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Continuation of Spider Research in Arkansas: Ouachita Mountain Area

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General Notes

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A CONTINUATION OF SPIDER RESEARCH IN ARKANSAS: OUACHITA MOUNTAIN AREA

For the past ten years, research has been pursued concerning the spider fauna of Arkansas (Dorris, 1968; 1969; 1970; 1971; 1972). At the present time, 206 species of spiders have been reported for Arkansas. This study revealed 99 species, 27 of which were new for the state. This is the first of a series of studies which will include a total of 6 areas: Ozark Mountains, Arkansas River Valley, Ouachita Mountains, Gulf Coastal Plain, Delta, and Crowley's Ridge. Prior to this study spiders had been collected at random throughout the state with greater concentration within the vicinity of Clark County. The purpose of this study is to determine the spider fauna of the Ouachita Mountain area of Arkansas. Eventually, when all areas are covered, the spider fauna of the entire state of Arkansas can be ascertained in relation to distribution.

Several methods of collecting were used in the Ouachita Mountain Area. They were (a) a heavy duty sweep net to sweep grasses and heavy brush, (b) a wire mesh sieve to sift spiders from leaf litter, (c) hand picking from trees, bushes, ground and old dwellings or other related places, and (d) mud-dauber nest collections to reveal paralyzed spiders captured by mud-daubers. Collections were made primarily between the hours of 9 a.m. and 3 p.m. since this is the time indicated by most authorities to be the period of greatest activity.

The spiders collected were placed in screw cap bottles with 70% ethyl alcohol. A field book was kept to identify bottle numbers and check stations and to record other pertinent data.

For complete coverage of the Ouachita Mountain Region, check stations were set up in the eastern, central and western sectors of the area. These check points were covered from July through December with appropriate collecting methods being used. Each main station was checked three or more times during this period to insure complete coverage, and sub-stations were checked one to three times (Figure 1).

Names used are those employed by Comstock (1948), Kaston and Kaston (1953), and Gertsch (1949). The arrangement followed is that of Kaston and Kaston (1953).

A total of 22 families, 69 genera, and 99 species were collected in the Ouachita Mountain Area with 27 new species being added to the state record (Table 1).

Table 1. Data Concerning Spider Collections Made in Ouachita Mountain Area.

