			MPM
<i>Tetragnatha guatemalensis</i>	B&N; BEA; INHSD		BEA	Brad	L&F; R&R		DR67; sni c59; DR67;			
<i>Tetragnatha laboriosa</i>	KBj; BEA; INHSD; L&U	ISM; INHSC	BEA	Brad	L&F; BJK	MPM	sni c32; c59;			INHSC
<i>Tetragnatha pallescens</i>	KBj; BEA; INHSD	ISM	BEA	Brad	L&F	MPM	c&b; c59; DR67; sni			
<i>Tetragnatha shoshone</i>	BEA			Brad			DR67; sni			
<i>Tetragnatha straminea</i>	KBj; BEA; INHSD; L&U	ISM; INHSC	BEA	Brad	L&F	MPM	DR67; sni			
				Brad			c32; c59; sni			MPM
				Brad						

## APPENDIX I—Continued.

Species	Illinois		Indiana		Ohio		Wisconsin		Michigan	
	S	V	S	V	S	V	S	V	S	V
<i>Tetragnatha vermiformis</i>	BEA	INHSC	BEA							
<i>Tetragnatha versicolor</i>	KBj; BEA; INHSD	ISM, INHSC	BEA		Brad		L&F L&F	MPM MPM	c&b; c59; smi c59; DR67; smi smi	
<i>Tetragnatha viridis</i>										
Theridiidae										
<i>Achaearanea conjuncta</i>	KBj; BEA; INHSD	FMNH			Brad Brad			MPM	c35; smi	
<i>Achaearanea globosa</i>	B&N; BEA; INHSD		BEA		Brad					
<i>Achaearanea porteri</i>	KBj; BEA; INHSD	INHSC	BEA		Brad		L&F; LLK			
<i>Achaearanea rupicola</i>	KBj; BEA; INHSD	FMNH	BEA		Brad					
<i>Achaearanea tabulata</i>	KBj; BEA; INHSD; NSE	ISM; INHSC	BEA		Brad		L&F; LLK	MPM	c32; DR67; smi smi	
<i>Achaearanea tepidariorum</i>	BEA									
<i>Anelosimus studiosus</i>	B&N; BEA; INHSD									
<i>Argyrodes elevatus</i>	KBj; BEA; INHSD	FMNH	BEA		Brad		L&F; LLK; R&R	MPM	c33; smi	MPM; INHSC
<i>Crustulina altera</i>	KBj; BEA; INHSD		BEA		Brad		LLK; R&R	MPM	c35; DR67; smi	
<i>Crustulina sticta</i>	KBj; BEA; INHSD		BEA		Brad					
<i>Dipoena buccalis</i>	KBj; BEA; INHSD	FMNH, ISM			Brad Brad		L&F; LLK		smi DR67; smi	INHSC
<i>Dipoena nigra</i>	B&N; BEA; INHSD	FMNH			Brad		L&F; LLK; BJK	MPM	smi	
<i>Enoplognatha caricis</i>	KBj; INHSD B&N; BEA; INHSD				Brad		L&F; LLK			
<i>Enoplognatha intrepida</i>	KBj; INHSD B&N; BEA; INHSD				Brad		L&F; LLK	MPM	c32; DR67; smi	
<i>Enoplognatha joshua</i>	KBj; BEA; INHSD		BEA		Brad		BJK			
<i>Enoplognatha marmorata</i>	KBj; BEA; INHSD	FMNH			Brad		L&F; LLK	MPM	c32; DR67; smi	
<i>Enoplognatha ovata</i>					Brad		BJK	MPM	smi	

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Epistinus amoenus</i>				Brad					
<i>Euryopsis argentea</i>	KBJ; BEA; INHSD		BEA	Brad		L&F; LLK		sni	
<i>Euryopsis funebris</i>	KBJ; BEA	FMNH, ISM; INHSC	BEA	Brad		L&F; LLK	MPM	c&b; DR67; sni	
<i>Euryopsis gertschi</i>	KBJ; BEA; INHSD		BEA						
<i>Euryopsis pepini</i>				Brad		L&F; LLK			
<i>Euryopsis quinquemaculata</i>	B&N; BEA; INHSD			Brad					
<i>Euryopsis saukea</i>	B&N; BEA;			Brad		L&F; LLK			
<i>Faiditus cancellatus</i>	B&N; BEA; INHSD								
<i>Keijia alabamensis</i>	B&N; BEA; INHSD		BEA	Brad		L&F; LLK			
<i>Keijia antoni</i>	B&N; BEA; INHSD			Brad					
<i>Keijia punctosparsa</i>	KBJ; BEA; INHSD		BEA	Brad		MPM	MPM	c32; sni	
<i>Lasaeola prona</i>	B&N; BEA; INHSD	FMNH							
<i>Latrodectus mactans</i>	KBJ; BEA; INHSD	ISM; INHSC	BEA	Brad			MPM	c33	
<i>Latrodectus variolus</i>	B&N; BEA; INHSD	INHSC	BEA	Brad		L&F; LLK	MPM	sni	
<i>Neospintharus trigonum</i>	B&N; BEA; INHSD	FMNH, ISM	BEA	Brad		L&F; LLK		c33; DR67; sni	MPM
<i>Pholcomma hirsutum</i>	BEA		BEA	Brad		L&F; LLK		sni	
<i>Phoroncidia americana</i>	B&N; BEA; INHSD		BEA	Brad					
<i>Robertus banksi</i>						L&F; LLK		SNA	
<i>Robertus borealis</i>	KBJ; BEA; INHSD	FMNH							
<i>Robertus eremophilus</i>	B&N; BEA; INHSD					L&F; LLK			
<i>Robertus frontatus</i>	B&N; BEA; INHSD	FMNH		Brad					

## APPENDIX I—Continued.

Species	Illinois	Illinois	Indiana	Ohio	Ohio	Wisconsin	Wisconsin	Michigan	Michigan
	S	V	S	S	V	S	V	S	V
<i>Robertus fuscus</i>	KBJ; BEA; INHSD					LLK LLK		c35; sni DR67; sni	
<i>Robertus laticeps</i>									
<i>Robertus longipalpus</i>		FMNH	SNA			L&F; LLK			
<i>Robertus pumilis</i>	KBJ; BEA; INHSD		BEA	Brad		L&F; LLK; BJK	MPM	DR67; sni	
<i>Robertus riparius</i>								sni	
<i>Robertus similis</i>						LLK		sni	
<i>Robertus spinifer</i>	B&N; BEA; INHSD	INHSC		Brad				sni	
<i>Rhomphaea fictitium</i>									
<i>Rugathodes aurantius</i>						LLK		sni	
<i>Rugathodes sexpunctatus</i>				Brad		L&F; LLK		c34; DR67; sni	
<i>Spintharus flavidus</i>	KBJ; BEA; INHSD	ISM		Brad					
<i>Steatoda albomaculata</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad		L&F; LLK		DR67; sni	
<i>Steatoda americana</i>	KBJ; BEA; INHSD		BEA	Brad		L&F; LLK	MPM	c34; sni	
<i>Steatoda borealis</i>	KBJ; BEA; INHSD; MPM	FMNH; MPM; ISM; INHSC	BEA	Brad	MPM	L&F; LLK	MPM; INHSC	c32; DR67; sni	MPM
<i>Steatoda grossa</i>	KBJ; BEA; INHSD	ISM; INHSC	BEA	Brad		L&F; LLK	MPM	sni	MPM
<i>Steatoda triangulosa</i>	B&N; BEA; INHSD		BEA	Brad					
<i>Stemmops ornatus</i>	B&N; BEA; INHSD								
<i>Takayus lyricus</i>	B&N; BEA; INHSD	FMNH	BEA	Brad		L&F; LLK	MPM	sni	
<i>Theonoe stridula</i>	B&N; BEA; INHSD; L&U	FMNH; INHSC	BEA	Brad		L&F; LLK	MPM	sni	
<i>Theridion albidum</i>						L&F; LLK; BJK	MPM	sni	
<i>Theridion cheimatos</i>				SNA					





## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Wamba crispulus</i>	B&N; BEA; INHSD	FMNH		Brad					
Theridiosomatidae									
<i>Theridiosoma gemmosum</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad		L&F; BJK	MPM	c32; sni	
Thomisidae									
<i>Bassaniana floridana</i>		FMNH		Brad			MPM	sni	
<i>Bassaniana utahensis</i>	KBJ; BEA; INHSD	FMNH	BEA	Brad		L&F	MPM	c&b; c40; DRC	
<i>Bassaniana versicolor</i>									
<i>Misumena vatia</i>	KBJ; BEA; INHSD; L&U	ISM	BEA	Brad		L&F; BJK	MPM	c32; c40; DRC	MPM
<i>Misumenoides formosipes</i>	KBJ; BEA; INHSD; L&U	MPM; ISM; INHSC	BEA	Brad		L&F	MPM	c&b	
<i>Misumenops asperatus</i>	KBJ; BEA; INHSD; L&U	ISM; INHSC	BEA	Brad		L&F; BJK	MPM	c32; c40; sni	
<i>Misumenops celer</i>	KBJ; BEA; INHSD	ISM; INHSC		Brad				sni	
<i>Misumenops oblongus</i>	KBJ; BEA; INHSD	ISM; INHSC	BEA	Brad		L&F	MPM	c35; c40; DR67; sni	
<i>Ozyptila americana</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad		L&F; LLK; BJK		c33; c40; DR67; sni; bbs	
<i>Ozyptila conspurcata</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA			L&F; R&R		c&b; c40; sni; bbs	
<i>Ozyptila creola</i>				Brad					
<i>Ozyptila curvata</i>				Brad					
<i>Ozyptila distans</i>		FMNH; INHSC						sni	
<i>Ozyptila georgiana</i>								sni	
<i>Ozyptila modesta</i>				Brad					
<i>Ozyptila monroensis</i>	KBJ; BEA; INHSD	FMNH	BEA	Brad		L&F LLK; DRC		DRE; DRC	

## APPENDIX I—Continued.

Species	Illinois		Indiana		Ohio		Wisconsin		Michigan	
	S	V	S	V	S	V	S	V	S	V
<i>Synema parvulum</i>	MBC; BEA; INHSD	ISM; INHSC	BEA	Brad						
<i>Tmarus angulatus</i>	KBJ; BEA; INHSD	FMNH; ISM; INHSC	BEA	Brad	L&F				c35; c40; sni	
<i>Tmarus minutus</i>			BEA	Brad						
<i>Tmarus rubromaculatus</i>										
<i>Xysticus alboniger</i>		INHSC	BEA	Brad					sni	
<i>Xysticus ampullatus</i>			BEA	Brad	BJK			MPM	sni	
<i>Xysticus auctificus</i>	L&U; BEA; INHSD	ISM	BEA	Brad						
<i>Xysticus banksi</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad					DRE; c&b; sni	
<i>Xysticus bicuspis</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad					c&b; c40; sni; DRC	
<i>Xysticus canadensis</i>									sni	
<i>Xysticus chippewa</i>									sni	
<i>Xysticus cunctator</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad					c&b; c40; sni	
<i>Xysticus discursans</i>	KBJ; BEA; INHSD; L&U	FMNH; ISM	BEA	Brad					c&b; c40; DR67; sni; bbs	
<i>Xysticus elegans</i>									sni	
<i>Xysticus ellipticus</i>	KBJ; BEA; INHSD	FMNH		Brad					c33; sni	
<i>Xysticus emertoni</i>	KBJ; BEA; INHSD; L&U	FMNH; MPM; INHSC; ISM	BEA	Brad					c32; c40; DR67; sni; bbs	
<i>Xysticus ferox</i>	KBJ; BEA; INHSD	FMNH		Brad					sni	
<i>Xysticus fervidus</i>	KBJ; BEA; INHSD; L&U	FMNH	BEA	Brad					c35; c40; sni; bbs	
<i>Xysticus fraternus</i>	KBJ; BEA; INHSD	ISM	BEA	Brad					c&b; c40; sni	
<i>Xysticus funestus</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad					c&b; c40; DR67; sni	
<i>Xysticus gulosus</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad					c&b; c40; DR67; sni	

## APPENDIX I—Continued.

Species	Illinois S	Illinois V	Indiana S	Ohio S	Ohio V	Wisconsin S	Wisconsin V	Michigan S	Michigan V
<i>Xysticus luctuosus</i>	KBJ; BEA; INHSD	ISM; INHSC	BEA	Brad		L&F; R&R	MPM	DR67; sni	
<i>Xysticus luctuosus</i>						L&F; LLK		sni	
<i>Xysticus nevadensis</i>						LLK			
<i>Xysticus pellax</i>		INHSC		Brad		L&F; R&R		DR67; sni DRE; DRC	
<i>Xysticus posti</i>									
<i>Xysticus punctatus</i>						LLK; DRC	MPM		
<i>Xysticus texanus</i>	B&N; BEA; INHSD		BEA						
<i>Xysticus triguttatus</i>	KBJ; BEA; INHSD	ISM; INHSC	BEA	Brad		L&F; BJK; R&R	MPM	c34; c40; DR67; sni	
Titanoecidae									
<i>Titanoeca americana</i>	KBJ; BEA; INHSD	INHSC	BEA	Brad		L&F	MPM	c&b; DR67; sni	
<i>Titanoeca brunnea</i>	BEA		BEA	Brad					
Uloboridae									
<i>Hyptiotes cavatus</i>	KBJ; BEA; INHSD	FMNH; INHSC	BEA	Brad		L&F; LLK		c32; DR67; sni	
<i>Octonoba sinensis</i>	MBC; BEA; INHSD	ISM	BEA	Brad					
<i>Uloborus glomosus</i>	KBJ; BEA; INHSD; L&U	FMNH; ISM; INHSC	BEA	Brad		L&F		sni	
Zoridae									
<i>Zora pumila</i>	B&N; BEA; INHSD	INHSC	BEA	Brad					

## APPENDIX II

Spider Species Name Concordance Table. The table contains all species names and genus-species name combinations employed in the referenced species lists (Literature cited). The literature source is listed in the column Source, using the abbreviations listed in the Literature cited section. The column 'Reason for exclusion' indicates the currently valid name under which the particular species is listed in Table 8 and Appendix I. Abbreviations: 'err. pro' = in error of; 'syn of' = species name in the left column is a synonym of the currently valid species name listed in the right column; 'transf to' = indicates the currently valid genus-species combination of the species (according to Platnick 2005).

Species	Source	Reason for exclusion
Agelenidae		
<i>Tegenaria derhamii</i> (Scopoli 1763)	sni; ISM	syn of <i>T. domestica</i>
Amaurobiidae		
<i>Amaurobius americanus</i> Emerton?	cb	species name not listed in Platnick 2005
<i>Amaurobius bennetti</i> (Blackwall 1846)	sni	transf to <i>Callobius</i>
<i>Amaurobius fidelis</i> (Banks 1892)	sni	syn of <i>Coras juvenilis</i>
<i>Callioplus tibialis</i> (Emerton 1888)	sni	transf to <i>Cybaeopsis</i>
<i>Callobius borealis</i> (Emerton 1909)	sni	transf to <i>Amaurobius</i>
<i>Coelotes fidelis</i> Banks 1892	c32; sni	syn of <i>Coras juvenilis</i>
<i>Coelotes juvenilis</i> (Keyserling 1881)	INHS; sni	transf to <i>Coras</i>
<i>Coelotes montanus</i> Emerton 1890	sni	transf to <i>Coras</i> , Snider lists <i>Coras montanus</i> as well
<i>Walms borealis</i> Emerton 1909	L&F; LLK; DR67	listed under <i>Amaurobius</i> in Platnick 2005
Anyphaenidae		
<i>Anyphaena rubra</i> Emerton 1890	cb	syn of <i>Hibana gracilis</i>
<i>Anyphaenella saltabunda</i> (Hentz 1847)	RR; sni	transf to <i>Wulfila</i>
<i>Aysha gracilis</i> (Hentz 1847)	L&F; c35; DRD; L&U	transf to <i>Hibana</i>
<i>Oxysoma cubanum</i> Banks 1909	L&U; BEA; INHS	transf to <i>Arachosia</i>
<i>Wulfila alba</i> (Hentz 1847)	INHS	miscitation for <i>W. albens</i>
Araneidae		
<i>Aculepeira carbonaria</i> (L. Koch 1869)	L&F	Palaearctic; Wisconsin specimens may have belonged to <i>Aculepeira verae</i> ; no additional specimen records in the literature
<i>Alpaida calix</i> (Walckenaer 1805)	INHS	transf to <i>Metazygia</i>
<i>Araneus angulatus</i> Clerck 1775	c33; sni	Palaearctic; Michigan specimens belong probably to various species (Levi 1971)
<i>Araneus cornutus</i> (Clerck 1757)	INHS; c32	transf to <i>Larinioides</i>
<i>Araneus cucurbitinus</i> Clerck 1757	c34	transf to <i>Araniella</i> ; specimens most likely misidentified and belonging to <i>Araniella displicata</i> (Snider 1971)
<i>Araneus diademus</i> Linnaeus 1758	sni	syn of <i>A. diadematus</i> Clerck 1757
<i>Araneus dumetorum</i> (Fourcroy 1785)	sni	syn of <i>Larinioides patagiatus</i>
<i>Araneus foliatus</i> (Fourcroy 1785)	sni	syn of <i>Larinioides cornutus</i>
<i>Araneus gigas</i> (Leach 1815)	BN; INHS	listed under <i>A. bicentenarius</i> in Platnick
<i>Araneus patagiatus</i> (Clerck 1757)	INHS; c32	transf to <i>Larinioides</i>
<i>Araneus pratensis</i> (Hentz 1847)	cb	transf to <i>Neoscona</i>
<i>Araneus raji</i> Scopoli 1763	sni	syn of <i>A. marmoreus</i>
<i>Araneus sachimau</i> Archer 1951	sni	syn of <i>A. iviei</i>

