

PRELIMINARY SURVEY OF THE SPIDER FAUNA OF THE GREAT SMOKY MOUNTAINS NATIONAL PARK: A PROJECT REPORT

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This report summarizes the results of a 9-month preliminary survey of the spider fauna of the Great Smoky Mountains National Park (GSMNP). This survey, conducted from 1 September 1994 to 31 May 1995, was designed to accomplish the essential groundwork for a full survey of GSMNP spiders. It included a literature review of GSMNP spiders, an inventory of GSMNP spiders housed in museum and private collections, initiation of standardized sampling of spiders in the GSMNP (with an emphasis on spiders living in threatened old growth forest communities), and a start at identifying existing collections of GSMNP spiders. This report includes the following products of this preliminary project: 1) A list of all spider species which, according to published records, have been collected in the GSMNP. (This list includes literature citations for each species and a complete bibliography.) 2) A brief history of spider collecting in the GSMNP. 3) An inventory of extant GSMNP spider collections giving current location, collectors, and, where possible, approximate numbers of specimens. 4) A preliminary list of spider species found in the GSMNP, with habitat and abundance annotations.

Literature records of spiders collected in the GSMNP

Table 1 presents a list of literature records of spiders collected in the GSMNP. This list contains every species (109) for which a published collecting record (either a place name or a mark on a distribution map) clearly identifies a locality lying within the present Park boundary. The species are listed by genus and family in alphabetical sequence. In this and other tables, we followed Platnick's (1993) classification in assigning genera to families. A second list of literature records (Table 2) provides the same information for published records of spider species (52) collected near (within 20 miles of the boundary), but not inside, the Park. Each paper with one (or more) records is cited in abbreviated form on these lists and more completely in Table 3. The search for literature records was nearly exhaustive; all entries in the taxonomic catalogs of spiders (Bonnet 1945; Brignoli 1983; Platnick 1989, 1993) were scanned, any of these with titles indicating the potential for Great Smoky Mountains records were marked, and these papers (about 320) were examined for records. Fewer than 40 additional papers with the potential for such records have yet to be examined.

The type localities of 19 spider species are in the GSMNP. These species are marked with asterisks in Table 1, and their type localities and other relevant data are provided in Table 4. Eight of these species (marked with a single asterisk) may be endemic to the Park, since there are no published records from other localities. Most of the other 11 species (two asterisks) with type localities in the Park appear to be restricted to the southern Appalachians.

Brief history of spider collecting in the GSMNP

A history of spider collecting in the GSMNP which is based on published records and specimen labels and includes the names of collectors, collecting dates, approximate itineraries, and repositories of these collections, should improve access to existing data on GSMNP spiders (Table 5). The first known spider collecting in what would become the GSMNP was done by Sherman Bishop and Cyrus Crosby, both of Cornell University, in October of 1926, the same year that the United States Congress authorized the creation of the Park and 14 years before the Park was dedicated. The second collector to visit the Park, William M. Barrows, became the most frequent collector of GSMNP spiders, making at least 16 collecting trips to the Park from 1928 to 1943. Barrows, a professor at Ohio State University, prepared a list of 253 spider species he collected from the Park; this handwritten list was found among his papers a few months after his death in 1946 and is now in the GSMNP Library. Barrows published two papers describing 10 new species from these collections (Barrows 1940, 1945). Barrows' collections remain largely at OSU in the Museum of Biodiversity and, prior to the current survey, constituted the most important collection of GSMNP spiders.

During the 1930's, as the Park was being developed, numerous other arachnologists and entomologists made brief visits to the Park and collected spiders. These were Nathan Banks and Phillip Darlington (both at the Museum of Comparative Zoology at Harvard), Alexander Petrunkevitch (Yale), Willis Gertsch and Wilton Ivie (both at the American Museum of Natural History), Arthur Chickering (Albion College), W. B. Jones, A. C. Cole, B. J. Kaston, D. C. Lowrie, W. Kern, and W. H. Ball. Arthur Stupka, Chief Naturalist, whose interest in GSMNP spiders was presumably triggered and nourished by Barrows, collected numerous spiders which he gave to Barrows. Except for Barrow's collecting trips in the early 1940's, we found records of only seven spider collecting trips to the Park in the 1940's and 1950's, and only three of these were made by professional arachnologists (Wilton Ivie, S. Mulaik, and Herbert Levi). Between 1960 and the present, approximately 30 different people (plus two groups, participants at the 1981 American Arachnological Society Meetings in Knoxville and the Highlands Biological Station spider class of 1988) have collected spiders in the Park, but the bulk of spiders collected during this period is the work of three people, Frederick Coyle (WCU), Donald DeFoe (GSMNP), and Joel Harp (University of Tennessee and Oak Ridge). Records indicate that half of all spider collector visits to the Park occurred during June, July, and August. The majority of Park collections have been from the following, relatively accessible, localities: Newfound Gap, Mount Leconte, Clingman's Dome, Greenbrier Cove, Laurel Falls Trail, and Park Headquarters.

Repositories of GSMNP spider collections

Table 5 summarizes what is known about where material collected in the GSMNP is now housed. It is based on published records, responses to letters sent to curators of collections deemed likely to contain GSMNP material, and a request for information published in American Arachnology, the American Arachnological Society newsletter. Until the present study began, the largest collections of GSMNP spiders were housed in the Museum of Biodiversity at Ohio State University, the Illinois Natural History Survey, the American Museum of Natural History (which houses the world's largest collection of American spiders), the GSMNP Museum, and the Museum of Comparative Zoology. As a result of Coyle's Park visits in the past and particularly the

current survey effort by Coyle and Miller, the WCU collection houses far more adult specimens than is present in all other collections combined. These specimens will eventually be deposited in the GSMNP Museum and, perhaps, the USNM and AMNH. Two museums that were expected to house spiders from the GSMNP, the North Carolina State Museum and the Virginia Museum of Natural History, have none (R. Hoffman and R. Shelley, pers. commun.).

Preliminary list of spider species found in the GSMNP

Table 6 lists all species collected from the GSMNP, examined and identified by us, and databased to date. Included in this database of 721 records are less than half (121 vials) of the OSU Barrows collection, all (119 vials) of the GSMNP Museum collection, and 477 records from the WCU collection (a few collected in the 1970's by Coyle and the rest from our fall 1994 and spring 1995 collections). This (obviously incomplete) list contains a total of 212 species in 119 genera and 34 families; 150 of these species have not been recorded (in publications) previously from the Park. These 212 observed species do not include 47 of the species with published records in the Park (Table 1). To date we have found 25 species which we are unable to identify with confidence; it is highly probable that 20 of these (including 18 that are not included in this species list) are undescribed species. These putative new species include 1 dictynid, 1 leptonetid, 14 linyphiids, 1 nesticid, 1 theridiid, and 2 salticids. As is typical for virtually all surveys of natural communities, there are few very common species and many rare species. It is too early to rigorously assess habitat preferences, but it is worth noting that ten species have been found only in the (now threatened) spruce-fir forests.

Summary of sampling and identification efforts

Our sampling effort during this preliminary study included 11 field days in September and October 1994 and 9 field days in May and June 1995. Thirty-eight different sites were sampled; most of these were in the middle of the Park and in its western and eastern extremities. The following habitats were sampled: old growth (OG) hemlock, OG mesic oak, OG dry oak, oak/pine, OG mixed hardwood, OG cove hardwood, OG hemlock/hardwood, spruce-fir, second growth mixed hardwood, heath bald, grass bald, and old field. A total of 290 samples were collected; these include 66 1 m² litter samples, 76 1 h ground samples, 60 1 h aerial samples, 72 1 h beating samples, and 16 1 h sweeping samples. About 5110 adult spiders were found in all these samples (2145 in litter samples and 2965 in the 1-hour samples). We have examined and identified about 50% of these spiders (all of the litter spiders and a few hundred of the rest) and have entered the data for most (1887) of these into the database.

