



## How To Use The Spider Identification Key

### How To Use The Spider Key

This taxonomic key or guide to spider identification looks at the similarities and differences between spider families using a series of questions about the spider you are watching.

The Key to Common Spider Families of Midewin only covers the 12 families included in this brochure. There are approximately 28 other families recorded from Illinois. See References for more detailed information.

**To use this key,** start at Question 1 and then, depending on your answer (yes or no), proceed to the question number listed. Continue answering questions until an answer gives you a spider family instead of a question number. For example, if your spider was in a vertical orb web in a dry woodland, you would answer "yes" to the first question and proceed to question 2. The answer to question 2 would also be "yes" so you would proceed to question 3. For question 3 you would answer "no" which brings you to the family of your spider, the Orb Weavers. You can then turn to the Orb Weavers section of this brochure for more information.

### Brief Glossary of Words Used in this Spider Watching Guide

- Arachnologists:** Scientists who study spiders.  
**Cephalothorax:** Front part of body  
**Chelicerae:** Structures at the front of the mouth containing venom glands  
**Opisthosoma:** Abdomen, rear part of body  
**Pedipalps:** Leg-like structures used for handling food and sensing the environment  
**Prosoma:** Front part of body  
**Retreat:** Silk nest or hiding place

### References

- Complete list of families and species of spiders recorded from Illinois: The Spider Species of the Great Lakes States. P. Sierwald, M. Draney, T. Prentice, F. Pascoe, N. Sandlin, E. Lehman, V. Medland and J. Louderman. 2005. Proc. Indiana Acad. Sci. 114 (2): 111-206.
- A key to all the families of North American spiders: Spiders of North America: an identification manual. D. Ubick, P. Paquin, P.E. Cushing and V. Roth (eds). 2005. American Arachnological Society.
- Charlotte's Web, E. B. White

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### Midewin National Tallgrass Prairie

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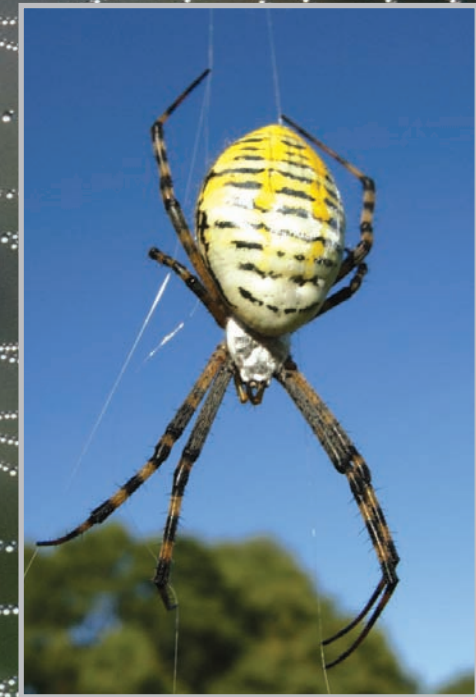
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# Spider Watching At Midewin