## APPENDIX II—Continued.

Species	Source	Reason for exclusion
<i>Araneus sericatus</i> Clerck 1757	cb	syn of <i>Larinioides sclopetarius</i>
<i>Araneus solitarius</i> (Emerton 1884)	L&F; DR67	syn of <i>A. saevus</i>
<i>Araneus triguttatus</i> (Fabricius 1775)	L&F	Palaearctic; Wisconsin specimens likely mislabeled; no additional specimen records in the literature
<i>Araniella cucurbitina</i> (Clerck 1757)	c34; sni	Palaearctic; Michigan specimens belong probably to <i>Araniella displicata</i>
<i>Conepeira glyphica</i> Archer 1951	L&F	syn of <i>A. guttulatus</i>
<i>Conepeira mayo</i> (McCook 1893)	L&F	syn of <i>A. triguttatus</i> , Palaearctic; Wisconsin specimens of <i>A. triguttatus</i> likely mislabeled; no additional specimen records in the literature
<i>Epeira cornuta</i> (Clerck 1757)	L&F; DR67	transf to <i>Larinioides</i>
<i>Epeira patagiata</i> (Clerck 1757)	L&F; DR67	transf to <i>Larinioides</i>
<i>Epeira sericata</i> (Clerck 1757)	DR67	syn of <i>Larinioides sclopetarius</i>
<i>Eustala anatera</i> (Walckenaer 1842)	DR67	err. pro <i>E. anastera</i>
<i>Glyptocranium bisaccatum</i> (Emerton 1884)	c35	transf to <i>Mastophora</i>
<i>Hypsosinga variabilis</i> (Emerton 1884)	BJK; sni	syn of <i>H. pygmaea</i>
<i>Hypsosinga truncata</i> (Banks 1901)	sni	syn of <i>H. rubens</i>
<i>Larinioides sericata</i> (Clerck 1757)	BEA	syn of <i>L. sclopetarius</i>
<i>Neoscona benjamina</i> Walckenaer 1842	c33	nomen dubium
<i>Neoscona hentzi</i> (Keyserling 1864)	INHS; L&F	syn of <i>N. crucifera</i>
<i>Neoscona minima</i> F. O. P.-Cambridge 1904	sni; MBC	syn of <i>N. arabesca</i>
<i>Neoscona sacra</i> (Walckenaer 1841)	L&F	nomen dubium, possibly specimens belong to <i>N. crucifera</i>
<i>Neosconella pagnia</i> (Walckenaer 1842)	INHS	transf to <i>Araneus</i>
<i>Neosconella thaddeus</i> (Hentz 1847)	INHS	transf to <i>Araneus</i>
<i>Nuctenea cornuta</i> (Clerck 1757)	INHS	transf to <i>Larinioides</i>
<i>Nuctenea dumetora</i> Villers [sic] 1789	sni	syn of <i>Larinioides patagiatus</i> , err. pro Fourcroy 1785
<i>Nuctenea patagiata</i> (Clerck 1757)	INHS	transf to <i>Larinioides</i>
<i>Nuctenea sericata</i> (Clerck 1757)	INHS	syn of <i>Larinioides sclopetarius</i>
<i>Nuctenea undata</i> Olivier 1789	sni	syn of <i>Larinioides sclopetarius</i>
<i>Singa campestris</i> Emerton 1915	LLK	syn of <i>S. keyserlingi</i>
<i>Singa maculata</i> Emerton 1884	c32	syn of <i>Hypsosinga rubens</i>
<i>Singa pratensis</i> Emerton 1884	L&F	transf to <i>Araneus</i>
<i>Singa variabilis</i> Emerton 1884	L&F; LLK; c32	syn of <i>Hypsosinga pygmaea</i> , but see Crawford 1988 for a dissenting opinion
<i>Wixia anaglyphe</i> (Walckenaer 1842)	KBJ; BEA; INHS	species identity unclear; listed as a 'never used' by Platnick
<i>Zilla montana</i> C. L. Koch 1834	c34	transf to <i>Zygiella</i>
Atypidae		
<i>Atypus milberti</i> Walckenaer 1837	sni	syn of <i>Sphodros rufipes</i>
<i>Atypus niger</i> Hentz 1852	L&F; LLK	transf to <i>Sphodros</i>
Clubionidae		
<i>Clubiona agrestis</i> Emerton 1924	c39	syn of <i>C. bryantae</i>
<i>Clubiona emertoni</i> Petrunkevitch 1911	c33	syn of <i>C. moesta</i>
<i>Clubiona excepta</i> L. Koch 1866	sni	transf to <i>Elaver</i>
<i>Clubiona obtusa</i> Emerton 1915	c39	syn of <i>C. trivialis</i>
<i>Clubiona pallens</i> Hentz 1847	L&F; c33; DR67	syn of <i>Elavor excepta</i>

## APPENDIX II—Continued.

Species	Source	Reason for exclusion
<i>Clubiona tibialis</i> Emerton 1890	L&F; cb; sni	syn of <i>C. maritima</i>
<i>Clubionoides excepta</i> (L. Koch 1866)	INHS; sni	transf to <i>Elaver</i>
Corinnidae		
<i>Phrurolithus alarius</i> (Hentz 1847)	c32	transf to <i>Phrurotimpus</i>
<i>Phrurolithus borealis</i> Emerton 1911	c39	transf to <i>Phrurotimpus</i>
<i>Phrurolithus formidabilis</i> (Chamberlin & Gertsch 1930)	c39	transf back to <i>Phruronellus</i>
<i>Phrurolithus pugnatus</i> Emerton 1890	c33	transf to <i>Scotinella</i>
<i>Scotinella alaria</i> (Hentz 1847)	sni	transf to <i>Phrurotimpus</i>
<i>Scotinella borealis</i> (Emerton 1911)	sni	transf to <i>Phrurotimpus</i>
<i>Scotinella delicatula</i> (Gertsch 1935)	BEA; INHS	syn of <i>Phrurolithus similis</i>
<i>Scotinella emertoni</i> (Gertsch 1935)	INHS	transf to <i>Phrurolithus</i>
<i>Scotinella formica</i> (Banks 1895)	INHS	transf to <i>Phruronellus</i>
<i>Scotinella formidabilis</i> (Chamberlin & Gertsch 1930)	sni	transf back to <i>Phruronellus</i>
<i>Scotinella goodnighti</i> (Muma 1945)	INHS	transf to <i>Phrurolithus</i>
<i>Scotinella similis</i> (Banks 1895)	INHS; sni	transf to <i>Phrurolithus</i>
<i>Trachelas deceptus</i> (Banks 1895)	INHS; DRD	transf to <i>Meriola</i>
Ctenidae		
<i>Ctenus bilobatus</i> F.O.P.-Cambridge 1900	Brad	native to Mexico; occasionally imported
<i>Cupiennius coccineus</i> F.O.P.-Cambridge 1901	Brad	native to Costa Rica, Panama; occasionally imported
Cybaeidae		
<i>Cybaeus silicis</i> Barrows 1919	BN; INHS	syn of <i>C. giganteus</i>
Dictynidae		
<i>Cicurina lowriei</i> Levi 1951	L&F; DR67; sni	syn of <i>C. placida</i>
<i>Conopistha trigonum</i> (Hentz 1850)	L&F	transf to <i>Argyrodes</i>
<i>Dictyna alias</i> Chamberlin 1948	L&F	syn of <i>D. sancta</i>
<i>Dictyna altamira</i> Gertsch & Davis 1942	sni	transf to <i>Emblyna</i>
<i>Dictyna annulipes</i> (Blackwall 1846)	INHS; L&F; DR67; sni	transf to <i>Emblyna</i>
<i>Dictyna bicornis</i> Emerton 1915	INHS; L&F; sni	transf to <i>Phantyna</i>
<i>Dictyna cruciata</i> (Emerton 1888)	INHS; L&F; sni	transf to <i>Emblyna</i>
<i>Dictyna frondea</i> Emerton 1888	c35	syn of <i>D. foliacea</i>
<i>Dictyna hentzi</i> Kaston 1945	L&F; LLK; sni	transf to <i>Emblyna</i>
<i>Dictyna manitoba</i> (Ivie 1947)	INHS; L&F	transf to <i>Emblyna</i>
<i>Dictyna maxima</i> Banks 1892	DR67; sni	transf to <i>Emblyna</i>
<i>Dictyna roscida</i> (Hentz 1850)	sni	transf to <i>Emblyna</i>
<i>Dictyna sublata</i> (Hentz 1850)	INHS; L&F; c32; DR67; sni; BJK	transf to <i>Emblyna</i>
<i>Scotolathys pallidus</i> (Marx 1891)	c34; L&F; LLK	transf to <i>Lathys</i>
Gnaphosidae		
<i>Drassodes robinsoni</i> Chamberlin 1919	INHS	syn of <i>D. saccatus</i>
<i>Drassodes robustus</i> (Emerton 1890)	cb	syn of <i>Haplodrassus signifer</i>
<i>Drassyllus femoralis</i> (Banks 1904)	LLK	syn of <i>Urozelotes rusticus</i>
<i>Drassyllus virginianus</i> Chamberlin 1922	L&F; bbs	syn of <i>D. novus</i>
<i>Drassyllus rusticus</i> L. Koch 1872	INHS	transf to <i>Urozelotes</i>
<i>Gnaphosa gigantea</i> Keyserling 1887	c32	syn of <i>G. muscorum</i>