Table 1. Literature Records of Spiders Collected in the GSMNP

* = species with type locality in GSMNP and known only from GSMNP

** = species with type locality in GSMNP and also found outside GSMNP

Family	Genus	Species	Author(s) of record	Year	Journal	Vol.	Page
Amaurobiidae	<i>Callioplus</i>	<i>pantoplus</i>	Leech, R.	1972	Mem. Entomol. Soc. Canada	84	60
**Amaurobiidae	<i>Callioplus</i>	<i>pantoplus</i>	Chamberlin, R. V.	1947	Bull. Univ. Utah	38	18
Amaurobiidae	<i>Callobius</i>	<i>bennetti</i>	Leech, R.	1972	Mem. Entomol. Soc. Canada	84	28
Amaurobiidae	<i>Callobius</i>	<i>bennetti</i>	Chamberlin, R. V.	1947	Bull. Univ. Utah	38	7
Amaurobiidae	<i>Callobius</i>	<i>bennetti</i>	Chamberlin, R. V. & W. Ivie	1947	Ann. Entomol. Soc. America	40	35
Amaurobiidae	<i>Coras</i>	<i>medicinalis</i>	Muma, M. H.	1946	Amer. Mus. Novitates	1329	4
Amaurobiidae	<i>Wadotes</i>	<i>bimucronatus</i>	Muma, M. H.	1947	Amer. Mus. Novitates	1334	5
Amaurobiidae	<i>Wadotes</i>	<i>calcaratus</i>	Bennett, R. G.	1987	J. Arachnol.	15	106
Amaurobiidae	<i>Wadotes</i>	<i>deceptus</i>	Bennett, R. G.	1987	J. Arachnol.	15	111
Amaurobiidae	<i>Wadotes</i>	<i>hybridus</i>	Bennett, R. G.	1987	J. Arachnol.	15	116
Amaurobiidae	<i>Wadotes</i>	<i>tennesseensis</i>	Bennett, R. G.	1987	J. Arachnol.	15	121
**Amaurobiidae	<i>Wadotes</i>	<i>tennesseensis</i>	Gertsch, W. J.	1936	Amer. Mus. Novitates	852	14
Amaurobiidae	<i>Wadotes</i>	<i>tennesseensis</i>	Muma, M. H.	1947	Amer. Mus. Novitates	1334	4
Antrodiaetidae	<i>Antrodiaetus</i>	<i>unicolor</i>	Coyle, F. A.	1971	Bull. Mus. Comp. Zool.	141	335
Anyphaenidae	<i>Anyphaena</i>	<i>pectorosa</i>	Platnick, N. I.	1974	Bull. Mus. Comp. Zool.	146	230
Anyphaenidae	<i>Wulfilia</i>	<i>alba</i>	Platnick, N. I.	1974	Bull. Mus. Comp. Zool.	146	245
Araneidae	<i>Araneus</i>	<i>nordmanni</i>	Archer, A. F.	1951	Amer. Mus. Novitates	1487	25
Araneidae	<i>Cyclosa</i>	<i>turbinata</i>	Levi, H. W.	1977	Bull. Mus. Comp. Zool.	148	80
Araneidae	<i>Eustala</i>	<i>anastera</i>	Levi, H. W.	1977	Bull. Mus. Comp. Zool.	148	114
Araneidae	<i>Neoscona</i>	<i>arabesca</i>	Berman, J. D. & H. W. Levi	1971	Bull. Mus. Comp. Zool.	141	474
Araneidae	<i>Neoscona</i>	<i>hentzi</i>	Berman, J. D. & H. W. Levi	1971	Bull. Mus. Comp. Zool.	141	478
Clubionidae	<i>Clubiona</i>	<i>abboti</i>	Edwards, R. J.	1958	Bull. Mus. Comp. Zool.	118	417
Clubionidae	<i>Clubiona</i>	<i>canadensis</i>	Edwards, R. J.	1958	Bull. Mus. Comp. Zool.	118	406
*Clubionidae	<i>Clubiona</i>	<i>rhododendri</i>	Barrows, W. M.	1945	Ann. Entomol. Soc. Amer.	38	72
Clubionidae	<i>Clubiona</i>	<i>rhododendri</i>	Edwards, R. J.	1958	Bull. Mus. Comp. Zool.	118	410
Corinnidae	<i>Castianeira</i>	<i>cingulata</i>	Reiskind, J.	1969	Bull. Mus. Comp. Zool.	138	221
**Cybaeidae	<i>Cybaeus</i>	<i>patritus</i>	Bennett, R. G.	1991	PhD Dissertation, Univ. of Guelph		73
*Dictynidae	<i>Cicurina</i>	<i>alpicora</i>	Barrows, W. M.	1945	Ann. Entomol. Soc. Amer.	38	70
Dictynidae	<i>Cicurina</i>	<i>breviaria</i>	Chamberlin, R. V. & W. Ivie	1940	Bull. Univ. Utah	30	26
Dictynidae	<i>Cicurina</i>	<i>brevis</i>	Chamberlin, R. V. & W. Ivie	1940	Bull. Univ. Utah	30	29
Dictynidae	<i>Cicurina</i>	<i>bryantae</i>	Chamberlin, R. V. & W. Ivie	1940	Bull. Univ. Utah	30	25
**Dictynidae	<i>Cicurina</i>	<i>bryantae</i>	Exline, H.	1936	Amer. Mus. Novitates	850	13
Dictynidae	<i>Cicurina</i>	<i>bryantae</i>	Bennett, R. G.	1985	J. Arachnol.	13	88
Dictynidae	<i>Cicurina</i>	<i>exlinae</i>	Chamberlin, R. V. & W. Ivie	1940	Bull. Univ. Utah	30	27
Dictynidae	<i>Cicurina</i>	<i>minima</i>	Chamberlin, R. V. & W. Ivie	1940	Bull. Univ. Utah	30	31
Dictynidae	<i>Cicurina</i>	<i>robusta</i>	Exline, H.	1936	Amer. Mus. Novitates	850	20
Dictynidae	<i>Dictyna</i>	<i>cruciata</i>	Chamberlin, R. V. & W. J.	1958	Bull. Amer. Mus. Nat. Hist.	116	111
Dictynidae	<i>Dictyna</i>	<i>maxima</i>	Chamberlin, R. V. & W. J.	1958	Bull. Amer. Mus. Nat. Hist.	116	130
Dipluridae	<i>Microhexura</i>	<i>montivaga</i>	Coyle, F. A.	1981	Bull. Amer. Mus. Nat. Hist.	170	68
Dipluridae	<i>Microhexura</i>	<i>montivaga</i>	Coyle, F. A.	1985	Bull. Brit. Arachnol. Soc.	6	328
Gnaphosidae	<i>Drassodes</i>	<i>gosiutus</i>	Platnick, N. I. & M. U. Shadab	1976	Amer. Mus. Novitates	2593	12
Gnaphosidae	<i>Drassyllus</i>	<i>dixinus</i>	Platnick, N. I. & M. U. Shadab	1982	Bull. Amer. Mus. Nat. Hist.	173	24
Gnaphosidae	<i>Drassyllus</i>	<i>fallens</i>	Platnick, N. I. & M. U. Shadab	1982	Bull. Amer. Mus. Nat. Hist.	173	9
Gnaphosidae	<i>Litopyllus</i>	<i>temporarius</i>	Platnick, N. I. & M. U. Shadab	1980	Amer. Mus. Novitates	2691	17
Gnaphosidae	<i>Micaria</i>	<i>riggsi</i>	Gertsch, W. J.	1942	Amer. Mus. Novitates	1195	2
Gnaphosidae	<i>Sergiolus</i>	<i>capulatus</i>	Platnick, N. I. & M. U. Shadab	1981	Amer. Mus. Novitates	2717	10
Gnaphosidae	<i>Zelotes</i>	<i>duplex</i>	Chamberlin, R. V.	1936	Amer. Mus. Novitates	853	8
Gnaphosidae	<i>Zelotes</i>	<i>hentzi</i>	Barrows, W. M.	1945	Ann. Entomol. Soc. Amer.	38	75
Gnaphosidae	<i>Zelotes</i>	<i>hentzi</i>	Platnick, N. I. & M. U. Shadab	1983	Bull. Amer. Mus. Nat. Hist.	174	112
Hahnidae	<i>Neoantistea</i>	<i>riparia</i>	Gertsch, W. J.	1934	Amer. Mus. Novitates	712	28
Hypochilidae	<i>Hypochilus</i>	<i>pococki</i>	Petrunkovitch, A.	1932	J. New York Ent. Soc.	40	19
Hypochilidae	<i>Hypochilus</i>	<i>pococki</i>	Forster, R. R., N. I. Platnick, &	1987	Bull. Mus. Comp. Zool.	185	9
Hypochilidae	<i>Hypochilus</i>	<i>pococki</i>	Petrunkovitch, A.	1932	J. New York Entomol. Soc.	40	22
Hypochilidae	<i>Hypochilus</i>	<i>pococki</i>	Gertsch, W. J.	1958	Amer. Mus. Novitates	1912	7
Hypochilidae	<i>Hypochilus</i>	<i>pococki</i>	Coyle, F. A.	1985	J. Arachnol.	13	212
**Leptonetidae	<i>Leptoneta</i>	<i>gertschi</i>	Barrows, W. M.	1940	Ohio J. Sci.	40	131
Leptonetidae	<i>Leptoneta</i>	<i>gertschi</i>	Gertsch, W. J.	1974	J. Arachnol.	1	152
Leptonetidae	<i>Leptoneta</i>	<i>silvicultrix</i>	Gertsch, W. J.	1974	J. Arachnol.	1	150
**Linyphiidae	<i>Bathypantes</i>	<i>bishopi</i>	Ivie, W.	1969	Amer. Mus. Novitates	2364	35