Taxon	Date	**Station Code	***Collecting Code	Habitat	Taxon	Date	**Station Code	***Collecting Code	Habitat
Theraphosidae (Tarantulas)					Xysticus triguifidus Keyserling	7/17	C-2	SN	Field
<i>Dugesiella hentzi</i> Walckenaer	10/1	C-5	P	Roadside	<i>Xysticus gulosus</i> Keyserling	10/2	C-2	S	Forest
Scytodidae (Spitting)					<i>Xysticus fumatus</i> Keyserling	8/28	C-4	SN	Forest
<i>Scytodes thoracica</i> (Latreille)	8/9	E-1	P	Building	<i>Synema parvula</i> (Hentz)	7/17	C-1	SN	Field
Loxoscelidae (Recluses)						8/28	C-4	SN	Forest
<i>Loxosceles aculeata</i> Gertsch & Mulaik	8/9	E-1	P	Building	<i>Philodromus parvulus</i> Blackwell	10/2	C-2	SN	Forest
<i>Loxosceles</i> (Green jumper)	10/2	C-2	P	Building	<i>Philodromus ambecillus</i> Keyserling	8/28	C-3	P	River
<i>Loxosceles viridis</i> Hentz	7/17	C-2	SN	Field	<i>Thanaos formicinus</i> (Clerck)	7/25	E-1	SN	Roadside
Amurobiidae (Necrobellidae)					<i>Tmarus angulatus</i> (Walckenaer)	9/25	W-1	P	Forest
<i>Titanocosa americana</i> Emerton	8/28	C-4	S	Forest	<i>Tibellus dultoni</i> (Hentz)	7/17	C-2	SN	Field
Uloboridae (Feather-legged)									
<i>Uloborus cavatus</i> (Hentz)	11/25	W-4	P	Forest	Salticidae (Jumping)				
Dictynidae (Cribellate)					<i>Phidippus whitcombii</i> Peckham	8/9	E-1	P	Building
<i>Dictyna volucris</i> Keyserling	10/2	C-2	S	Forest	<i>Phidippus catus</i> Keyserling	7/25	E-1	SN	Roadside
Onychiidae (Roses)					<i>Paraphidippus marginatus</i> (Walckenaer)	7/17	C-2	SN	Field
<i>Onychia bilineata</i> (Hentz)	9/5	W-1	S	Forest	<i>Metaphidippus galathea</i> (Walckenaer)	7/17	C-1	SN	Field
<i>Sargisius geminus</i> Chamberlin	7/17	C-1	SN	Field	<i>Metaphidippus protervus</i> (Walckenaer)	7/17	C-1	SN	Roadside
<i>Telochea laticus</i> (Barrow)	7/17	G-1	SN	Field		11/25	W-5	P	Forest
Clubionidae (Club footed)					<i>Habrocestum pulex</i> (Hentz)	9/5	W-1	S	Forest
<i>Clubiona abbotii</i> Koch	8/28	C-4	SN	Forest	<i>Zygoballia bellina</i> Peckham	7/17	C-2	SN	Field
<i>Chiracanthium incanum</i> (Hentz)	9/4	W-4	SN	Roadside		7/25	E-1	SN	Roadside
<i>Clubiona obesa</i> Hentz	7/25	E-1	SN	Roadside	<i>Zygoballia</i> (Hentz)	8/28	C-4	SN	Forest
<i>Phanacis borealis</i> (Emerton)	9/5	W-1	S	Forest		7/17	C-1	SN	Field
<i>Phanacis</i> (Hemlock)	9/25	W-1	S	Forest	<i>Zygoballia sexpunctatus</i> (Hentz)	7/17	C-1	SN	Field
Ctenidae (Wandering)						8/9	E-1	SN	Field
<i>Ctenus hibernicus</i> (Hentz)	9/25	W-1	P	Forest	<i>Agassia cyanea</i> Hentz	7/17	C-1	SN	Field
Thomisidae (Crab)					<i>Myrceia puber</i> Peckham	9/4	W-4	SN	Roadside
<i>Misumenoides formicipes</i> (Walckenaer)	7/17	C-2	SN	Field	<i>Maipissa undata</i> (DeGeer)	7/17	C-2	SN	Field
	9/4	W-4	SN	Roadside		9/5	W-1	S	Forest
<i>Misumenops asperatus</i> (Hentz)	7/17	C-1	SN	Field	<i>Nymphaeaceae hentzi</i> Banks	9/5	W-2	SN	Field
	7/17	C-2	SN	Field	<i>Phlegya fasciata</i> (Hahn)	10/2	C-2	S	Forest
<i>Misumenops celer</i> (Hentz)	9/4	W-4	SN	Roadside		8/28	C-4	SN	Forest
	7/17	C-1	SN	Field	<i>Habronattus coronatus</i> (Hentz)	7/17	C-2	SN	Field
<i>Misumenops celer</i> (Hentz)	7/17	C-1	SN	Field		8/28	C-3	P	River
	8/28	C-4	SN	Forest	<i>Habronattus borealis</i> (Hanks)	10/2	C-2	S	Forest
<i>Misumenops oblongus</i> Keyserling	8/28	C-4	SN	Forest	<i>Habronattus decorus</i> (Blackwell)	7/17	C-1	SN	Roadside
<i>Cosmetus venosus</i> Keyserling	8/9	E-1	P	Building		7/17	C-2	SN	Field
<i>Xysticus bicinctus</i> Keyserling	7/17	C-2	SN	Field		7/25	E-1	SN	Roadside
					Agelenidae (Gross)				
					<i>Agelenopsis parva</i> (Walckenaer)	9/25	W-1	P	Forest
					<i>Cosus medicinalis</i> (Hentz)	8/28	C-4	S	Forest
						9/25	W-1	P	Forest
					<i>Cecus robustus</i> Simon	9/25	W-1	S	Forest
						11/25	W-5	P	Forest