Midewin National Tallgrass Prairie

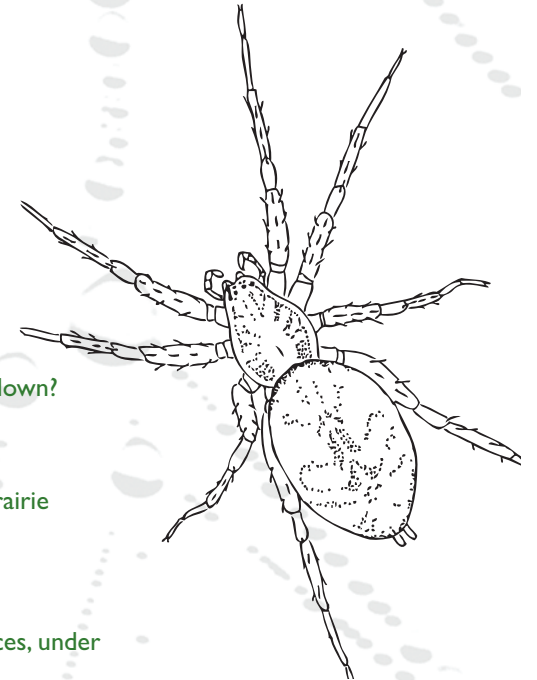


Cover photo: *Argiope trifasciata*This page: *Argiope aurantia*

## Where &amp; How To Look For Spiders At Midewin

## Key To Common Spider Families Of Midewin

- 1** Is the spider in a web?  
**Yes** . . . . .Go to Question 2  
**No** . . . . .Go to Question 7
- 2** Is the web an orb web (think Charlotte's web)?  
**Yes** . . . . .Go to Question 3  
**No** . . . . .Go to Question 4
- 3** Is the orb near water and not vertical?  
**Yes** . . . . .Long-Jawed Orb Weavers (Family Tetragnathidae)  
**No** . . . . .Orb Weavers (Family Araneidae)
- 4** Is the spider (usually less than 5 mm long) hanging in web upside down?  
**Yes** . . . . .Go to Question 5  
**No** . . . . .Funnel-Web Weavers (Family Agelenidae)
- 5** Is the web a disorganized "mesh web" built at the top of a dead prairie plant that is cluttered with prey exoskeletons?  
**Yes** . . . . .Meshweb Weavers (Family Dictynidae)  
**No** . . . . .Go to Question 6
- 6** Is the web a "cobweb" (located in sheltered areas of buildings, fences, under a log, etc.) and the spider is larger than 2 to 4 mm?  
**Yes** . . . . .Cobweb Weavers (Family Theridiidae)  
**No** . . . . .Sheetweb Weavers (Family Linyphiidae)
- 7** Is the spider relatively hairy with stout legs, jumping rather than running, and most often found in open sunny locations where it visually hunts with large eyes?  
**Yes** . . . . .Jumping Spiders (Family Salticidae)  
**No** . . . . .Go to Question 8
- 8** Is the spider "crab-like?"  
**Yes** . . . . .Go to Question 9  
**No** . . . . .Go to Question 10
- 9** Does the spider have the first two pair of legs longer than the second two pair of legs?  
**Yes** . . . . .Crab Spiders (Family Thomisidae)  
**No** . . . . .Running Crab Spiders (Family Philodromidae)
- 10** Does the spider have spiny legs which it uses to "hop" in grass and low vegetation?  
**Yes** . . . . .Lynx Spiders (Family Oxyopidae)  
**No** . . . . .Wolf Spiders (Family Lycosidae)
- 11** Does the spider have large posterior median eyes and is found running on the ground (litter, rocks, etc.)?  
**Yes** . . . . .Wolf Spiders (Family Lycosidae)  
**No** . . . . .Nursery Web and Fishing Spiders (Family Pisauridae)



Measurements in mm.





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### SPIDER IDENTIFICATION KEY

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## How To Use This Guide

This brochure will provide guidance for finding common and interesting spiders at Midewin and an explanation of their biology. It accurately represents common spiders of northeastern Illinois, many of which can also be found throughout the Midwest and beyond. It does not provide a complete list or description of all spiders you might encounter.

Spiders are grouped by taxonomists into families. Families are then split into genera and species. This brochure describes the biology of 12 families and provides a more detailed description of some common species.

For a complete list of the spiders of Midewin and surrounding area, go to [www.stfrancis.edu/watchingspiders](http://www.stfrancis.edu/watchingspiders).



## Where & How To Look For Spiders At Midewin

### How To Watch Spiders

Spider watching can be as interesting as bird or butterfly watching. Use binoculars, a close-up camera lens, or a magnifying glass to observe spiders in their natural habitats.