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Linyphiidae	<i>Bathypantes</i>	<i>pallidus</i>	Ivie, W.	1969	Amer. Mus. Novitates	2364	30
**Linyphiidae	<i>Centromerus</i>	<i>tennapax</i>	Barrows, W. M.	1940	Ohio J. Sci.	40	136
Linyphiidae	<i>Centromerus</i>	<i>tennapax</i>	Heldsingen, P. J. van	1973	Zool. Verhandl.	124	14
Linyphiidae	<i>Ceratinopsidis</i>	<i>formosa</i>	Bishop, S. C. & C. R. Crosby	1930	Amer. Mus. Novitates	38	29
Linyphiidae	<i>Eperigone</i>	<i>bryantae</i>	Milledge, A. F.	1987	Amer. Mus. Novitates	2885	17
Linyphiidae	<i>Eperigone</i>	<i>maculata</i>	Milledge, A. F.	1987	Amer. Mus. Novitates	2885	30
Linyphiidae	<i>Estrandia</i>	<i>grandaeva</i>	Blauvelt, H. H.	1936	Festschrift für Prof. Dr. Embrik Strand	2	164
Linyphiidae	<i>Frontinella</i>	<i>communis</i>	Blauvelt, H. H.	1936	Festschrift für Prof. Dr. Embrik Strand	2	148
Linyphiidae	<i>Goniatum</i>	<i>rubens</i>	Bishop, S. C. & C. R. Crosby	1935	J. New York Entomol. Soc.	43	259
*Linyphiidae	<i>Horcotes</i>	<i>uncinatus</i>	Barrows, W. M.	1945	Ann. Entomol. Soc. Amer.	38	75
Linyphiidae	<i>Lepthyphantes</i>	<i>zebra</i>	Zorsch, H. M.	1937	Amer. Midl. Nat.	18	887
Linyphiidae	<i>Maso</i>	<i>sundevalli</i>	Bishop, S. C. & C. R. Crosby	1935	J. New York Entomol. Soc.	43	233
Linyphiidae	<i>Meioneta</i>	<i>angulata</i>	Barrows, W. M.	1940	Ohio J. Sci.	40	136
*Linyphiidae	<i>Meioneta</i>	<i>officiosus</i>	Barrows, W. M.	1940	Ohio J. Sci.	40	134
Linyphiidae	<i>Phanetta</i>	<i>subterranea</i>	Milledge, A. F.	1984	J. Arachnol.	12	143
Linyphiidae	<i>Pitohyphantes</i>	<i>costatus</i>	Blauvelt, H. H.	1936	Festschrift für Prof. Dr. Embrik Strand	2	137
*Linyphiidae	<i>Sciastes</i>	<i>tenna</i>	Chamberlin, R. V.	1948	Ann. Entomol. Soc. Amer.	41	541
*Linyphiidae	<i>Sisicottus</i>	<i>hibernus</i>	Barrows, W. M.	1945	Ann. Entomol. Soc. Amer.	38	74
**Linyphiidae	<i>Taranucnus</i>	<i>ornithes</i>	Barrows, W. M.	1940	Ohio J. Sci.	40	134
Linyphiidae	<i>Taranucnus</i>	<i>ornithes</i>	Heldsingen, P. J. van	1973	Psyche	80	48
Linyphiidae	<i>Walkenaera</i>	<i>directa</i>	Crosby, C. R. & S. C. Bishop	1931	J. New York Entomol. Soc.	39	367
Lycosidae	<i>Allocosa</i>	<i>funerea</i>	Dondale, C. D. & J. H. Redner	1983	Canadian Entomol.	115	938
Lycosidae	<i>Gladicosa</i>	<i>gulosa</i>	Brady, A. R.	1986	Psyche	93	290
Lycosidae	<i>Lycosa</i>	<i>kochi</i>	Gertsch, W. J. & H. K. Wallace	1935	Amer. Mus. Novitates	794	21
Lycosidae	<i>Pardosa</i>	<i>milvina</i>	Dondale, C. D. & J. H. Redner	1984	Psyche	91	97
Lycosidae	<i>Schizocosa</i>	<i>bilineata</i>	Dondale, C. D. & J. H. Redner	1978	Canadian Entomol.	110	157
Lycosidae	<i>Schizocosa</i>	<i>occreata</i>	Dondale, C. D. & J. H. Redner	1978	Canadian Entomol.	110	150
**Mysmenidae	<i>Maymena</i>	<i>ambita</i>	Barrows, W. M.	1940	Ohio J. Sci.	40	132
Mysmenidae	<i>Maymena</i>	<i>ambita</i>	Gertsch, W. J.	1960	Amer. Mus. Novitates	1981	38
Nesticidae	<i>Nesticus</i>	<i>barrowsi</i>	Gertsch, W. J.	1984	Bull. Texas Mem. Mus.	31	35
**Nesticidae	<i>Nesticus</i>	<i>reclusus</i>	Gertsch, W. J.	1984	Bull. Texas Mem. Mus.	31	29
*Nesticidae	<i>Nesticus</i>	<i>secretus</i>	Gertsch, W. J.	1984	Bull. Texas Mem. Mus.	31	33
*Nesticidae	<i>Nesticus</i>	<i>stupkai</i>	Gertsch, W. J.	1984	Bull. Texas Mem. Mus.	31	31
Oxyopidae	<i>Oxyopes</i>	<i>salticus</i>	Brady, A. R.	1964	Bull. Mus. Comp. Zool.	131	478
Philodromidae	<i>Ozyptilla</i>	<i>distans</i>	Dondale, C. D. & J. H. Redner	1975	J. Arachnol.	2	153
Philodromidae	<i>Philodromus</i>	<i>rufus</i>	Dondale, C. D. & J. H. Redner	1968	Mem. Entomol. Soc. Canada	55	22
Pisauridae	<i>Dolomedes</i>	<i>scriptus</i>	Carico, J. E.	1973	Bull. Mus. Comp. Zool.	144	469
Pisauridae	<i>Dolomedes</i>	<i>tenebrosus</i>	Carico, J. E.	1973	Bull. Mus. Comp. Zool.	144	454
Pisauridae	<i>Dolomedes</i>	<i>vittatus</i>	Carico, J. E.	1973	Bull. Mus. Comp. Zool.	144	474
Pisauridae	<i>Pisaurina</i>	<i>mira</i>	Carico, J. E.	1972	Psyche	79	300
Salticidae	<i>Habrocestum</i>	<i>parvulum</i>	Richman, D. B.	1981	Bull. Amer. Mus. Nat. Hist.	170	204
Salticidae	<i>Habrocestum</i>	<i>pulex</i>	Richman, D. B.	1981	Bull. Amer. Mus. Nat. Hist.	170	200
Salticidae	<i>Metacyrba</i>	<i>undata</i>	Barnes, R. D.	1958	Amer. Mus. Novitates	1867	36
Salticidae	<i>Neon</i>	<i>nellii</i>	Gertsch, W. J. & W. Ivie	1955	Amer. Mus. Novitates	1743	11
**Salticidae	<i>Pseudicius</i>	<i>leconti</i>	Barrows, W. M.	1940	Ohio J. Sci.	40	138
Tengellidae	<i>Liocranoides</i>	<i>unicolor</i>	Barrows, W. M.	1940	Ohio J. Sci.	40	138
Tetragnathidae	<i>Tetragnatha</i>	<i>extensa</i>	Seeley, R. M.	1928	Bull. New York St. Mus.	278	120
Theridiidae	<i>Crustulina</i>	<i>altera</i>	Gertsch, W. J. & A. F. Archer	1942	Amer. Mus. Novitates	1171	1
Theridiidae	<i>Enoplognatha</i>	<i>marmorata</i>	Levi, H. W.	1957	Bull. Amer. Mus. Nat. Hist.	112	11
Theridiidae	<i>Euryopis</i>	<i>limbata</i>	Levi, H. W.	1954	Amer. Mus. Novitates	1666	26
Theridiidae	<i>Graphomoa</i>	<i>theridioides</i>	Barrows, W. M.	1940	Ohio J. Sci.	40	132
Theridiidae	<i>Graphomoa</i>	<i>theridioides</i>	Gertsch, W. J. & A. F. Archer	1942	Amer. Mus. Novitates	1171	3
Theridiidae	<i>Paidisca</i>	<i>marxi</i>	Levi, H. W.	1957	Bull. Amer. Mus. Nat. Hist.	112	111
Theridiidae	<i>Pholcomma</i>	<i>hirsuta</i>	Levi, H. W.	1957	Trans. Amer. Microscop. Soc.	76	110
Theridiidae	<i>Robertus</i>	<i>frontatus</i>	Kaston, B. J.	1946	Amer. Mus. Novitates	1306	7
Theridiidae	<i>Robertus</i>	<i>laticeps</i>	Kaston, B. J.	1946	Amer. Mus. Novitates	1306	9
Theridiidae	<i>Robertus</i>	<i>riparius</i>	Kaston, B. J.	1946	Amer. Mus. Novitates	1306	11
Theridiidae	<i>Spintharus</i>	<i>flavidus</i>	Levi, H. W.	1963	Psyche	70	225
Theridiidae	<i>Theridion</i>	<i>albidum</i>	Levi, H. W.	1957	Bull. Amer. Mus. Nat. Hist.	112	82