## APPENDIX II—Continued.

Species	Source	Reason for exclusion
<i>Haplodrassus magister</i> Chamberlin 1933	INHS	syn of <i>Urozelotes rusticus</i>
<i>Haplodrassus robustus</i> (Emerton 1890)	sni	syn of <i>Haplodrassus signifer</i> ; <i>H. signifer</i> also listed by Snider
<i>Haplodrassus rubicolens</i> Chamberlin, no year	INHS	not found in Platnick
<i>Herpyllus vasifer</i> (Walckenaer 1805)	L&F; c32; DR67	syn of <i>H. ecclesiasticus</i>
<i>Litopyllus rupicolens</i> Chamberlin 1922	INHS	syn of <i>L. temporarius</i>
<i>Micaria aurata</i> (Hentz 1847)	KBJ; BEA; INHS	nomen dubium according to Platnick
<i>Micaria montana</i> Emerton 1890	c35; pd; L&F; LLK	syn of <i>M. pulicaria</i>
<i>Nodocion melanie</i> Levi 1951	L&F; LLK	syn of <i>N. floridanus</i>
<i>Poecilochroa capulata</i> (Walckenaer 1837)	L&F; RR	transf to <i>Sergiolus</i>
<i>Poecilochroa decorata</i> (Kaston 1945)	sni	transf to <i>Sergiolus</i>
<i>Poecilochroa famula</i> (Chamberlin 1922)	L&F	syn of <i>Sergiolus minutus</i>
<i>Poecilochroa montana</i> Emerton 1890	L&F; sni	transf to <i>Sergiolus</i>
<i>Poecilochroa variegata</i> (Hentz 1847)	sni	syn of <i>Sergiolus capulatus</i>
<i>Sostogeus zygethus</i> (Chamberlin & Gertsch 1940)	INHS	syn of <i>Sosticus loricatus</i> (L. Koch 1866)
<i>Trachyzelotes lyonneti</i> (Audouin 1826)	BEA	Mediterranean; unlikely to be established; see Platnick, Murphy 1984 and Prentice et al. 1998
<i>Zelotes ater</i> (Hentz 1832)	c32	nomen dubium
<i>Zelotes depressus</i> (Emerton 1890)	c33	transf to <i>Drassyllus</i>
<i>Zelotes subterraneus</i> (C. L. Koch 1833)	BEA; KBJ; INHS; Brad; L&F; c34; DR67; sni	Palaearctic; specimens most likely misidentified and belonging to <i>Zelotes fratris</i>
Hahniidae		
<i>Hahnia agilis</i> Keyserling 1887	c32	transf to <i>Neontistea</i>
<i>Neontistea radula</i> (Emerton 1890)	RR; sni; L&F	syn of <i>N. magna</i> . <i>N. riparia radula</i> is listed as a syn of <i>N. magna</i> , but <i>N. riparia</i> (Keyserling 1887) is listed as a valid species in Platnick. Voucher specimens will have to be examined to clearly determine which species L&F meant.
Linyphiidae		
<i>Agyneta cauta</i> (O. P.-Cambridge 1902)	sni	Palaearctic, unlikely to be established in North America
<i>Bathypantoides brevis</i> (Emerton 1911)	L&F	transf to <i>Bathyphantes</i>
<i>Bathyphantes concolor</i> (Wider 1834)	INHS; L&F; sni	transf to <i>Diplostyla</i>
<i>Bathyphantes nigrinus</i> (Westring 1851)	c34; sni	Palaearctic, unlikely to be established in North America
<i>Bathyphantes pullatus</i> (O.P.-Cambridge 1863)	LLK; sni	transf to <i>Kaestneria</i>
<i>Bathyphantes tristis</i> Banks 1892	L&F	syn of <i>Eperigone trilobata</i>
<i>Catabrithorax oxypaederotipus</i> (Crosby 1905)	sni	transf to <i>Collinsia</i>
<i>Catabrithorax plumosus</i> (Emerton 1882)	LLK; sni; L&U	transf to <i>Collinsia</i>
<i>Centromerus longibullis</i> [sic] (Emerton 1882)	sni	misspelling for <i>C. longibulbus</i>
<i>Centromerus serratus</i> Emerton 1909	sni	Palaearctic, unlikely to be established in North America

## APPENDIX II—Continued.

Species	Source	Reason for exclusion
<i>Ceraticelus formosus</i> (Banks 1892)	OHIO list	transf to <i>Idionella</i>
<i>Ceratinella placida</i> Banks 1892	c35	syn of <i>C. brunnea</i>
<i>Ceratinops laticeps</i> (Emerton 1894)	sni	transf to <i>Ceraticelus</i>
<i>Ceratinopsis anglicana</i> (Hentz 1850)	INHS	transf to <i>Tutaibo</i>
<i>Ceratinopsis purpurescens</i> (Keyserling 1886)	BEA; INHS; L&F	transf to <i>Styloctetor</i>
<i>Ceratinopsis tarsalis</i> Emerton 1924	BN; INHS	syn of <i>C. atolma</i> Chamberlin 1925; BEA lists <i>C. tarsalis</i> as a syn of <i>C. nigripalpis</i>
<i>Chocorua cuneata</i> (Emerton 1909)	LLK	syn of <i>Diplocephalus subrostratus</i>
<i>Cochlembolus pallidus</i> (Emerton 1882)	DR67	transf to <i>Scotinotylus</i>
<i>Cornicularia acuminata</i> Blackwall 1833	sni	transf to <i>Walckenaeria</i> ; Palearctic, European specimens inadvertently listed for Michigan
<i>Cornicularia brevicornis</i> Emerton 1882	LLK; sni	transf to <i>Walckenaeria</i>
<i>Cornicularia clavicornis</i> Emerton 1882	L&F; DR67	transf to <i>Walckenaeria</i>
<i>Cornicularia communis</i> Emerton 1882	L&F; LLK; sni	transf to <i>Walckenaeria</i>
<i>Cornicularia directa</i> (O.P.-Cambridge 1874)	c35	transf to <i>Walckenaeria</i>
<i>Cornicularia indirecta</i> (O.P.-Cambridge 1874)	L&F; DR67	transf to <i>Walckenaeria</i>
<i>Cornicularia minuta</i> Emerton 1882	L&F; LLK; DR67	transf to <i>Walckenaeria</i>
<i>Cornicularia pallida</i> Emerton 1882	L&F; LLK; c35; DR67	transf to <i>Walckenaeria</i>
<i>Cornicularia pinocchio</i> Kaston 1945	sni	transf to <i>Walckenaeria</i>
<i>Cornicularia tibialis</i> Emerton 1882	sni	transf to <i>Walckenaeria</i>
<i>Diplocephalus cuneata</i> (Emerton 1909)	sni	syn of <i>D. subrostrata</i>
<i>Frontinella pyramitela</i> (Walckenaer 1841)	INHS; L&F; L&U; BJK	syn of <i>F. communis</i> , synonymy disputed, possibly nomen dubium
<i>Glyphesis scopulifera</i> (Emerton 1882)	BEA	transf to <i>Tapinocyba</i>
<i>Gonatium rubens</i> (Blackwall 1833)	BN; BEA; INHS; c34; sni; L&F; LLK	Palearctic; specimens most likely misidentified and probably belonging to <i>G. crassipalpum</i>
<i>Grammonota spinimana</i> Emerton 1923	LLK; DR67	syn of <i>G. gentilis</i>
<i>Halorates oxypaederoptipus</i> (Crosby 1905)	BEA	transf to <i>Collinsia</i>
<i>Halorates plumosus</i> (Emerton 1882)	BEA	transf to <i>Collinsia</i>
<i>Hormathion limnatum</i> Crosby & Bishop 1933	L&F	transf to <i>Thyreosthenius</i> Simon 1884 syn of <i>T. parasiticus</i> (Westring 1851)
<i>Hybocepus cymbadentatus</i> Crosby & Bishop 1933	L&F; LLK	transf to <i>Hybauchenidium</i>
<i>Islandia flaveola</i> (Banks 1892)	INHS	err. pro <i>Islandiana</i>
<i>Islandia longisetosa</i> (Emerton 1882)	INHS	err. pro <i>Islandiana</i>
<i>Lepthyphantes appalachia</i> Chamberlin & Ivie 1944	L&F; DR67	syn of <i>Tenuiphantes sabulosus</i>
<i>Lepthyphantes bihamata</i> (Emerton 1882)	sni	transf to <i>Poeciloneta</i>
<i>Lepthyphantes calcarata</i> Emerton 1909	sni	transf to <i>Incestophantes</i>
<i>Lepthyphantes furcata</i> (Emerton 1913)	L&F	transf to <i>Poeciloneta</i>
<i>Lepthyphantes nebulosa</i> (Sundevall 1830)	KBJ; BEA; INHS; cb; DR67; RR	transf to <i>Megalepthyphantes</i>
<i>Lepthyphantes sabulosa</i> (Keyserling 1886)	BN; BEA; INHS; L&F; sni	transf to <i>Tenuiphantes</i>