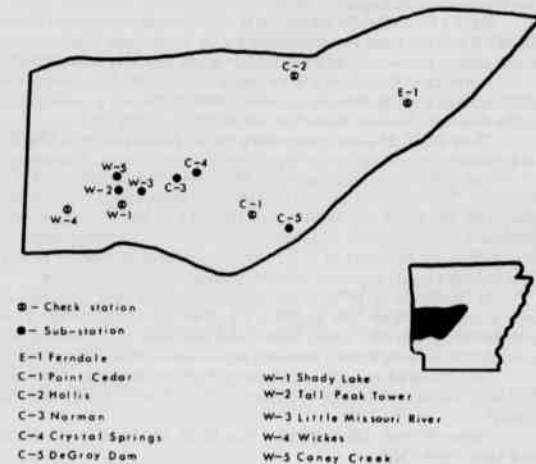
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Taxon	Date	**Station Code	**Collecting Code	Habitat	Taxon	Date	**Station Code	**Collecting Code	Habitat
Mahulidae (Sheet web)					<i>Eucata anastata</i> (Walckenaer)	7/16	C-1	MD	Bridge
* <i>Neontatesia apylla</i> (Keyserling)	8/28	C-4	S	Forest	<i>Acanthopis stellata</i> (Walckenaer)	7/17	C-1	SN	Field
	9/25	W-1	S	Forest		7/17	C-1	SN	Roadside
	9/25	W-1	S	Forest		7/17	C-2	SN	Field
	10/2	C-2	S	Forest		7/25	E-1	SN	Roadside
Pisauridae (Nursery web)						9/4	W-4	SN	Roadside
* <i>Pelopis undulata</i> (Keyserling)	8/28	C-4	SN	Forest		9/25	W-1	F	Forest
* <i>Polonides undulata</i> Hentz	7/16	C-1	F	Bridge		10/2	C-2	F	Forest
* <i>Polonides acutus</i> Hentz	8/28	C-3	F	River	<i>Acacia hamata</i> (Hentz)	8/9	E-1	F	Building
	9/26	W-3	F	Road		8/28	C-4	F	Forest
<i>Pisumina mixa</i> (Walckenaer)	8/28	C-4	SN	Forest		9/5	W-1	MD	Bridge
	10/2	C-2	SN	Forest	<i>Ananiella duplicata</i> Chamberlin & Ivie	8/28	C-3	MD	Bridge
<i>Tania pennsylvanica</i> (Bishop)	8/28	C-4	SN	Forest	* <i>Cyclosa biguttata</i> (Hentz)	9/26	W-3	F	Forest
	9/4	W-4	SN	Roadside	<i>Cyclosa conica</i> (Pallas)	7/16	C-1	MD	Bridge
	9/4	W-4	S	Forest	<i>Metopius labyrinthicus</i> (Hentz)	7/17	C-1	F	Forest
						7/25	E-1	SN	Roadside
Lycosidae (Wolf)						8/9	E-1	F	Building
<i>Lycosa hollis</i> Walckenaer	8/28	C-3	F	River		8/28	C-3	MD	Bridge
<i>Lycosa sabida</i> Walckenaer	8/28	C-4	SN	Forest		8/28	C-4	SN	Forest
<i>Lycosa gulfensis</i> Walckenaer	11/25	W-5	F	Forest		9/25	W-1	F	Forest
* <i>Lycosa saxon</i> (Keyserling)	11/25	W-5	F	Forest	<i>Neocamelus pugnax</i> (Walckenaer)	8/28	C-3	MD	Bridge
<i>Pardosa meluana</i> (Hentz)	7/17	C-1	SN	Field					
<i>Pardosa insularis</i> Emerton	8/28	C-4	S	Forest					
Oxyopidae (Lynx)									
<i>Oxyopes salticus</i> Hentz	7/17	C-1	SN	Field					
	7/17	C-1	SN	Roadside					
	7/17	C-2	SN	Field					
	7/25	E-1	SN	Roadside					
	8/28	C-4	SN	Forest					
Theridiidae (Comb-footed)									
<i>Theridion lepidarium</i> (Koch)	8/9	E-1	F	Building					
	8/28	C-3	F	Building					
	8/28	C-4	F	Forest					
	9/5	W-2	F	Building					
<i>Theridion grandis</i> Hentz	8/28	C-4	SN	Forest					
<i>Theridion diggensi</i> Emerton	8/28	C-4	SN	Forest					
<i>Comptula diggensi</i> (Hentz)	8/28	C-4	SN	Forest					
* <i>Piperea buccata</i> Keyserling	8/9	E-1	F	Building					
<i>Theridula opulenta</i> (Walckenaer)	8/28	C-4	SN	Forest					
Araneidae (Orb-weavers)									
<i>Argiope aurantia</i> Lucas	7/25	E-1	SN	Roadside					
	8/9	E-1	F	Building					
	8/28	C-4	F	Forest					
	9/25	W-1	F	Forest					
	10/2	C-2	F	Forest					
* <i>Micrathena sagittata</i> (Walckenaer)	7/17	C-2	F	Forest					
	8/28	C-4	SN	Forest					
	10/2	C-2	F	Forest					
<i>Argiope trifasciata</i> (Forsskal)	7/17	C-1	SN	Roadside					
	7/17	C-2	SN	Field					
	7/25	E-1	SN	Roadside					
	8/9	E-1	SN	Field					
<i>Micrathena gracilis</i> (Walckenaer)	7/17	C-2	F	Forest					
	7/25	E-1	F	Forest					
	8/28	C-4	F	Forest					
	9/25	W-1	F	Forest					
	10/2	C-2	F	Forest					
<i>Micrathena mitrata</i> (Walckenaer)	10/2	C-2	F	Building					
	7/17	C-2	F	Forest					
	7/25	E-1	F	Forest					
	8/28	C-4	SN	Forest					
	8/28	C-4	F	Forest					
	9/25	W-1	F	Forest					
	10/2	C-2	F	Forest					
<i>Verucosa atrevida</i> (Walckenaer)	10/2	C-2	SN	Forest					
	7/25	E-1	F	Forest					
	8/28	C-4	F	Forest					
	9/25	W-1	F	Forest					
	10/2	C-2	F	Forest					
* <i>Araneus grandis</i> (Linnaeus)	9/25	W-1	F	Forest					
<i>Araneus marmoreus</i> (Clerck)	7/16	C-1	MD	Bridge					
	9/5	W-1	MD	Bridge					
	9/25	W-1	F	Forest					
	10/2	C-2	F	Forest					
	11/25	W-5	F	Forest					
<i>Neocosa domicilium</i> (Hentz)	9/5	W-1	MD	Bridge					
	10/2	C-2	F	Building					
<i>Neocosa anabasis</i> (Walckenaer)	7/16	C-1	MD	Bridge					
	7/17	C-2	SN	Field					
	8/9	E-1	F	Building					
	8/28	C-4	SN	Field					
	9/5	W-1	MD	Bridge					
	9/25	W-1	F	Forest					
	10/2	C-2	F	Forest					
<i>Mangona globetosa</i> (Hentz)	7/17	C-2	SN	Field					
	9/5	W-2	SN	Field					
<i>Mangona placida</i> (Hentz)	8/28	C-4	SN	Forest					
<i>Mangona obtusa</i> (Walckenaer)	8/28	C-4	SN	Forest					
	8/28	C-4	F	Forest					
	10/2	C-2	F	Forest					