Table 1. Literature Records of Spiders Collected in the GSMNP

* = species with type locality in GSMNP and known only from GSMNP

** = species with type locality in GSMNP and also found outside GSMNP

<u>Family</u>	<u>Genus</u>	<u>Species</u>	<u>Author(s) of record</u>	<u>Year</u>	<u>Journal</u>	<u>Vol.</u>	<u>Page</u>
Theridiidae	<u>Theridion</u>	<u>aurantium</u>	Levi, H. W.	1957	Bull. Amer. Mus. Nat. Hist.	112	98
Theridiidae	<u>Theridion</u>	<u>aurantium</u>	Barrows, W. M.	1945	Ann. Entomol. Soc. Amer.	38	72
Theridiidae	<u>Theridion</u>	<u>aurantium</u>	Levi, H. W.	1980	Trans. Amer. Microscop. Soc.	99	336
Theridiidae	<u>Theridion</u>	<u>frondeum</u>	Levi, H. W.	1957	Bull. Amer. Mus. Nat. Hist.	112	81
Theridiidae	<u>Theridion</u>	<u>murarium</u>	Levi, H. W.	1957	Bull. Amer. Mus. Nat. Hist.	112	22
Theridiidae	<u>Theridion</u>	<u>sexpunctatum</u>	Levi, H. W.	1957	Bull. Amer. Mus. Nat. Hist.	112	91
Theridiidae	<u>Theridula</u>	<u>emertoni</u>	Levi, H. W.	1954	Trans. Amer. Microscop. Soc.	73	333
Theridiidae	<u>Theridula</u>	<u>opulenta</u>	Levi, H. W.	1954	Trans. Amer. Microscop. Soc.	73	334
Theridiosomatidae	<u>Theridiosoma</u>	<u>gemmosum</u>	Coddington, J. A.	1986	Smithsonian Contrib. Zool.	422	64
Theridiosomatidae	<u>Theridiosoma</u>	<u>gemmosum</u>	Archer, A. F.	1953	Amer. Mus. Novitates	1622	8
Thomisidae	<u>Misumenoides</u>	<u>aleatorius</u>	Gertsch, W. J.	1939	Bull. Amer. Mus. Nat. Hist.	76	309
Uloboridae	<u>Hyptiotes</u>	<u>cavatus</u>	Muma, M. H. & W. J. Gertsch	1964	Amer. Mus. Novitates	2196	13
Uloboridae	<u>Uloborus</u>	<u>glomosus</u>	Muma, M. H. & W. J. Gertsch	1964	Amer. Mus. Novitates	2196	22

Table 2. Literature Records of Spiders Collected near (within 20 miles of), but not within, the GSMNP

* = species with type locality in GSMNP and known only from GSMNP

** = species with type locality in GSMNP and also found outside GSMNP

Family	Genus	Species	Author(s) of record	Year	Journal	Vol.	Page
Amaurobiidae	<u>Calliopius</u>	<u>armipotens</u>	Leech, R.	1972	Mem. Entomol. Soc. Canada	84	62
Amaurobiidae	<u>Coras</u>	<u>cavernorum</u>	Barrows, W. M.	1940	Ohio J. Sci.	40	130
Amaurobiidae	<u>Coras</u>	<u>cavernorum</u>	Muma, M. H.	1946	Amer. Mus. Novitates	1329	11
Araneidae	<u>Acacesia</u>	<u>hamata</u>	Levi, H. W.	1976	Bull. Mus. Comp. Zool.	147	375
Araneidae	<u>Acacesia</u>	<u>hamata</u>	Glueck, S.	1994	Psyche	101	69
Araneidae	<u>Acanthepeira</u>	<u>marion</u>	Levi, H. W.	1976	Bull. Mus. Comp. Zool.	147	368
Araneidae	<u>Araneus</u>	<u>bicentenarius</u>	Levi, H. W.	1971	Bull. Mus. Comp. Zool.	141	143
Araneidae	<u>Araneus</u>	<u>marmoreus</u>	Levi, H. W.	1971	Bull. Mus. Comp. Zool.	141	156
Araneidae	<u>Araniella</u>	<u>displicata</u>	Levi, H. W.	1974	Bull. Mus. Comp. Zool.	146	294
Araneidae	<u>Argiope</u>	<u>aurantia</u>	Levi, H. W.	1968	Bull. Mus. Comp. Zool.	136	338
Araneidae	<u>Argiope</u>	<u>trifasciata</u>	Levi, H. W.	1968	Bull. Mus. Comp. Zool.	136	340
Araneidae	<u>Hyposinga</u>	<u>rubens</u>	Levi, H. W.	1971	Psyche	78	248
Araneidae	<u>Larinia</u>	<u>directa</u>	Levi, H. W.	1975	Bull. Mus. Comp. Zool.	147	105
Araneidae	<u>Mangora</u>	<u>gibberosa</u>	Levi, H. W.	1975	Bull. Mus. Comp. Zool.	147	130
Araneidae	<u>Mangora</u>	<u>maculata</u>	Levi, H. W.	1975	Bull. Mus. Comp. Zool.	147	122
Araneidae	<u>Mangora</u>	<u>placida</u>	Levi, H. W.	1975	Bull. Mus. Comp. Zool.	147	126
Araneidae	<u>Metepeira</u>	<u>labyrinthea</u>	Chamberlin, R. V. & W. Ivie	1942	Bull. Univ. Utah	32	63
Araneidae	<u>Micrathena</u>	<u>gracilis</u>	Levi, H. W.	1978	Bull. Mus. Comp. Zool.	148	433
Araneidae	<u>Micrathena</u>	<u>mitrata</u>	Levi, H. W.	1978	Bull. Mus. Comp. Zool.	148	428
Araneidae	<u>Micrathena</u>	<u>sagittata</u>	Levi, H. W.	1978	Bull. Mus. Comp. Zool.	148	430
Araneidae	<u>Nuctenea</u>	<u>cornuta</u>	Levi, H. W.	1974	Bull. Mus. Comp. Zool.	146	306
Araneidae	<u>Nuctenea</u>	<u>patagiata</u>	Levi, H. W.	1974	Bull. Mus. Comp. Zool.	146	308
Araneidae	<u>Verrucosa</u>	<u>arenata</u>	Levi, H. W.	1976	Bull. Mus. Comp. Zool.	147	358
Corinnidae	<u>Castianeira</u>	<u>trilineata</u>	Barrows, W. M.	1940	Ohio J. Sci.	40	137
Corinnidae	<u>Castianeira</u>	<u>trilineata</u>	Reiskind, J.	1969	Bull. Mus. Comp. Zool.	138	219
Corinnidae	<u>Trachelas</u>	<u>tranquillus</u>	Platnick, N. I. & M. U. Shadab	1974	Amer. Mus. Novitates	2553	8
Gnaphosidae	<u>Callilepis</u>	<u>pluto</u>	Platnick, N. I.	1975	Amer. Mus. Novitates	2573	8
Gnaphosidae	<u>Drassyllus</u>	<u>aprilinus</u>	Platnick, N. I. & M. U. Shadab	1982	Bull. Amer. Mus. Nat. Hist.	173	48
Gnaphosidae	<u>Drassyllus</u>	<u>creolus</u>	Platnick, N. I. & M. U. Shadab	1982	Bull. Amer. Mus. Nat. Hist.	173	56
Gnaphosidae	<u>Drassyllus</u>	<u>eremitus</u>	Platnick, N. I. & M. U. Shadab	1982	Bull. Amer. Mus. Nat. Hist.	173	11
Gnaphosidae	<u>Drassyllus</u>	<u>frigidus</u>	Platnick, N. I. & M. U. Shadab	1982	Bull. Amer. Mus. Nat. Hist.	173	52
Gnaphosidae	<u>Herypyllus</u>	<u>ecclesiasticus</u>	Platnick, N. I. & M. U. Shadab	1977	Bull. Amer. Mus. Nat. Hist.	159	7
Gnaphosidae	<u>Micaria</u>	<u>longipes</u>	Platnick, N. I. & M. U. Shadab	1982	Amer. Mus. Novitates	2916	49
Leptonetidae	<u>Leptoneta</u>	<u>coma</u>	Barrows, W. M.	1940	Ohio J. Sci.	40	131
Leptonetidae	<u>Leptoneta</u>	<u>coma</u>	Gertsch, W. J.	1974	J. Arachnol.	1	151
Linyphiidae	<u>Neriene</u>	<u>radiata</u>	Blauvelt, H. H.	1936	Festschrift für Prof. Dr. Embrik Strand	2	110
Linyphiidae	<u>Scyllaceus</u>	<u>pallidus</u>	Bishop, S. C. & C. R. Crosby	1938	J. New York Entomol. Soc.	46	93
Nesticidae	<u>Eidmannella</u>	<u>pallida</u>	Gertsch, W. J.	1984	Bull. Texas Mem. Mus.	31	54
Philodromidae	<u>Philodromus</u>	<u>marxi</u>	Dondale, C. D. & J. H. Redner	1968	Mem. Entomol. Soc. Canada	55	12
Philodromidae	<u>Philodromus</u>	<u>montanus</u>	Dondale, C. D. & J. H. Redner	1968	Mem. Entomol. Soc. Canada	55	51
Tetragnathidae	<u>Glenognatha</u>	<u>foxi</u>	Levi, H. W.	1980	Bull. Mus. Comp. Zool.	149	68
Tetragnathidae	<u>Leucauge</u>	<u>venusta</u>	Levi, H. W.	1980	Bull. Mus. Comp. Zool.	149	25
Tetragnathidae	<u>Meta</u>	<u>menardi</u>	Levi, H. W.	1980	Bull. Mus. Comp. Zool.	149	42
Tetragnathidae	<u>Tetragnatha</u>	<u>elongata</u>	Levi, H. W.	1981	Bull. Mus. Comp. Zool.	149	300
Tetragnathidae	<u>Tetragnatha</u>	<u>laboriosa</u>	Levi, H. W.	1981	Bull. Mus. Comp. Zool.	149	308
Tetragnathidae	<u>Tetragnatha</u>	<u>straminea</u>	Levi, H. W.	1981	Bull. Mus. Comp. Zool.	149	312
Theridiidae	<u>Achaeearanea</u>	<u>tepidarium</u>	Levi, H. W.	1963	Bull. Mus. Comp. Zool.	129	215
Theridiidae	<u>Argyrodes</u>	<u>trigonus</u>	Exline, H. & H. W. Levi	1962	Bull. Mus. Comp. Zool.	127	122
Theridiidae	<u>Latrodectus</u>	<u>mactans</u>	Levi, H. W.	1959	Trans. Amer. Microscop. Soc.	78	24
Theridiidae	<u>Steatoda</u>	<u>americana</u>	Levi, H. W.	1957	Bull. Mus. Comp. Zool.	117	400
Theridiidae	<u>Steatoda</u>	<u>borealis</u>	Levi, H. W.	1957	Bull. Mus. Comp. Zool.	117	422
Theridiidae	<u>Theridion</u>	<u>differens</u>	Levi, H. W.	1957	Bull. Amer. Mus. Nat. Hist.	112	32
Theridiidae	<u>Theridion</u>	<u>flavonotatum</u>	Levi, H. W.	1957	Bull. Amer. Mus. Nat. Hist.	112	34
Thomisidae	<u>Ebo</u>	<u>latithorax</u>	Sauer, R. J. & N. I. Platnick	1972	Canadian Entomol.	104	38
Thomisidae	<u>Misumenops</u>	<u>asperatus</u>	Gertsch, W. J.	1939	Bull. Amer. Mus. Nat. Hist.	76	328
Thomisidae	<u>Synema</u>	<u>parvulum</u>	Gertsch, W. J.	1939	Bull. Amer. Mus. Nat. Hist.	76	334
Thomisidae	<u>Xysticus</u>	<u>ferox</u>	Gertsch, W. J.	1939	Bull. Amer. Mus. Nat. Hist.	76	385
Thomisidae	<u>Xysticus</u>	<u>fraternus</u>	Gertsch, W. J.	1939	Bull. Amer. Mus. Nat. Hist.	76	384
Thomisidae	<u>Xysticus</u>	<u>gulosus</u>	Gertsch, W. J.	1939	Bull. Amer. Mus. Nat. Hist.	76	353