## APPENDIX II—Continued.

Species	Source	Reason for exclusion
<i>Lepthyphantes subalpina</i> (Emerton 1882)	DR67; L&F	syn of <i>L. turbatrix</i>
<i>Lepthyphantes triramus</i> Chamberlin & Ivie 1947	sni	syn of <i>Incestophantes duplicatus</i>
<i>Lepthyphantes zebra</i> (Emerton 1882)	BEA; L&F; sni	transf to <i>Tenuiphantes</i>
<i>Linyphia clathrata</i> Sundevall 1830	c33; RR	transf to <i>Neriene</i>
<i>Linyphia communis</i> Hentz 1850	c32	transf to <i>Frontinella</i>
<i>Linyphia insignis</i> Blackwall 1841	c33	transf to <i>Helophora</i>
<i>Linyphia lineata</i> (Linnaeus 1758)	c33	transf to <i>Stemonyphantes</i> , Palearctic; most likely not part of the Midwest fauna
<i>Linyphia maculata</i> Emerton 1909	L&F; sni	syn of <i>Neriene variabilis</i>
<i>Linyphia marginata</i> C. L. Koch 1834	L&F; c32; DR67	syn of <i>Neriene radiata</i>
<i>Linyphia phrygiana</i> C. L. Koch 1836	c32	transf to <i>Pityohyphantes</i> ; specimens identified as <i>L. phrygiana</i> may belong to <i>Pityohyphantes costatus</i>
<i>Linyphia pusilla</i> Sundevall 1830	c32	transf to <i>Microlinyphia</i>
<i>Linyphia radiata</i> (Walckenaer 1842)	KBJ; BEA	transf to <i>Neriene</i>
<i>Linyphia variabilis</i> Banks 1892	c33	transf to <i>Neriene</i>
<i>Linyphia waldea</i> Chamberlin & Ivie 1943	INHS; L&F; DR67	syn of <i>Neriene clathrata</i>
<i>Maso alticeps</i> (Fox 1891)	sni	transf to <i>Ceraticelus</i>
<i>Maso gallicus</i> (Simon 1894)	LLK	Palearctic; most likely not part of the Midwest fauna
<i>Maso sundevalli</i> (Westring 1851)	LLK	syn of <i>M. gallicus</i> , Palearctic; most likely not part of the Midwest fauna
<i>Microneta complicata</i> Banks 1892	L&F	misidentified
<i>Microneta cornupalpis</i> (O.P.-Cambridge 1875)	c35	transf to <i>Centromerus</i>
<i>Microneta olivacea</i> Emerton 1882	c35	transf to <i>Agynera</i>
<i>Microneta persoluta</i> (O.P.-Cambridge 1875)	c35	transf to <i>Centromerus</i>
<i>Minyriolus arenarius</i> (Emerton 1911)	L&F; sni	transf to <i>Satilatlas</i>
<i>Minyriolus castaneus</i> (Emerton 1882)	L&F; DR67	transf to <i>Walckenaeria</i>
<i>Montilaira probata</i> (O.P.-Cambridge 1874)	BEA	transf to <i>Collinsia</i>
<i>Neriene waldea</i> (Chamberlin & Ivie 1943)	KBJ	syn of <i>N. clathrata</i>
<i>Oedothorax montanus</i> (Emerton 1882)	c35	transf to <i>Sisicottus</i>
<i>Pityohyphantes phrygianus</i> (C. L. Koch 1836)	c32; sni	Palearctic; specimens identified as <i>phrygianus</i> treated here as belonging to <i>Pityohyphantes costatus</i> .
<i>Pocadicnemis hartlandiana</i> (Emerton 1913)	DR67	transf to <i>Tusukuru</i>
<i>Pocadicnemis pumila</i> (Blackwall 1841)	LLK; DR67; sni	specimens belong most likely to <i>P. americana</i>
<i>Prolinyphia marginata</i> (C. L. Koch 1834)	INHS; BJK	syn of <i>Neriene radiata</i>
<i>Pusillia mandibulata</i> (Emerton 1882)	L&F; LLK; DR67	transf to <i>Microlinyphia</i>
<i>Sciastes terrestris</i> (Emerton 1882)	L&F; LLK; DR67	transf to <i>Porrhomma</i>
<i>Scironis montigenus</i> Bishop & Crosby 1938	DR67	transf to <i>Sisicottus</i>
<i>Scotoussa bidentata</i> (Emerton 1882)	INHS	transf to <i>Diplocentria</i>
<i>Stemonyphantes lineatus</i> (Linnaeus 1758)	c33; sni; L&F	Palearctic; most likely not part of the Midwest fauna
<i>Tumagyna</i> [sic] <i>debilis</i> (Banks 1892)	c35	misspelled for <i>Tunagyna</i>

## APPENDIX II—Continued.

Species	Source	Reason for exclusion
<i>Walckenaer</i> [sic] <i>vigilax</i> (Blackwall 1853)	L&F; LLK; DR67; L&U; RR	syn of <i>W. spiralis</i>
<i>Walckenaeria acuminata</i> Blackwall 1833	sni	Palaearctic, European specimens inadvertently listed for Michigan
Lycosidae		
<i>Allocosa modesta</i> (Keyserling 1877)	Brad	nomen dubium
<i>Alopecosa beanii</i> Emerton 1894	c33	syn of <i>A. aculeata</i>
<i>Arctosa cinerea</i> (Fabricius 1777)	c32; sni	Palaearctic; most likely a misidentification for <i>Arctosa littoralis</i>
<i>Arctosa quinaria</i> Emerton 1894	sni	syn of a <i>A. raptor</i>
<i>Arctosa</i> [sic] <i>funerea</i> (Hentz 1844)	sni	most likely err pro <i>Allocosa funerea</i>
<i>Hogna punctulata</i> (Hentz 1844)	DRE	transf to <i>Rabidosa</i>
<i>Hogna rabida</i> (Walckenaer 1837)	DRE	transf to <i>Rabidosa</i>
<i>Lycosa aspersa</i> (Hentz 1844)	INHS; L&F; c34; sni	transf to <i>Hogna</i>
<i>Lycosa avara</i> (Keyserling 1877)	c35; sni; L&F	transf to <i>Varacosa</i>
<i>Lycosa avida</i> Walckenaer 1837	L&F; c32; DR67; sni; RR	transf to <i>Schizocosa</i>
<i>Lycosa baltimoriana</i> (Keyserling 1877)	INHS; L&F; DR67; sni	transf to <i>Hogna</i>
<i>Lycosa carolinensis</i> (Walckenaer 1805)	INHS; L&F; c32; sni	transf to <i>Hogna</i>
<i>Lycosa fatifera</i> Hentz 1842	c33	transf to <i>Geolycosa</i>
<i>Lycosa frondicola</i> (Emerton 1885)	INHS; L&F; c32; DR67; sni; bbs; RR	transf to <i>Hogna</i>
<i>Lycosa georgicola</i> (Walckenaer 1837)	BEA; INHS	transf to <i>Allocosa</i>
<i>Lycosa gulosa</i> (Walckenaer 1837)	INHS; L&F; c32; sni	transf to <i>Gladicosa</i>
<i>Lycosa helluo</i> (Walckenaer 1837)	INHS; L&F; c33; DR67; sni	transf to <i>Hogna</i>
<i>Lycosa hentzi</i> Banks 1904	INHS	transf to <i>Rabidosa</i>
<i>Lycosa insularis</i> Emerton 1855	sni	species identity uncertain; the only lycosid with the species name <i>insularis</i> described by Emerton was never placed into genus <i>Lycosa</i> (see genus <i>Pirata</i> ). <i>Lycosa insularis</i> Lucas from Cuba is unlikely to be conspecific with Michigan specimens.
<i>Lycosa modesta</i> (Keyserling 1877)	sni	transf to <i>Allocosa</i> , nomen dubium
<i>Lycosa nidifex</i> (Marx 1881)	c34	syn of <i>Geolycosa turricola</i>
<i>Lycosa pikei</i> Marx 1881	c33	transf to <i>Geolycosa</i>
<i>Lycosa pratensis</i> Emerton 1885	L&F; c33; DR67; RR	syn of <i>Trochosa terricola</i>
<i>Lycosa pulchra</i> (Keyserling 1877)	INHS	transf to <i>Gladicosa</i>
<i>Lycosa punctulata</i> (Hentz 1844)	INHS; c35; sni	transf to <i>Rabidosa</i>
<i>Lycosa rabida</i> (Walckenaer 1837)	INHS	transf to <i>Rabidosa</i>
<i>Lycosa riparia</i> Hentz 1844	c35; sni	syn of <i>Allocosa georgicola</i>
<i>Pardosa emertoni</i> Chamberlin 1908	c32	syn of <i>P. distincta</i>
<i>Pardosa longispinata</i> Tullberg 1901	sni	syn of <i>P. littoralis</i>
<i>Pardosa modica brunnea</i> Emerton 1885	c35	syn of <i>P. modica</i>
<i>Pardosa tachypoda</i> (Thorell 1878)	sni	syn of <i>P. xerampelina</i>