Spiders that build webs are perhaps the most well known and easily observable. The classic orb web is found in prairies, on fences and buildings, and in woodlands. The Orb Weavers of northeastern Illinois overwinter in egg sacs or as very small spiderlings. Therefore, orbs are very small in the spring and early summer, but increase in size through late summer and fall.

Evenings in late summer are excellent times to see the Orb Weavers in action. They often build a fresh web in the early evening hours and then sit in the middle of the orb waiting for prey to hit the web. During the day Orb Weavers often hide under leaves or branches. Sometimes they hold a single silk thread still connected to the middle of the orb to sense any prey that might hit the web while they are hiding from their own predators.

Other web types include sheet webs (a flat sheet or platform of silk suspended in grass or bushes), funnel webs (similar to sheet web but narrowed into a tubular funnel at one end), and cobwebs (random, irregular, silk threads).

Webs are often difficult to spot until they are made visible by dew. As in bird watching, an early morning walk is often rewarded with sightings not seen during the rest of the day. Another spider watching trick is to walk toward the sun; the reflections on the webs make them easier to spot.

Once you have located a web, you can return regularly to observe the spider's behavior. If a spider is catching food successfully, it will usually rebuild the web in the same spot, moving only if hungry!

A large, unappreciated, number of spider species live on the ground, in vegetation, or on buildings and fences, catching prey without the use of a silk web. Some wait and ambush pollinators visiting flowers (crab spiders), wander leaf litter sensing prey by sight and by ground vibration (wolf spiders), or use their excellent eyesight to stalk and pounce like a cat on prey (jumping spiders). These spiders are more difficult to find because

## A Spider's Ecological Role

there is no physical structure such as a web to help locate them. They are also quick to hide before a casual observer has spotted them. However, once the spider has been found, the observer, having a magnifying glass and some patience, will be rewarded with interactive behavior very different from that of its web-bound relatives.

Once you have learned how to find and observe spiders, you will begin to notice and appreciate them everywhere, perhaps even the ones that cohabitate with you!

## Spiders' Ecological Role

All spiders are predators, feeding on any invertebrate species (including each other) that they are able to subdue using a combination of silk, venom, or strength. While their predacious lifestyle dictates a solitary life, spiders are found in large numbers in all habitats throughout the year, though they are not usually active during cold weather. Spiders themselves are prey for a variety of toads, birds, and insect and worm parasites. Spiders may be found in webs, running on the ground, climbing vegetation, or hiding in crevices under rocks and debris.

Spiders disperse by "ballooning" as young spiderlings (remember Charlotte's babies). On warm days with gentle breezes, thousands of spiderlings balloon leaving accumulations of ballooning silk on fences, bushes, and trees. The silk is referred to as gossamer and the spiderlings are sometimes called gossamer spiders. There are two peaks of ballooning activity, one in late spring to early summer and a second between mid-summer and autumn. The ability to balloon allows spiders to disperse to new areas and also to re-establish populations after prairie fires.