TABLE 3.
Taxonomic Papers with Records of Spiders Collected in or near the GSMNP

Author	Year	Title	Journal (or publisher)	Vol. Pages
Archer, A. F.	1951	Studies in the orbweaving spiders (Argiopidae). 1	Amer. Mus. Novitates	1487 1-52
Archer, A. F.	1953	Studies in the orbweaving spiders (Argiopidae). III.	Amer. Mus. Novitates	1622 1-27
Barnes, R. D.	1958	North American jumping spiders of the subfamily Marpissinae (Araneae, Salticidae)	Amer. Mus. Novitates	1867 1-50
Barrows, W. M.	1940	New and rare spiders from the Great Smoky Mountain National Park region	Ohio J. Sci.	40 130-138
Barrows, W. M.	1945	New spiders from the Great Smoky Mountain National Park	Ann. Entomol. Soc. Amer.	38 70-76
Bennett, R. G.	1985	The natural history and taxonomy of <u>Cicurina bryantiae</u> Exline (Araneae, Agelenidae)	J. Arachnol.	13 87-96
Bennett, R. G.	1987	Systematics and natural history of <u>Wadotes</u> (Araneae, Agelenidae)	J. Arachnol.	15 91-128
Bennett, R. G.	1991	Systematics of the North American cybaeid spiders (Araneae, Dictynnoidea, Cybaeidae)	PhD Dissertation, Univ. of	
Berman, J. D. & H. W. Levi	1971	The orb weaver genus <u>Neoscona</u> in North America (Araneae: Araneidae)	Bull. Mus. Comp. Zool.	141 465-500
Bishop, S. C. & C. R. Crosby	1930	Studies in American spiders: Genera <u>Ceratinopsis</u> , <u>Ceratinopsidis</u> , and <u>Iulalbo</u>	Amer. Mus. Novitates	38 15-33
Bishop, S. C. & C. R. Crosby	1935	Studies in American spiders: Miscellaneous genera of Erigoneae, Part I	J. New York Entomol. Soc.	43 217-280
Bishop, S. C. & C. R. Crosby	1938	Studies in American spiders: Miscellaneous genera of Erigoneae, Part II	J. New York Entomol. Soc.	46 55-107
Blauvelt, H. H.	1936	The comparative morphology of the secondary sexual organs of <u>Linyphia</u> and some related genera, including a revision of the	Festschrift für Prof. Dr. Embrik	2 81-171
Brady, A. R.	1964	The lynx spiders of North America, North of Mexico (Araneae: Oxyopidae)	Bull. Mus. Comp. Zool.	131 429-518
Brady, A. R.	1986	Nearctic species of the new wolf spider genus <u>Gladicosa</u> (Araneae: Lycosidae)	Psyche	93 285-319
Carico, J. E.	1972	The Nearctic spider genus <u>Pisaurina</u> (Pisauridae)	Psyche	79 295-310
Carico, J. E.	1973	The nearctic species of the genus <u>Dolomedes</u> (Araneae: Pisauridae)	Bull. Mus. Comp. Zool.	144 435-488
Chamberlin, R. V.	1936	Further records and descriptions of North American Gnaphosidae	Amer. Mus. Novitates	853 1-25
Chamberlin, R. V.	1947	A summary of the known North American Amaurobiidae	Bull. Univ. Utah	38 1-31
Chamberlin, R. V.	1948	On some American spiders of the family Erigonidae	Ann. Entomol. Soc. Amer.	41 483-562
Chamberlin, R. V. & W. Ivie	1940	Agelenid spiders of the genus <u>Cicurina</u>	Bull. Univ. Utah	30 1-108
Chamberlin, R. V. & W. Ivie	1942	A hundred new species of American spiders	Bull. Univ. Utah	32 1-117
Chamberlin, R. V. & W. Ivie	1947	North American dictynid spiders: The bennetti group of <u>Amaurobius</u>	Ann. Entomol. Soc. America	40 29-55
Chamberlin, R. V. & W. J. Gertsch	1958	The spider family Dictynidae in America north of Mexico	Bull. Amer. Mus. Nat. Hist.	116 1-152
Coddington, J. A.	1986	The genera of the spider family Theridiosomatidae	Smithsonian Contrib. Zool.	422 1-96
Coyle, F. A.	1971	Systematics and natural history of the mygalomorph spider genus <u>Antrodiaetus</u> and related genera (Araneae: Antrodiaetidae)	Bull. Mus. Comp. Zool.	141 269-402
Coyle, F. A.	1981	The mygalomorph spider genus <u>Microhexura</u> (Araneae, Dipluridae)	Bull. Amer. Mus. Nat. Hist.	170 64-75
Coyle, F. A.	1985	Observations on the mating behaviour of the tiny mygalomorph spider, <u>Microhexura montivaga</u> Crosby & Bishop (Araneae,	Bull. Brit. Arachnol. Soc.	6 328-330
Coyle, F. A.	1985	Two-year life cycle and low palpal character variance in a Great Smoky Mountain population of the lamp-shade spider	J. Arachnol.	13 211-218
Crosby, C. R. & S. C. Bishop	1931	Studies in American spiders: Genera <u>Comicularia</u> , <u>Paracomicularia</u> , <u>Epiceraticellus</u> , and <u>Pelecopsis</u> .	J. New York Entomol. Soc.	39 359-403
Dondale, C. D. & J. H. Redner	1968	The <u>Imbecillus</u> and <u>tufus</u> groups of the spider genus <u>Phildromus</u> in North America (Araneida: Thomisidae)	Mem. Entomol. Soc. Canada	55 1-78