## APPENDIX II—Continued.

Species	Source	Reason for exclusion
<i>Pirata arenicola</i> Emerton 1909	L&F; DR67	syn of <i>P. aspirans</i>
<i>Pirata febriculosus</i> (Becker 1881)	c32	syn of <i>P. piraticus</i>
<i>Pirata maculatus</i> Emerton 1909	L&F; c35;	syn of <i>P. sedentarius</i>
	MBC; ISM	
<i>Pirata marxi</i> Stone 1890	INHS; DR67;	transf to <i>Trebacosa</i>
	sni	
<i>Pirata sylvestris</i> Emerton 1909	c35; sni	syn of <i>P. insularis</i>
<i>Schizocosa crassipalpis</i> (Emerton 1909)	L&F; RR	syn of <i>S. crassipalpa</i>
<i>Tarentula aculeata</i> (Clerck 1757)	L&F; DR67;	transf to <i>Alopecosa</i>
	sni	
<i>Trabea aurantiaca</i> (Emerton 1885)	L&F	transf to <i>Trabeops</i>
<i>Trochosa avara</i> (Keyserling 1877)	INHS	transf to <i>Varacosa</i>
<i>Trochosa pratensis</i> (Emerton 1885)	sni	syn of <i>T. terricola</i>
Mimetidae		
<i>Ero furcata</i> (Villers 1789)	BN; BEA;	Palearctic; specimens most likely misidentified and belonging to <i>Ero</i> <i>leonina</i> (Kaston 1981)
	INHS; Brad;	
	L&F; c35;	
	sni	
<i>Mimetus intersector</i> Hentz 1850	c35; sni	syn of <i>M. syllepsicus</i>
Mysmenidae		
<i>Mysema</i> (misspelling) <i>guttata</i> Banks 1895	INHS	transf to <i>Microdipoena</i>
<i>Mysmena guttata</i> (Banks 1895)	BN; BEA;	transf to <i>Microdipoena</i>
	INHS	
Nesticidae		
<i>Nesticus pallidus</i> (Emerton 1875)	NSE; L&F	transf to <i>Eidmannella</i>
Oecobiidae		
<i>Oecobius annulipes</i> Lucas 1846	OHIO list	listed as <i>O. annulipes</i> Lucas 1846. However, <i>O. annulipes</i> is reported from Algeria. Most likely the spec- imens from Ohio belong to <i>O. na-</i> <i>vus</i> .
<i>Oecobius texanus</i> Bryant 1936	MBC	syn of <i>O. cellariorum</i>
Philodromidae		
<i>Philodromus abotti</i> Walckenaer 1837	L&F; L&U	nomen dubium
<i>Philodromus aureolus</i> (Clerck 1757)	L&U; L&F;	Palearctic; specimens most likely misidentified and belonging to <i>Philodromus cespitum</i>
	c40	
<i>Philodromus canadensis</i> Emerton 1917	c34	syn of <i>P. cespitum</i>
<i>Philodromus crespiticolus</i> [sic] (Walckenaer 1805)	DR67	err pro <i>P. cespiticolens</i> , syn of <i>P. cespitum</i>
<i>Philodromus emertoni</i> Bryant 1933	c35; sni	syn of <i>P. mineri</i>
<i>Philodromus lentiginosus</i> Keyserling 1881	c35; sni	syn of <i>P. histrio</i>
<i>Philodromus lineatus</i> Emerton 1892	cb	syn of <i>P. imbecillus</i>
<i>Philodromus pictus</i> Emerton 1892	c34	syn of <i>P. rufus</i>
<i>Philodromus washita</i> Banks, Newport & Bird 1932	L&U	syn of <i>P. keyserlingi</i>
<i>Rhysodromus alascensis</i> (Keyserling 1884)	sni	transf to <i>Philodromus</i>
<i>Thanatus formicus</i> [sic] (Clerck 1757)	DR67	err pro <i>T. formicinus</i>
<i>Tibellus americanus</i> Gertsch?	KB; INHS	species name not found in Platnick's catalog vers. 5
Pholcidae		
<i>Spermophora meridionalis</i> Hentz 1841	L&F	syn of <i>S. senoculata</i>

## APPENDIX II—Continued.

Species	Source	Reason for exclusion
Pisauridae		
<i>Dapanus mirus</i> (Walckenaer 1837)	L&F	transf to <i>Pisaurina</i>
<i>Dolomedes fulvitreronotatus</i> Bishop 1924	sni	syn of <i>D. striatus</i>
<i>Dolomedes scopularis</i> [sic] C. L. Koch 1847	DR67; sni; L&F	syn of <i>D. triton</i> , err. pro <i>scapularis</i>
<i>Dolomedes triton sexpunctatus</i> Hentz 1845	c33; sni	syn of <i>D. triton</i>
<i>Dolomedes urinator</i> Hentz 1845	cb	syn of <i>D. vittatus</i>
<i>Admestina tibialis</i> [sic] (C. L. Koch 1846)	sni	err pro <i>A. tibialis</i>
Salticidae		
<i>Agassa cerulea</i> (Walckenaer 1837)	INHS	nomen dubium
<i>Ballus youngi</i> (Peckham & Peckham 1888)	L&F	transf to <i>Attidops</i>
<i>Dendryphantas capitatus</i> (Hentz 1845)	c32	syn of <i>Pelegrina proterva</i> , dark specimens may be misidentified and belong to <i>P. galathea</i> (Cutler, pers. com., see Maddison 1996)
<i>Eris marginata</i> (Walckenaer 1837)	INHS; sni; L&U	syn of <i>Hentzia palmarum</i>
<i>Evarcha falcata</i> (Clerck 1757)	sni	Palaearctic; most likely a specimen of <i>Evarcha hoyi</i>
<i>Fuentes lineata</i> (C. L. Koch 1846)	c44	transf to <i>Marpissa</i>
<i>Gertschia</i> "dakotensis" "Cutler", unpublished	RR	manuscript name by Cutler (1970, unpublished thesis), synonym of <i>Synageles occidentalis</i>
<i>Gertschia noxiosa</i> (Hentz 1850)	L&F; sni	transf to <i>Synageles</i>
<i>Habrocestum parvulum</i> (Banks 1895)	KBJ; BEA; INHS; Brad; LLK	transf. to <i>Chinattus</i>
<i>Habrocestum pulex</i> (Hentz 1846)	KBJ; BEA; INHS; ISM; NSE; Brad; L&F; RR; c33; c44; DR67; sni; bbs	transf. to <i>Naphrys</i>
<i>Habronattus arizonensis</i> Banks 1904	INHS	syn of <i>H. conjunctus</i>
<i>Habronattus coronatus</i> (Hentz 1846)	INHS; MBC	syn of <i>H. coecatus</i>
<i>Habronattus peregrinus</i> (Peckham & Peckham 1883)	c44	syn of <i>H. viridipes</i>
<i>Habronattus rutherfordi</i> (Gertsch & Mulaik 1936)	INHS; L&U	syn of <i>H. texanus</i>
<i>Hentzia ambigua</i> (Walckenaer 1837)	L&F	syn of <i>H. palmarum</i>
<i>Hycia bina</i> (Hentz 1846)	L&F; c44; sni	transf to <i>Marpissa</i> ; considered a syn of <i>Marpissa formosa</i> by some authors
<i>Hycia pikei</i> Peckham 1888	L&F; sni	transf to <i>Marpissa</i>
<i>Icius elegans</i> (Hentz 1846)	L&F; LLK; DR67; sni	transf to <i>Tutelina</i>
<i>Icius fontanus</i> Levi 1951	L&F	transf to <i>Paradamoetas</i>
<i>Icius formicarius</i> (Emerton 1891)	c33; sni	transf to <i>Tutelina</i>
<i>Icius harti</i> (Peckham in Emerton 1891)	NSE; L&F; sni	transf to <i>Tutelina</i>
<i>Icius similis</i> Banks 1895	L&F; DR67; sni	transf to <i>Tutelina</i>
<i>Maevia vittata</i> (Hentz 1846)	cb; c44; bbs	syn of <i>M. inclemens</i>