* Species not published prior to the present collection.

- ** E-1 Ferndale C-5 DeGray Dam Area
 C-1 Point Cedar W-1 Shady Lake
 W-2 Tall Peak Lookout Tower (North of Shady Lake)
 C-3 Norman W-3 Little Missouri River (4 miles South Albert Pike)
 C-4 Crystal Springs W-4 Caney Creek Wilderness Area
 Camp Ground
- *** S - Seive
 SN - Sweep net
 F - Handpicking
 MD - Mud-dauber nests

Figure 1. Map of Ouachita Mountain Area showing check stations.



By using the materials and methods described above and by setting up major and minor check stations, as was done in this study, the spider fauna of the entire state can be identified in a systematic manner. Since 99 species were collected in this one geographical area, authors believe that the Arkansas spider fauna is abundant. Different habitats should reveal many different species.

General Notes

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NATURAL AREAS PRESERVATION IN ARKANSAS

Scientists have a special interest in the preservation of natural areas. Everyone who teaches field courses in the natural sciences has been affected as favorite study sites were cut over, plowed under, or rearranged by bulldozers. Each year one travels farther and searches harder for good demonstration sites, and it becomes ever more difficult to find certain rare or threatened species.

This paper will attempt to share some thoughts on how the resources of the Arkansas Natural Heritage Commission should be focused to maximize achievement in preserving our remaining natural areas. In turn, because the scientific community is its most dependable source of informational, conceptional, and moral support, the Natural Heritage Commission solicits input from that quarter as it makes long-range plans for the preservation program in Arkansas.