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Author	Year	Title	Journal (or publisher)	Vol.	Pages
Dondale, C. D. & J. H. Redner	1975	The genus <i>Oxyptilia</i> in North America (Araneida, Thomisidae)	J. Arachnol.	2	129-181
Dondale, C. D. & J. H. Redner	1978	Revision of the nearctic wolf spider genus <i>Schizocosa</i> (Araneida: Lycosidae)	Canadian Entomol.	110	143-181
Dondale, C. D. & J. H. Redner	1983	The wolf spider genus <i>Allocosa</i> in North and Central America (Araneae: Lycosidae)	Canadian Entomol.	115	933-964
Dondale, C. D. & J. H. Redner	1984	Revision of the <i>milvina</i> group of the wolf spider genus <i>Pardosa</i> (Araneae: Lycosidae)	Psyche	91	67-117
Edwards, R. J.	1958	The spider subfamily Clubioninae of the United States, Canada, and Alaska (Araneae: Clubionidae)	Bull. Mus. Comp. Zool.	118	365-436
Exline, H.	1936	Nearctic spiders of the genus <i>Cicurina</i> Menge	Amer. Mus. Novitates	850	1-25
Exline, H. & H. W. Levi	1962	American spiders of the genus <i>Argyrodes</i> (Araneae, Theridiidae)	Bull. Mus. Comp. Zool.	127	75-204
Forster, R. R., N. I. Platnick, & M. R.	1987	A review of the spider superfamilies Hypochiloidea and Austrochiloidea (Araneae, Araneomorphae)	Bull. Mus. Comp. Zool.	185	1-116
Gertsch, W. J.	1934	Some American spiders of the family Hahniidae	Amer. Mus. Novitates	712	1-32
Gertsch, W. J.	1936	Further diagnoses of new American spiders	Amer. Mus. Novitates	852	1-27
Gertsch, W. J.	1939	A revision of the typical crab-spiders (Misumeninae) of America north of Mexico.	Bull. Amer. Mus. Nat. Hist.	76	277-442
Gertsch, W. J.	1942	New American spiders of the family Clubionidae. III.	Amer. Mus. Novitates	1195	1-18
Gertsch, W. J.	1958	The spider family Hypochilidae	Amer. Mus. Novitates	1912	1-28
Gertsch, W. J.	1960	Descriptions of American spiders of the family Symphytognathidae	Amer. Mus. Novitates	1981	1-40
Gertsch, W. J.	1974	The spider family Leptonetidae in North America	J. Arachnol.	1	145-203
Gertsch, W. J.	1984	The spider family Nesticidae (Araneae) in North America, Central America, and the West Indies	Bull. Texas Mem. Mus.	31	1-91
Gertsch, W. J. & A. F. Archer	1942	Descriptions of new American Theridiidae	Amer. Mus. Novitates	1171	1-16
Gertsch, W. J. & H. K. Wallace	1935	Further notes on American Lycosidae	Amer. Mus. Novitates	794	1-22
Gertsch, W. J. & W. Ivie	1955	The spider genus <i>Neon</i> in North America	Amer. Mus. Novitates	1743	1-17
Glueck, S.	1994	A taxonomic revision of the orb weaver genus <i>Acacasia</i> (Araneae: Araneidae)	Psyche	101	59-84
Heldsingen, P. J. van	1973	A recapitulation of the nearctic species of <i>Centromerus</i> Dahl (Araneida, Linyphiidae) with remarks on <i>Lungyna debilis</i> (Banks)	Zool. Verhandl.	124	1-45
Heldsingen, P. J. van	1973	Annotations on two species of linyphiid spiders described by the late Wilton Ivie	Psyche	80	48-61
Ivie, W.	1969	North American spiders of the genus <i>Bathypantes</i> (Araneae, Linyphiidae)	Amer. Mus. Novitates	2364	1-70
Kaston, B. J.	1946	North American spiders of the genus <i>Clenium</i>	Amer. Mus. Novitates	1306	1-19
Leech, R.	1972	A revision of the nearctic Amaurobiidae (Arachnida: Araneida)	Mem. Entomol. Soc. Canada	84	1-182
Levi, H. W.	1954	Spiders of the genus <i>Euryopis</i> from North and Central America (Araneidae, Theridiidae)	Amer. Mus. Novitates	1666	1-48
Levi, H. W.	1954	The spider genus <i>Theridula</i> in North and Central America and the West Indies (Araneae: Theridiidae)	Trans. Amer. Microscop. Soc.	73	331-343
Levi, H. W.	1957	The North American spider genera <i>Paratheridula</i> , <i>Tekellina</i> , <i>Pholcomma</i> and <i>Acheris</i> (Araneae: Theridiidae)	Trans. Amer. Microscop. Soc.	76	105-115
Levi, H. W.	1957	The spider genera <i>Crustulina</i> and <i>Steatoda</i> in North America, Central America, and the West Indies (Araneae, Theridiidae)	Bull. Mus. Comp. Zool.	117	367-424
Levi, H. W.	1957	The spider genera <i>Enoplognatha</i> , <i>Theridion</i> , and <i>Paidisca</i> in America north of Mexico (Araneae, Theridiidae)	Bull. Amer. Mus. Nat. Hist.	112	1-123
Levi, H. W.	1959	The spider genus <i>Latrodectus</i> (Araneae, Theridiidae)	Trans. Amer. Microscop. Soc.	78	7-43

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Author	Year	Title	Journal (or publisher)	Vol.	Pages
Levi, H. W.	1963	American spiders of the genus <i>Achaearanea</i> and the new genus <i>Echinotheridion</i> (Araneae, Theridiidae)	Bull. Mus. Comp. Zool.	129	187-240
Levi, H. W.	1963	The American spider genera <i>Spintharus</i> and <i>Thwaitesia</i> (Araneae: Theridiidae)	Psyche	70	223-234
Levi, H. W.	1968	The spider genera <i>Gea</i> and <i>Argiope</i> in America (Araneae: Araneidae)	Bull. Mus. Comp. Zool.	136	319-352
Levi, H. W.	1971	The <i>diadematus</i> group of the orb-weaver genus <i>Araneus</i> north of Mexico (Araneae: Araneidae)	Bull. Mus. Comp. Zool.	141	131-179
Levi, H. W.	1971	The orb-weaver genera <i>Singa</i> and <i>Hyosinga</i> in America (Araneae: Araneidae)	Psyche	78	229-256
Levi, H. W.	1974	The orb-weaver genera <i>Aranella</i> and <i>Nuctenea</i> (Araneae: Araneidae)	Bull. Mus. Comp. Zool.	146	291-316
Levi, H. W.	1975	The American orb-weaver genera <i>Larinia</i> , <i>Cercidia</i> , and <i>Mangora</i> north of Mexico (Araneae, Araneidae)	Bull. Mus. Comp. Zool.	147	101-135
Levi, H. W.	1976	The orb-weaver genera <i>Verrucosa</i> , <i>Acanthepeira</i> , <i>Wagneriana</i> , <i>Acacesia</i> , <i>Wixia</i> , <i>Scoloderus</i> and <i>Alpaida</i> north of Mexico	Bull. Mus. Comp. Zool.	147	351-391
Levi, H. W.	1977	The American orb-weaver genera <i>Cyclosa</i> , <i>Metazygia</i> and <i>Eustala</i> north of Mexico (Araneae, Araneidae)	Bull. Mus. Comp. Zool.	148	61-127
Levi, H. W.	1978	The American orb-weaver genera <i>Colphepeira</i> , <i>Microthema</i> and <i>Gasteracantha</i> north of Mexico (Araneae, Araneidae)	Bull. Mus. Comp. Zool.	148	417-442
Levi, H. W.	1980	The orb-weaver genus <i>Mecynogea</i> , the subfamily Metinae and the genera <i>Pachygnatha</i> , <i>Glenognatha</i> and <i>Azilia</i> of the	Bull. Mus. Comp. Zool.	149	1-74
Levi, H. W.	1980	Two new species of the genera <i>Theridion</i> and <i>Achaearanea</i> from North America (Araneae: Theridiidae)	Trans. Amer. Microscop. Soc.	99	334-337
Levi, H. W.	1981	The American orb-weaver genera <i>Dolichognatha</i> and <i>Tetragnatha</i> north of Mexico (Araneae: Araneidae, Tetragnathinae)	Bull. Mus. Comp. Zool.	149	271-318
Milledge, A. F.	1984	The erigonine spiders of North America. Part 7. Miscellaneous genera (Araneae, Linyphiidae)	J. Arachnol.	12	121-169
Milledge, A. F.	1987	The erigonine spiders of North America. Part 8. The genus <i>Eperigone</i> Crosby and Bishop (Araneae, Linyphiidae)	Amer. Mus. Novitates	2885	1-75
Muma, M. H.	1946	North American Agelenidae of the genus <i>Coras</i> Simon	Amer. Mus. Novitates	1329	1-20
Muma, M. H.	1947	North American Agelenidae of the genus <i>Wadolex</i> Chamberlin	Amer. Mus. Novitates	1334	1-12
Muma, M. H. & W. J. Gertsch	1964	The spider family Uloboridae in North America north of Mexico	Amer. Mus. Novitates	2196	1-43
Petrunkевич, A.	1932	Collecting <i>Hypochilus</i>	J. New York Ent. Soc.	40	19-23
Platnick, N. I.	1974	The spider family Anyphaenidae in America north of Mexico	Bull. Mus. Comp. Zool.	146	205-266
Platnick, N. I.	1975	A revision of the holarctic spider genus <i>Callilepis</i> (Araneae, Gnaphosidae)	Amer. Mus. Novitates	2573	1-32
Platnick, N. I. & M. U. Shadab	1974	A revision of the <i>tranquillus</i> and <i>spaciosus</i> groups of the spider genus <i>Trachelas</i> (Araneae, Clubionidae) in North and Central	Amer. Mus. Novitates	2553	1-34
Platnick, N. I. & M. U. Shadab	1976	A revision of the spider genera <i>Drassodes</i> and <i>Ivodrassus</i> (Araneae, Gnaphosidae) in North America	Amer. Mus. Novitates	2593	1-29
Platnick, N. I. & M. U. Shadab	1977	A revision of the spider genera <i>Herpyllus</i> and <i>Scolophaeus</i> (Araneae, Gnaphosidae) in North America	Bull. Amer. Mus. Nat. Hist.	159	1-44
Platnick, N. I. & M. U. Shadab	1980	A revision of the North American spider genera <i>Nodocion</i> , <i>Litophyllus</i> , and <i>Synaphosus</i> (Araneae, Gnaphosidae)	Amer. Mus. Novitates	2691	1-26
Platnick, N. I. & M. U. Shadab	1981	A revision of the spider genus <i>Sergiolus</i> (Araneae, Gnaphosidae)	Amer. Mus. Novitates	2717	1-41
Platnick, N. I. & M. U. Shadab	1982	A revision of the American spiders of the genus <i>Drassyllus</i> (Araneae, Gnaphosidae)	Bull. Amer. Mus. Nat. Hist.	173	1-97
Platnick, N. I. & M. U. Shadab	1982	A revision of the American spiders of the genus <i>Micaria</i> (Araneae, Gnaphosidae)	Amer. Mus. Novitates	2916	1-64
Platnick, N. I. & M. U. Shadab	1983	A revision of the American spiders of the genus <i>Zelotes</i> (Araneae, Gnaphosidae)	Bull. Amer. Mus. Nat. Hist.	174	97-192
Reiskind, J.	1969	The spider subfamily Castianeirinae of North and Central America (Araneae, Clubionidae)	Bull. Mus. Comp. Zool.	138	163-325
Richman, D. B.	1981	A revision of the genus <i>Habrocestum</i> (Araneae, Salticidae) in North America	Bull. Amer. Mus. Nat. Hist.	170	197-206