## APPENDIX II—Continued.

Species	Source	Reason for exclusion
<i>Marpissa bina</i> (Hentz 1846)	BEA	listed as a syn of <i>M. formosa</i> in BEA; not a syn of <i>formosa</i> according to Platnick 2005. Unclear whether the species occurs in any of the five Midwest states treated here.
<i>Marpissa undata</i> (DeGeer 1778)	L&F; cb; sni; DR67	transf to <i>Platycryptus</i>
<i>Metacyrba undata</i> (DeGeer 1778)	DR67	transf to <i>Platycryptus</i>
<i>Metaphidippus canadensis</i> (Banks 1897)	NSE; L&F; c44; sni	transf to <i>Ghelna</i>
<i>Metaphidippus capitatus</i> (Hentz 1845)	c34	syn of <i>Pelegrina proterva</i> , dark specimens may be misidentified and belong to <i>P. galathea</i> (Cutler, pers. com., see Maddison 1996)
<i>Metaphidippus flaviceps</i> (Kaston 1973)	MPM	transf to <i>Pelegrina</i>
<i>Metaphidippus flavipedes</i> (Peckham 1881)	L&F; c34; c44; DR67; sni	syn of <i>Pelegrina flavipes</i>
<i>Metaphidippus galathea</i> (Walckenaer 1837)	BJK; w84; sni; L&U	transf to <i>Pelegrina</i>
<i>Metaphidippus insignis</i> (Banks 1892)	L&F; w84; sni	transf to <i>Pelegrina</i>
<i>Metaphidippus montanus</i> Emerton 1891	cb; c44	transf to <i>Pelegrina</i>
<i>Metaphidippus protervus</i> (Walckenaer 1837)	KBJ; DR67; sni; L&U; BJK; RR	transf to <i>Pelegrina</i>
<i>Myrmarachne hentzi</i> Banks 1913	MBC	transf to <i>Sarinda</i>
<i>Onondaga lineata</i> (C. L. Koch 1848)	L&F; sni; RR	transf to <i>Marpissa</i>
<i>Paraphidippus marginatus</i> (Walckenaer 1837)	L&F; c33; c44; DR67	syn of <i>Hentzia palmarum</i>
<i>Pellenes agilis</i> (Banks 1893)	c34; sni	transf to <i>Habronattus</i>
<i>Pellenes borealis</i> (Banks 1895)	c33; sni	transf to <i>Habronattus</i>
<i>Pellenes calcarata</i> Banks 1904	sni	transf to <i>Habronattus</i>
<i>Pellenes cognatus</i> (Peckham & Peckham 1901)	sni	transf to <i>Habronattus</i>
<i>Pellenes coronatus</i> (Hentz 1846)	sni	syn of <i>Habronattus coecatus</i>
<i>Pellenes decorus</i> (Blackwall 1846)	c34; sni	transf to <i>Habronattus</i>
<i>Pellenes leucophaea</i> (C. L. Koch 1846)	sni	syn of <i>Pelegrina galathea</i>
<i>Pellenes peregrinus</i> (Peckham 1883)	c34	syn of <i>Habronattus viridipes</i>
<i>Pellenes pulex</i> (Hentz 1846)	sni	transf to <i>Naphrys</i>
<i>Pellenes texanus</i> (Chamberlin 1924)	sni	transf to <i>Habronattus</i>
<i>Pellenes viridipes</i> (Hentz 1846)	sni	transf to <i>Habronattus</i>
<i>Phidippus altanus</i> Gertsch 1934	L&F; c44	syn of <i>P. borealis</i>
<i>Phidippus brunneus</i> Emerton 1891	c44	syn of <i>P. princeps</i>
<i>Phidippus electus</i> C. L. Koch 1846	c35	syn of <i>P. mystaceus</i>
<i>Phidippus fraudulentus</i> (Walckenaer 1837)	KBJ; BEA; INHS	nomen dubium; listed in BEA as a syn of <i>P. insignarius</i>
<i>Phidippus mccooki</i> (Peckham 1883)	KBJ; BEA; INHSD; ISM	syn of <i>P. cardinalis</i> (see Edwards 2004)
<i>Phidippus rimator</i> (Walckenaer 1837)	L&F; RR	nomen dubium; LF give <i>P. clarus</i> as a synonym. Wisconsin specimens may belong to <i>P. clarus</i>
<i>Phlegra fasciata</i> (Hahn 1826)	BN; BEA; Brad; L&F; LLK; cb; c44; sni	Palaearctic; North American specimens were misidentified and belong to the re-validated species <i>Phlegra hentzi</i> (see Lugonov & Koponen 2002)

## APPENDIX II—Continued.

Species	Source	Reason for exclusion
<i>Salticus hentzi</i> (Banks 1913)	MBA; BEA; INHS	transf to <i>Sarinda</i>
<i>Sarinda papenhoei</i> (Peckham & Peckham 1895)	BN; BEA; INHS	returned to <i>Sassacus</i>
<i>Sassacus aemulus</i> Gertsch 1934	L&F	transf to <i>Sibianor</i>
<i>Sitticus cursor</i> (Barrows 1919)	KBJ; INHS	syn of <i>S. concolor</i>
<i>Sitticus floridanus</i> Gertsch & Mulaik 1936	RR	syn of <i>S. concolor</i>
<i>Sitticus palustris</i> (Peckham & Peckham 1883)	KBJ; BEA; INHS; ISM; c33; c44; DR67; sni; BJK	listed in Platnick as <i>S. floricola palustris</i>
<i>Synemosyna lunata</i> (Walckenaer 1837)	L&F	Nomen dubium; LF list <i>S. formica</i> as a syn. Wisconsin specimens may belong to <i>S. formica</i>
<i>Thiodina irrorata</i> (Walckenaer 1837)	KBJ; BEA; INHS	Nomen dubium, listed in BEA as a syn of <i>T. puerpera</i>
<i>Wala palmarum</i> (Hentz 1832)	cB	transf to <i>Hentzia</i>
<i>Zygoballus bettini</i> Peckham & Peckham 1888	INHS; L&F; LLK; c44; sni	syn of <i>Z. rufipes</i>
<i>Zygoballus sextipunctatus</i> (Hentz 1845)	INHS	listed incorrectly as syn of <i>Z. melloleitaoi</i> ; see Platnick for explanation
Heteropodidae		
<i>Heteropoda venatoria</i> (Linnaeus 1767)	Brad; MPM	Pantropical, occasionally imported
Tetragnathidae		
<i>Eucta lacerta</i> (Walckenaer 1842)	c32	transf to <i>Tetragnatha lacerta</i> , nomen dubium
<i>Meta menardi</i> (Latreille 1804)	KBJ; BEA; INHS; LEV; ISM	Palaearctic, specimens most likely misidentified and belonging to <i>Meta ovalis</i> (see Marusik & Koponen 1992 and Dondale 1995)
<i>Mimognatha foxi</i> (McCook 1894)	L&F; L&U	transf to <i>Glenognatha</i>
<i>Pachygnatha kuratai</i> Levi 1951	L&F; LLK; DR67; sni; RR	syn of <i>P. dorothea</i>
<i>Tetragnatha banksi</i> McCook 1893	L&F	syn of <i>T. guatemalensis</i>
<i>Tetragnatha harrodi</i> Levi 1951	L&F; LLK; c59; DR67; ISM	syn of <i>T. dearmata</i>
<i>Tetragnatha rusticana</i> Chickering 1959	c59; sni	syn of <i>T. extensa</i>
<i>Tetragnatha seneca</i> Seeley 1928	RR; sni	syn of <i>T. guatemalensis</i>
Theridiidae		
<i>Allotheridion alabamense</i> (Gertsch & Archer 1942)	L&F	transf to <i>Keijia</i>
<i>Allotheridion albidum</i> (Banks 1895)	L&F	transf back to <i>Theridion</i>
<i>Allotheridion differens</i> (Emerton 1882)	L&F	transf back to <i>Theridion</i>
<i>Allotheridion fieldi</i> Levi 1951	L&F	syn of <i>Theridion hemerobium</i>
<i>Allotheridion frondeum</i> (Hentz 1850)	L&F	transf back to <i>Theridion</i>
<i>Allotheridion glaucescens</i> (Becker 1879)	L&F	transf back to <i>Theridion</i>
<i>Allotheridion lyricum</i> (Walckenaer 1842)	L&F	transf to <i>Takayus</i>
<i>Allotheridion murarium</i> (Emerton 1882)	L&F	transf back to <i>Theridion</i>
<i>Allotheridion zelotypum</i> Emerton 1882	L&F	syn of <i>Theridion pictum</i>
<i>Ancylorranis hirsutum</i> (Emerton 1882)	L&F; LLK	transf to <i>Pholcomma</i>
<i>Argyrodes cancellatus</i> (Hentz 1850)	B&N; BEA; INHSD; Brad	transf to <i>Faiditus</i>