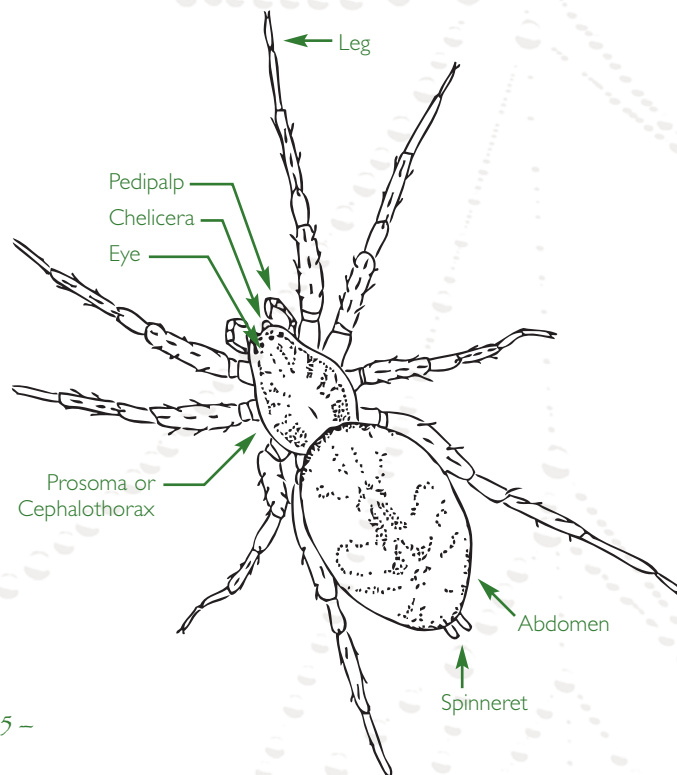
## Basic Spider Anatomy

### Basic Spider Anatomy

The front part of the body (cephalothorax or prosoma) has the eyes (usually eight) and the chelicerae with fangs. The cephalothorax also has eight walking legs and a pair of leg-like structures called pedipalps that are used for food handling and sensing the environment. The rear part of the body (abdomen or opisthosoma) has the reproductive openings on the underside and spinnerets at the rear. The difference in number of walking legs (eight versus six), the number of body parts (two versus three), and the spider's lack of antennae distinguish it from insects; while the spider's two body parts distinguish it from its close relative the harvestman or daddy long-legs (Order Opiliones).

### Harvestman

(Daddy Long-Legs) has a single body unit.





## Spider Development

### Spider Development

Eggs are deposited in a silk egg sac that can be hidden, placed in the web, or carried, depending on the species of spider. The spiderlings hatch within the egg sac and molt at least once. This is a dangerous time for the spiderlings as they are confined to a small space with their hungry siblings! Spiders are known to eat eggs in their egg sac that do not develop and even cannibalize slower-developing siblings. Most of the spiderlings tolerate each other and restrain their predatory instincts until they disperse from the egg sac.

Spiders do not go through any type of metamorphosis; babies look like small adults. Spiders molt or shed their outgrown exoskeletons from 4 to 12 times during their lifetime. At the last molt, the spiders become sexually mature and males can be distinguished from females by their enlarged pedipalps and, usually, smaller size.

### Spider Courtship & Mating

After molting to sexual maturity, males wander in search of females. Once a mate is found, the male uses a variety of displays including dancing, web “plucking,” drumming on the substrate, and sound to convince the female that he is the right male for her and not a meal. If the female is convinced, mating occurs and the male usually makes a hasty retreat but is occasionally eaten by the female. Since the males are short lived and may not mate again, their bodies can provide important nutrition for the female. The female stores the sperm until she is ready to fertilize the eggs and deposit them into an egg sac.

### Spider Silk

Silk is one of the defining characteristics of spiders (another is that they are all predacious). Spider silk is one of those evolutionary products that mystifies and amazes humans. We have yet to synthetically produce a material (not even steel!) that has the incredible strength and elastic properties of spider silk.

Spider silk is produced as a liquid in silk glands located in the spider's abdomen. As the liquid is pulled through the three

## Spiders Bites

pairs of spinnerets at the tip of the abdomen, the liquid becomes the solid strands we know as silk. Spiders are capable of producing many kinds of silk for different uses including ballooning, prey capture (webs and wrapping), drag-lines, egg sacs, retreats, and courtship. The Orb Weavers use non-sticky silk for the frame and spokes onto which they spin a spiral of sticky silk. The Orb Weavers use the non-sticky threads to move around the web and the sticky threads trap their prey. Test this by touching the outer edge of the web and then the spiral to compare stickiness.

### Spider Bites

Nearly all spiders have venom that is injected through their fangs. While black widow and brown recluse spider venom can be harmful to humans, these species do not regularly live in the prairies, savannas, or woodlands of northeastern Illinois. Some spider bites may be painful (not unlike a bee sting) but the fangs of most spiders are not large or powerful enough to penetrate human skin.