Taxonomic Papers with Records of Spiders Collected in or near the GSMNP

Author	Year	Title	Journal (or publisher)	Vol.	Pages
Sauer, R. J. & N. I. Platnick	1972	The crab spider genus <i>Ebo</i> (Araneida: Thomisidae) in the United States and Canada	Canadian Entomol.	104	35-60
Seeley, R. M.	1928	Revision of the spider Genus <i>Tetragnatha</i>	Bull. New York St. Mus.	278	99-149
Zorsch, H. M.	1937	The spider genus <i>Lepthyphantes</i> in the United States	Amer. Midl. Nat.	18	856-898

TABLE 4. SPIDER SPECIES WITH TYPE LOCALITIES IN THE GREAT SMOKY MTNS. NATIONAL PARK

<u>Family</u>	<u>Genus</u>	<u>Species</u>	<u>Author</u>	<u>Date</u>	<u>Type locality</u>	<u>Coll. date</u>	<u>Collector</u>
Amaurobiidae	<u>Callioplus</u>	<u>pantoplus</u>	(Bishop & Crosby)	1935	TN: Sevier Co., Laurel Creek	1926	Crosby & Bishop
	<u>Wadotes</u>	<u>tennesseensis</u>	Gertsch	1936	TN: Sevier Co., sides of Mt. Leconte	1933	Gertsch
	<u>Clubiona</u>	<u>rhododendri</u>	Barrows	1945	TN: Sevier Co., Newfound Gap	1937	Barrows
	<u>Cybaeus</u>	<u>patritus</u>	Bishop & Crosby	1926	TN: Sevier Co., Clingman's Dome (neotype)	1936	Barrows
	<u>Cicurina</u>	<u>alpicora</u>	Barrows	1945	TN: Blount Co., Spence Field	1937	Barrows
	<u>Cicurina</u>	<u>bryantae</u>	Exline	1936	NC: Swain Co., Newfound Gap	1930	Banks
	<u>Leptoneta</u>	<u>gertschi</u>	Barrows	1940	TN: Sevier Co., Greenbrier Cove	1939	Barrows
	<u>Bathypantes</u>	<u>bishopi</u>	Ivie	1969	TN: Sevier Co., Clingman's Dome	1941	C. & M. Goodnight
	<u>Centromerus</u>	<u>tennapax</u>	(Barrows)	1940	NC: Swain Co., Clingman's Dome	1937	Barrows
	<u>Horocotes</u>	<u>uncinatus</u>	Barrows	1945	NC: Swain Co., east of Newfound Gap	1943	Barrows
Mysmenidae	<u>Meioneta</u>	<u>officiosus</u>	(Barrows)	1940	TN: Sevier Co., GSMNP Headquarters area	1939	Barrows
	<u>Sciastes</u>	<u>tenna</u>	Chamberlin	1948	TN: Sevier Co., Little Pigeon Creek	1933	Ivie
	<u>Sissicotus</u>	<u>hibernus</u>	Barrows	1945	NC: Swain Co., Mingus Creek	1943	Barrows
	<u>Taranucnus</u>	<u>ornithes</u>	(Barrows)	1940	TN: Sevier Co., Little River	1936	Barrows
	<u>Maymena</u>	<u>ambita</u>	(Barrows)	1940	TN: Sevier Co., Laurel Falls Trail	1939	Barrows
	<u>Nesticus</u>	<u>reclusus</u>	Gertsch	1984	NC: Swain Co., Andrews Bald	1928	Barrows
	<u>Nesticus</u>	<u>secretus</u>	Gertsch	1984	TN: Sevier Co., Little Pigeon River	1933	Gertsch
	<u>Nesticus</u>	<u>stupkai</u>	Gertsch	1984	TN: Blount Co., White Oak Sinks	1937	Stupka
	<u>Pseudicius</u>	<u>leonti</u>	Barrows	1940	TN: Sevier Co., top of Mt. Leconte	1937	Barrows

Table 5. Repositories, origin, and size of spider collections from the GSMNP. In the "Collections" column are listed collectors (and years their spiders were collected) in chronological order.

<u>Repository</u>	<u>Collections</u>	<u>Quantity</u>
GSMNP Museum	R. Schmoller (69); D. DeFoe (75-93); F. Scherberger (80-86); R. Whightman (82); R. Wallace (85); J. Harp (85, 89); K. Schlechty (89); T. Miller (89); K. Manscill (90); Needles (91); J. Webb (91); R. Jenkins (93); K. Johnson (93)	about 120 vials
Western Carolina Univ.	Coyle & W. Shear (69); F. Coyle (75-94); Coyle & J. Miller (94-95); Coyle, Miller, & D. Toti (95)	about 5500 adults
Ohio State Univ. Museum of Biodiversity	W. Barrows (28-43); A. Stupka (36-43); W. Kern (39); D. Lowrie (39); Knull (42); F. Moore (67); C. Kennedy	about 270 vials
American Museum of Natural History	S. Bishop & C. Crosby (26); W. Barrows (28-43); Gertsch & W. Ivie (33, 60); W. Jones (35, 38); A. Stupka (36, 37); W. Gertsch (36); B. Kaston (39); C. & M. Goodnight (41); Ivie (52); R. J. & W. Ivie (65); Coyle & W. Shear (69); F. Coyle (75-94); L. Sorkin (81); Bennett (84)	unknown, but possibly 200-500 specimens
Museum of Comparative Zoology	N. Banks (30); P. Darlington (30); A. Chickering (35); H. Exline; H. Levi (53, 81); W. Shear (70); F. Coyle (75, 78); J. Coddington (81)	unknown, but possibly 100-200 specimens
Illinois Natural History Survey	H. Ross; M. Sanderson; L. Stannard; J. Unzicker	about 400 vials
Univ. of Tennessee	L. Bishop (84); V. McNeilus; J. Swafford; J. Harp	unknown
US National Museum	Highlands Biological Station class of 1988	probably 30-60 vials
Milwaukee Public Museum	J. Jass (81)	4 vials

Table 6. Preliminary List of Spider Species Collected in the GSMNP. Based on first 721 records in GSMNP spider database (June 7, 1995). Species name followed by "?" means that the species may actually be a closely related described or undescribed species. Habitats are listed in order of decreasing number of individuals collected. Number of adults is given in last column.

<u>Species</u>	<u>Habitat</u>	<u>No.</u>
Agelenidae		
<i>Agelenopsis barrowsi</i> ?		1
<i>Agelenopsis emertoni</i> ?	old field with scattered trees	2
<i>Agelenopsis kastoni</i>		1
<i>Agelenopsis naevia</i>		1
<i>Agelenopsis pennsylvanica</i>		2
<i>Agelenopsis utahana</i>	old gr. hardwood, old gr. oak, mix. hardwood/conifer	19
<i>Tegeneria domestica</i>		1
Amaurobiidae		
<i>Callioplus hoplomachus</i>	mixed hardwood/conifer	3
<i>Callioplus pantoplus</i>	old gr. mesic oak, sec. gr. hardwood/conifer, old gr. hemlock, old gr. cove	188
<i>Callobius bennetti</i>	old gr. oak, old gr. hemlock, old gr. cove	12
<i>Coras montanus</i>	old gr. oak, old gr. mix. hardwood	2
<i>Coras taugynus</i>	mix. hardwood/conifer	1
<i>Coras tennesseensis</i>		1
<i>Wadotes calcaratus</i>	mix. hardwood/conifer, hemlock/pine	4
<i>Wadotes dixiensis</i>	sec. gr. mix. hardwood, cove, pine/hemlock/hardwood	4
<i>Wadotes hybridus</i>	mix. hardwood/conifer	8
<i>Wadotes tennesseensis</i>	old gr. oak, old gr. hemlock, old gr. cove, old & sec. gr. mix. hardwood	35
Antrodiaetidae		
<i>Antrodiaetus unicolor</i>	all forest types	15
Anyphaenidae		
<i>Anyphaena celer</i>	old field with scattered trees	2
<i>Anyphaena maculata</i>		1
<i>Anyphaena pectorosa</i>		8
Araneidae		
<i>Acanthepeira cherokee</i>	old field with scattered trees	4
<i>Araneus iviei</i>	old field with scattered trees	1
<i>Araneus marmoreus</i>	old field with scattered trees, old gr. mix. hardwood	5
<i>Araneus nordmanni</i>	old gr. mix. hardwood, old gr. oak, old gr. hemlock cove, spruce-fir	13
<i>Araneus saevus</i>		1
<i>Cyclosa conica</i>		2
<i>Cyclosa turbinata</i>		2
<i>Eustala anastera</i>		1
<i>Larinea directa</i>		
<i>Larinioides cornuta</i>	sec. gr. mix. conifer/hardwood	1
<i>Larinioides patagiatus</i>		1
<i>Mangora maculata</i>		1
<i>Micrathena gracilis</i>		1
<i>Micrathena mitrata</i>	mix. hardwood/conifer	4
<i>Neoscona domiciliorum</i>		2
<i>Neoscona hentzi</i>		1
<i>Ocrepeira sp.</i>		
<i>Verrucosa arenata</i>		1
Atypidae		
<i>Sphrodros niger</i>		2
Clubionidae		
<i>Clubiona bishopi</i>	old gr. hemlock/hardwood cove	3
<i>Clubiona canadensis</i>	old gr. oak, old gr. mix. hardwood	7
<i>Clubiona obesa</i>		1
<i>Clubiona rhododendri</i>	bald	7
<i>Clubiona spiralis</i>	old gr. mesic oak, old gr. mix. hardwood, old gr. hemlock cove	6
<i>Clubionoides excepta</i>	mix. hardwood/conifer	2
Corinnidae		
<i>Castianeira crocata</i>		5
<i>Castianeira longipalpus</i>		1
<i>Castianeira variata</i>		1
<i>Trachelas sililis</i>	old field with scattered trees	3
Ctenidae		
<i>Anahita punctulata</i>		4