## APPENDIX II—Continued.

Species	Source	Reason for exclusion
<i>Argyrodes fctilium</i> (Hentz 1850)	B&N; BEA; INHSD; Brad	transf to <i>Rhomphaea</i>
<i>Argyrodes trigonum</i> (Hentz 1850)	B&N; BEA; INHSD; FMNH, ISM; Brad: L&F; LLK, C33; DR67; sni;	transf to <i>Neospintharus</i>
<i>Asagena americana</i> Emerton 1882	L&F; c34	transf to <i>Steatoda</i>
<i>Coressa stridula</i> Crosby 1906	LLK	transf back to <i>Theonoe</i>
<i>Crustulina guttata</i> (Wider 1834)	c33	Palaearctic; Chickering's specimens most likely belong to <i>C. altera</i>
<i>Cryptachaea rupicola</i> (Emerton 1882)	L&F	transf to <i>Achaearanea</i>
<i>Ctenium banksi</i> Kaston 1946	L&F; LLK	transf to <i>Robertus</i>
<i>Ctenium eremophilum</i> Chamberlin in Chamberlin & Gertsch 1928	L&F	transf to <i>Robertus</i>
<i>Ctenium fusca</i> (Emerton 1894)	sni	transf to <i>Robertus</i>
<i>Ctenium laticeps</i> (Keyserling 1884)	LLK; sni	transf to <i>Robertus</i>
<i>Ctenium longipalpus</i> Kaston 1946	L&F	transf to <i>Robertus</i>
<i>Ctenium riparius</i> (Keyserling 1886)	L&F; sni	transf to <i>Robertus</i>
<i>Ctenium similis</i> Kaston 1946	sni	transf to <i>Robertus</i>
<i>Ctenium spiniferum</i> (Emerton 1909)	LLK	transf to <i>Robertus</i>
<i>Dipoena prona</i> (Menge 1868)	BN; BEA; INHS	transf to <i>Lasaeola</i>
<i>Enoplognatha rugosa</i> (Emerton 1909)	INHS; LLK	syn of <i>E. intrepida</i>
<i>Enoplognatha tecta</i> Keyserling 1884	BN; BEA; INHS; LLK; sni; BJK	syn of <i>E. caricis</i>
<i>Euryopsis californica</i> Banks 1904	L&F	Western species; specimens most likely belong to <i>Euryopsis pepini</i>
<i>Euryopsis limbata</i> (Walckenaer 1842)	INHS; L&F; sni; RR	nomen dubium; specimens belong most likely to <i>E. funebris</i>
<i>Hentziectypus globosum</i> (Hentz 1850)	L&F	transf to <i>Archaearanea</i>
<i>Lactrodectus curacaviensis</i> (Müller 1776)	LLK; LLK	Wisconsin specimens likely to belong to <i>L. variolus</i>
<i>Lactrodectus mactans</i> (Fabricius 1775)	L&F	Wisconsin specimens likely to belong to <i>L. variolus</i> , see note in LLK: 45
<i>Latrodectus hesperus</i> Chamberlin & Ivie 1935	Brad	western North American species, oc- casionaly imported with fruits
<i>Lithyphantes albomaculatus</i> (DeGeer 1778)	L&F	transf to <i>Steatoda</i>
<i>Lithyphantes corollatus</i> (Linnaeus 1758)	c32	transf to <i>Steatoda</i> ; nomen dubium
<i>Paidisca unimaculata</i> Emerton 1882	sni; L&U	transf to <i>Thymoites</i>
<i>Parasteatoda tepidariorum</i> C. L. Koch 1841	L&F	transf to <i>Achaearanea</i>
<i>Sphyrotinus unimaculatus</i> (Emerton 1882)	LLK	transf to <i>Thymoites</i>
<i>Teutana triangulosa</i> (Walckenaer 1802)	L&F; sni	transf to <i>Steatoda</i>
<i>Theridion alabamense</i> (Gertsch & Archer 1942)	LLK	transf to <i>Keijia</i>
<i>Theridion antoni</i> Keyserling 1884	BN; BEA; INHS	transf to <i>Keijia</i>
<i>Theridion aurantium</i> (Emerton 1915)	LLK; sni	transf to <i>Rugathodes</i>
<i>Theridion berkeleyi</i> Emerton 1924	BN; BEA; INHS; LLK; sni	syn of <i>T. hemerobium</i>

## APPENDIX II—Continued.

Species	Source	Reason for exclusion
<i>Theridion crispulum</i> (Simon 1895)	BEA	transf to <i>Wamba</i>
<i>Theridion globosum</i> Hentz 1850	c35	transf to <i>Achaearanea</i>
<i>Theridion lyricum</i> Walckenaer 1842	sni; LLK	transf to <i>Takayus</i>
<i>Theridion marmoratum</i> Hentz 1850	L&F	transf to <i>Enoplognatha</i>
<i>Theridion ornatum</i> Hahn 1831	DR67; sni	syn of <i>T. pictum</i>
<i>Theridion punctisparsum</i> [sic] Emerton 1883	c32	transf to <i>Keijia</i> , err. pro <i>punctosparsum</i>
<i>Theridion punctosparsum</i> Emerton 1882	KBJ; BEA; INHS	transf to <i>Keijia</i>
<i>Theridion puritanum</i> (Chamberlin & Ivie 1942)	L&F	syn of <i>Enoplognatha caricis</i>
<i>Theridion rugosum</i> (Emerton 1909)	L&F; LLK	syn of <i>Enoplognatha intrepida</i>
<i>Theridion sexpunctatum</i> Emerton 1882	L&F; LLK; c34; DR67	transf to <i>Rugathodes</i>
<i>Theridion spirale</i> Emerton 1882	c32	syn of <i>T. glaucescens</i>
<i>Theridion tepidariorum</i> C. L. Koch 1841	c32	transf to <i>Achaearanea</i>
<i>Theridion zelotypum</i> Emerton 1882	c32	syn of <i>T. pictum</i>
<i>Theridula sphaerula</i> (Hentz 1850)	L&F	<i>T. sphaerula</i> is a misidentification by Levi & Field, Wisconsin specimens belong to <i>Theridula emertoni</i> (Levi, Levi & Kaspar 1958); <i>T. sphaerula</i> is a syn of <i>T. opulenta</i>
<i>Tholocco unimaculatum</i> (Emerton 1882)	L&F; LLK	transf to <i>Thymoites</i>
<i>Ulesanis americana</i> Emerton 1882	sni	transf to <i>Phoroncidia</i>
Theridiosomatidae		
<i>Theridiosma radiosum</i> (McCook 1881)	L&F	syn of <i>T. gemmosum</i>
Thomisidae		
<i>Coriarachne utahensis</i> (Gertsch 1932)	sni	transf to <i>Bassaniana</i>
<i>Coriarachne versicolor</i> Keyserling 1880	INHS; c40; DRC	transf to <i>Bassaniana</i>
<i>Misumena calycina</i> (Linnaeus 1758)	L&U	syn of <i>M. vatia</i>
<i>Misumena rosea</i> Keyserling 1880	sni	syn of <i>Misumenops asperatus</i>
<i>Misumenoides aleatorius</i> (Hentz 1847)	cb; c40	syn of <i>M. formosipes</i>
<i>Misumenops delphinus</i> (Walckenaer 1837)	INHS	syn of <i>M. celer</i>
<i>Oxyptila americanus</i> Banks 1895	LLK	<i>Oxyptila</i> : unjustified emendation of <i>Ozyptila</i>
<i>Oxyptila monroensis</i> Keyserling 1884	LLK	<i>Oxyptila</i> : unjustified emendation of <i>Ozyptila</i>
<i>Ozyptila bryantae</i> Gertsch 1939	RR	syn of <i>O. conspurcata</i>
<i>Ozyptila nevadensis</i> (Keyserling 1880)	LLK	transf to <i>Xysticus</i>
<i>Xysticus banksi</i> Gertsch [sic] 1933	cb	err. pro Bryant
<i>Xysticus graminis</i> Emerton 1892	cb; c40	syn of <i>X. bicuspis</i>
<i>Xysticus lemniscatus</i> (Walckenaer 1837)	KBJ; INHS	nomen dubium
<i>Xysticus limbatus</i> Keyserling 1880	c33	syn of <i>X. emertoni</i>
<i>Xysticus lutulentus</i> Gertsch 1934	L&F; LLK	syn of <i>X. luctuosus</i>
<i>Xysticus obscurum</i> Keyserling 1880	sni	syn of <i>X. ellipticus</i>
<i>Xysticus ontariensis</i> Emerton 1919	L&F; RR	syn of <i>X. pellax</i> ; see note in text
<i>Xysticus transversatus</i> (Walckenaer 1837)	L&F	syn of <i>X. ferox</i>
<i>Xysticus tumefactus</i> (Walckenaer 1837)	INHS	syn of <i>X. funestus</i>
Uloboridae		
<i>Uloborus americanus</i> Walckenaer 1842	cb; L&F	nomen dubium; specimens cited for Michigan and Wisconsin belong most likely to <i>U. glomosus</i>
<i>Uloborus octonarius</i> Muma 1945	INHS; MBC	syn of <i>Octonoba sinensis</i>