In 1973 the Arkansas General Assembly laid the cornerstone for natural area preservation in the State. The legislative session of 1975 created the new Department of Natural and Cultural Heritage and approved funds for the Natural Heritage Commission as one of the five agencies within that Department. Since the Commission began operating with funds and a staff in July of 1975, almost incredible progress has been made. The Singer Corporation's donation of Singer Forest in Poinsett County in June of 1973 provided an encouraging start. Since that time legal protection has been extended to twelve additional natural areas in all parts of Arkansas. At present 2,266 acres are protected in the System of Natural Areas, and negotiations are underway to protect twelve additional sites which include approximately 3,000 acres.

The first purchase, Roth Prairie, was completed April 5, 1976. A 40-acre tall-grass prairie located south of Stuttgart, Roth Prairie is now managed by Arkansas State University and is used for demonstration by the Arkansas County Agricultural Museum.

Smoke Hole, 437 acres of bottomland hardwood on Bayou Two Prairie, is on the Lonoke County/Prairie County line thirteen miles south-east of Carlisle. The swamp supports an almost exclusive stand of tupelo bordered by a community on the northwest where specimens from nine species of oak have been collected. Negotiations have been initiated with the University of Arkansas at Little Rock for accepting custody of this area.

Sweden Creek Falls is a 75-foot waterfall descending into a shaded cove described by Maxine Clark as a typical relic of Appalachian flora. The falls and a half-mile stretch of Sweden Creek, purchased by the Commission in January of 1977, are located in Madison County south of Kingston.

Dardanelle Rock, overlooking the Arkansas River in Yell County, is an outcrop of sandstone and shale. This 10-acre site was purchased by the Commission in August of 1976.

Devil's Knob-Devil's Backbone is a 520-acre site located in Izard County. Probably the most undisturbed site in the System of Natural Areas, Devil's Knob has been recommended by Dr. E. E. Dale (University of Arkansas at Fayetteville) for recognition as a national natural landmark. Good upland hardwood, an Ashe juniper glade, and limestone-dolomite outcrops are characteristic features of this remote site.

A stretch of Cove Creek in Faulkner County with 222 acres of land surrounding the creek was purchased by the Commission in December of 1976. Upland pine-hardwood, streambottom hardwood, a cedar glade, and the Carolina spring beauty, listed as endangered by Dr. Gary Tucker in the *Arkansas Natural Area Plan*, are all found on this site.

Chalk Bluff, 55 acres overlooking the St. Francis River in Clay County, was described by Dr. George Thomas Clark in the *Natural Area Plan* and contains upland hardwood typical of Crowley's Ridge. This site is at the northernmost point of Crowley's Ridge in Arkansas.

The most recent purchase was 38.5 acres surrounding the Louisiana Purchase Historical Monument Marker in Phillips, Lee and Monroe Counties. The center of the site is at the intersection of the 5th Principal Meridian and the Baseline, the principal coordinates of the land survey system of Arkansas and other states included in the Louisiana Purchase. The high-ground swamp maintains an unusually constant level of shallow water and shows vegetation patterns which distinctly reflect slight variations in elevation and drainage. The Louisiana Purchase Swamp was acquired in February of 1977. Title was transferred directly to Arkansas State Parks, and a conservation easement from Parks to the Commission provides legal protection and establishes management policy.

In December of 1976, conservation easements were acquired on two sites in Prairie County, almost 29 acres of Konecny Prairie and the 18-acre Konecny Grove. The prairie is a part of the largest block of Grand Prairie grassland left in the state; and the grove is a prairie slash of persimmon, green ash, honey locust, and hawthorn with a four-acre marsh dominated by cattail and bordered by black willow. The grove supports Arkansas' only known breeding population of willow flycatchers.

Two hundred acres in Logoly State Park are expected to be dedicated into the System of Natural Areas through a conservation easement. The best features of this site in Columbia County are the beech-dominated ravines and the aquatic communities supported by numerous mineral springs.

Taylor Woods, 138 acres near Pine Bluff, will be added to the System through a conservation easement donated to the Commission by Mr. and Mrs. Tate Phillips.

In addition to the protected System, the Commission also maintains a Registry of Arkansas Natural Areas. The Registry recognizes sites that have been evaluated by the staff and have outstanding scientific, educational, and recreational significance. The Registry now lists and describes forty-one sites.

Various government agencies own substantial acreage which meets the standards that have been established for listing in the Registry. These agencies are encouraged to establish preserved areas, and thirteen of the sites on the Registry reflect this Commission activity. Magazine