Ctenizidae		
<i>Ummidia carabivora?</i>		4
Cybaeidae		
<i>Cybaeus patritus</i>	old gr. cove, spruce-fir	6
<i>Cybaeus silicis?</i>	old gr. hemlock, spruce-fir	14
Cyrtaucheniiidae		
<i>Myrmekiaphila fluviatilis</i>		6
Dictynidae		
<i>Cicurina arcuata</i>	old gr. mesic oak, old & sec. gr. mix. hardwood, old gr. hemlock, old gr. cove	45
<i>Cicurina breviana</i>	old gr. hemlock/hardwood cove, spruce-fir	25
<i>Cicurina brevis</i>	mix. hardwood/conifer, old gr. cove	8
<i>Cicurina bryantae</i>		1
<i>Cicurina exlinae</i>	hemlock/pine, cove hardwood	5
<i>Cicurina minima</i>	old gr. oak, old & sec. gr. mix. hardwood, old gr. hemlock, old gr. cove	43
<i>Cicurina sp. #1</i>	sec. gr. mix. hardwood/hemlock	2
<i>Lathys immaculata</i>	oak/pine	1
<i>Lathys maculina</i>	oak/pine, mix. hardwood/conifer, old gr. hemlock cove	138
Dipluridae		
<i>Microhexura montivaga</i>	spruce-fir	1
Gnaphosidae		
<i>Callilepis pluto</i>		2
<i>Drassodes gosiutus?</i>		3
<i>Drassyllus aprilinus</i>		1
<i>Drassyllus fallens</i>		3
<i>Drassyllus novus</i>		1
<i>Herpyllus ecclesiasticus</i>		1
<i>Sergiolus capulatus</i>		1
<i>Talanites echinus</i>	oak/pine, hemlock/pine	3
Hahniidae		
<i>Calymmaria persica</i>	old gr. oak, old gr. mix. hardwood, old gr. hemlock, old gr. cove, spruce-fir	31
<i>Cryphoea montana</i>	spruce-fir	3
<i>Neoantistea agilis</i>		1
<i>Neoantistea magna</i>	old gr. oak, old & sec. gr. mix. hardwood, spruce-fir	34
Hypochilidae		
<i>Hypochilus pococki</i>	old gr. hemlock cove, mix. hardwood/conifer	7
Leptonetidae		
<i>Leptoneta gertschi</i>	sec. gr. mix. hardwood, old gr. hemlock cove	23
<i>Leptoneta silvicultrix</i>	oak/pine, old & sec. gr. mix. hardwood, old gr. hemlock cove	151
<i>Leptoneta sp. #1</i>	old gr. hemlock/hardwood	27
Linyphiidae		
<i>Bathypantes bishopi</i>	old gr. oak, old gr. mix. hardwood, old gr. hemlock, spruce-fir, heath bald	15
<i>Bathypantes pallidus</i>		1
<i>Blestia sarcocoon</i>	mix. hardwood/conifer, old gr. hemlock, birch-spruce-fir	92
<i>Centromerus denticulatus</i>	old gr. hemlock, oak/pine, sec. gr. hardwood	22
<i>Centromerus latidens</i>	hardwood/conifer, sec. gr. mix. hardwood	2
<i>Centromerus tennapax</i>	spruce-fir, old gr. hemlock	49
<i>Ceraticelus alticeps</i>	old gr. mix. hardwood, old gr. hemlock, old gr. oak, birch-spruce-fir, old field	67
<i>Ceraticelus carinatus?</i>	old gr. oak, old gr. hemlock, old & sec. gr. mix. hardwood, birch-spruce-fir	111
<i>Ceraticelus creolus</i>		10
<i>Ceraticelus fastidiosus</i>	old field with scattered trees	7
<i>Ceraticelus fissiceps</i>	sec. gr. mix. hardwood/hemlock, old gr. hemlock, spruce-fir	3
<i>Ceraticelus laetabilis</i>	old gr. oak, hemlock/pine, sec. gr. hardwood	13
<i>Ceraticelus laetus?</i>	old gr. hemlock, old gr. hardwood	4
<i>Ceraticelus minutus</i>	old gr. hardwood/hemlock, old gr. oak	14
<i>Ceratinella brunnea</i>	spruce-fir	16
<i>Ceratinops annulipes?</i>		1
<i>Ceratinops carolina</i>	old gr. birch	2
<i>Ceratinopsidis formosa</i>	mix. hardwood/conifer, old gr. mix. hardwood, old gr. hemlock, old gr. oak	73
<i>Dicymbium elongatum</i>	spruce-fir	31
<i>Drapetisca alteranda</i>	old gr. hemolck	4
<i>Eperigone entomologica</i>	spruce-fir, old gr. hemlock	57
<i>Eperigone maculata</i>	sec. gr. mix. hardwood	2
<i>Erigone brevidentata</i>	cove hardwood	1
<i>Floricomus praedesignatus</i>	old gr. hemlock, old gr. oak, birch-spruce-fir	7
<i>Floricomus bishopi?</i>		5

<i>Phidippus insignarius</i>		1
<i>Phidippus pius</i>		1
<i>Phidippus princeps</i>		4
<i>Phidippus putnami</i>		1
<i>Phidippus whitmani</i>		1
<i>Thiodina puerpera</i>	old field with scattered trees	2
<i>Thiodina sylvana</i>		1
<i>Zygoballus bettini?</i>	old field with scattered trees	5
Segestriidae		
<i>Ariadna bicolor</i>	oak/pine, sec. gr. hardwood, conifer/hardwood	2
Sicariidae		
<i>Loxosceles reclusa</i>	maintenance shed	3
Tetragnathidae		
<i>Leucauge venusta</i>		3
<i>Tetragnatha versicolor</i>		1
<i>Zygiella dispar</i>		1
Theridiidae		
<i>Achaearanea rupicola</i>		1
<i>Anelosimus studiosus</i>		1
<i>Argyrodes fictitium</i>		1
<i>Argyrodes trigonum</i>		1
<i>Crustulina altera</i>	oak/pine, cove hardwood/hemlock	5
<i>Episinus amoenus</i>	sec. gr. mix. hardwood	
<i>Latrodectus mactans</i>		2
<i>Pholcomma hirsuta</i>	old gr. cove, old & sec. gr. mix. hardwood	85
<i>Robertus frontatus</i>	old gr. hemlock/hardwood cove, old gr. birch, mix. hardwood/conifer	20
<i>Robertus laticeps</i>	barn	2
<i>Robertus riparius</i>	spruce-fir	5
<i>Theridion albidum</i>	old field with scattered trees	1
<i>Theridion antonii?</i>		1
<i>Theridion aurantium</i>	spruce-fir	9
<i>Theridion differens</i>		3
<i>Theridion frondeum</i>		7
<i>Theridion lyricum</i>	cove hardwood	5
<i>Theridion murarium</i>		2
<i>Theridion sexpunctatum</i>	old gr. birch, old gr. hemlock	2
<i>Thymoites marxi</i>		1
Theridiosomatidae		
<i>Theridiosoma gemmosum</i>	old gr. hemlock/hardwood cove, spruce-fir	9
Thomisidae		
<i>Misumenoides formosipes</i>	grass bald	5
<i>Misumenops asperatus</i>		1
<i>Misumenops celer</i>		2
<i>Misumenops oblongus</i>	grass bald	8
<i>Ozyptila distans</i>	old gr. mix. hardwood	1
<i>Ozyptila monroensis</i>		6
<i>Tmarus angulatus?</i>		1
<i>Xysticus elegans</i>		4
<i>Xysticus ferox</i>		3
<i>Xysticus gulosus</i>		1
Uloboridae		
<i>Hyptiotes cavatus</i>	old gr. hemlock/ hardwood cove, mix. hardwood/conifer	8
<i>Uloborus glomosus</i>	mix. hardwood/conifer, old field with scattered trees	