Crab Spider  
with prey.



## Spiders in Webs



*Araneus marmoreus*

### Orb Weavers (Family Araneidae)

**Body Length: 1.5 to 30 mm**

Orb Weavers are the spiders most people think of when someone says "spider." This is a large and diverse family. While size, shape, and color vary greatly, common characteristics of the family include a small cephalothorax, small eyes, and large globular abdomen. Males are much smaller than females. All spin vertical orbs to catch flying prey.

Nocturnal Orb Weavers often build new webs in the evening, hunt all night, and then eat the web in the morning. Diurnal Orb Weavers make the fresh orb in the morning for day use. Eating the orb not only recycles amino acids and other nutrients used to make the web, but also provides an extra snack of all the tiny insects that were trapped but were too small for the spider to notice.

Orb Weavers are found anywhere there are flying insects and structures across which a web can be spun. The spiders sit in the orb upside down, sensing trapped prey through vibrations



## Spiders In Webs

of the web. When the Orb Weaver feels threatened, it often drops from its web and becomes almost impossible to find in the vegetation. Sometimes the spiders build a silk retreat in a nearby hidden location (rolled-up leaf, branch crevice, etc.) but still maintain communication with their web through a silk thread attached to the middle of the orb.

Prey (usually flying insects such as flies, bees, wasps, beetles, etc.) caught in the web is held with the front legs while the rear legs wrap it in silk. Once immobilized, the prey is bitten to inject venom. The wrapped prey may be eaten in the middle of the orb, taken to the spider retreat, or hung in the web to eat later.

### Yellow Garden Spider (*Argiope aurantia*)

**Body length: female 19-28 mm, male 5-8 mm**

The Yellow Garden Spider may have a leg span of over 70 mm and a web diameter of over a meter. These Orb Weavers are the largest and best known in our area.



The large females are found in sunny spots during the day (common in prairies), hunting upside down in the middle of their orb. They build no retreats, instead dropping to the ground when disturbed.

These spiders do not hesitate to wrap and feed on insects larger than themselves including dragonflies and grasshoppers.

The spiders mature and mate in late summer. Round egg sacs are produced into the fall and attached with silk to vegetation near the web. Each egg sac may have more than a thousand eggs in it. The spiderlings overwinter in the egg sac, emerging and dispersing by ballooning in the spring.



### Banded Garden Spider

(*Argiope trifasciata*)

**Body length: female 15-25 mm, male 4-6 mm**

Similar to the Yellow Garden Spider but slightly smaller, and the egg sac is gumdrop shaped. It may be found in very dense concentrations in old fields and prairies.

## Spiders In Webs

### Spined Micrathena (*Micrathena gracilis*)

**Body length: female 7.5-10 mm, male 4.5-5 mm**

Look for the compact orb of this spiny Orb Weaver strung between trees or branches in woodlands and especially in Prairie Creek Woods at Midewin.

The spider sits motionless in the center of the web, looking more like debris than a spider, thanks to the unusual spines on the abdomen. This spider also has another trick to deter predation. If disturbed, the spider will produce a low-pitched buzz audible from several feet away. The vibration causing the buzz can be felt if the spider is held in your hand.



Presumably, a potential predator would be startled by this un-spider-like sound and drop the spider. The sound is made by the spider rubbing a "scraper" on the fourth leg across a "file" on the underside of the abdomen. The file is on the surface of the spider's book lungs (respiratory cavities in the abdomen), which may serve to increase the resonance of the sound.

Females mature from summer through fall; males mature through the summer months. This species probably overwinters in the egg sac.







Tetragnatha Spider

## Long-Jawed Orb Weavers

(Family Tetragnathidae)

**Body length: 6 to 13 mm**

Most of these slender spiders make their orb webs in vegetation along wet areas including creeks and marshes. They are common around the pond in front of Midewin's Welcome Center. Their orbs are very similar to those of the Orb Weavers but the center or hub is cut out after the web is made. The web may be made at any angle from vertical to horizontal. The Long-Jawed Orb Weaver is often found in the center of the web. At other times, it may be found on grass or other vegetation to which the orb is attached. It appears almost invisible with its slender body and legs arranged in a straight line. As its name implies, it has enlarged chelicerae.



## SPIDERS IN WEBS

Adults are found throughout the summer. Males are only slightly smaller than females. Egg sacs are laid in late summer, and the spiderlings emerge before winter.

### Silver Long-Jawed Orb Weaver

(*Tetragnatha laboriosa*)

**Body length: female 6 mm, male 5 mm (without chelicerae)**

This spider spins a new web on quiet, warm evenings and is most active around dusk. Because this species lives near water, is active in the evening, and prefers to prey on flies, it is an important mosquito predator. This species may also be found quite some distance from water and has been recorded feeding on agricultural pests in crop fields.



Adults are found from spring through summer.

### Orchard Orb Weaver (*Leucauge venusta*)

**Body length: female 5-8 mm, male 3-4 mm**

These striking spiders, unlike others in the family, tend to make their orbs in bushes and trees in wooded areas especially in Prairie Creek Woods at Midewin. The spider sits in the middle on the underside of the angled orb. The spider quickly drops from this vulnerable spot when disturbed. Males and females mature in early summer. Egg sacs are attached to vegetation near the web.



Tetragnatha Spider



Funnel-shaped Web

## Funnel-Web Weavers

(Family Agelenidae)

**Body length: 4 to 18 mm**

Funnel-Web Weavers are medium to large brown spiders often with stripes and elongated spinnerets. They build broad platform webs with a tangle of silk above and a round funnel-like opening at one end. Since the silk is not sticky, the spider must sense the vibration made by prey wandering across the platform, then dart out and bite it. While primarily nocturnal, they will readily respond to prey in the web during the day. The funnel webs are found in gardens, in fields, around and sometimes in buildings, and around structures such as logs and fences. The spiders can be teased out of the funnel retreat by vibrating a blade of grass or thin twig on the web to mimic a trapped insect. During late summer and fall, males leave their webs to search for females.



## Meshweb Weavers

(Family Dictynidae)

**Body length: 2 to 4 mm**

Meshweb Weavers spin tangled, relatively shapeless webs in the top of plants. They prefer flower heads of dead, dry vegetation (look at last year's flower heads in an unburned prairie). The webs are permanent and become full of debris including the exoskeletons of their prey. How many exoskeletons can you find in the photo above? A small region of the interior is reinforced with silk to form a distinct, tubular retreat. The spiders are most often found motionless within their retreats. They overwinter in the sub-adult stage. Male and females are similar in appearance with adult females only slightly larger than males.



Dictyna Mesh Web



## Spiders In Webs

Unlike her relatives, the Dictynid female is accommodating to the male after mating. In fact, it may share the web for some time after mating, even after egg laying. This unusual sociality has even led to three Dictynids sharing a web.

Meshweb Weavers have a completely different approach to making their silk “sticky.” In addition to the typical spinnerets that all other spiders have, these spiders have a cribellum or a flat, transverse plate in front of the spinnerets that can produce silk threads. The cribellum has hundreds of microscopic silk-producing spigots that produce unique hackled band silk thread. Silk strands from the cribellum are pulled out with special comb-like hairs on the fourth pair of legs called the calamistrum. This produces a “feathering” of the silk that makes the hackled band silk thread “stickier,” not because of an adhesive but because the feathered threads get caught (like Velcro) to the spiny exoskeletons of insects.



Family Theridiidae



Cobweb

## Cobweb Weavers (Family Theridiidae)

**Body length: 3 to 15 mm**

The typical body shape of this spider is a small prosoma and a large, often glossy, globular abdomen. Cobwebs are composed of tangled, irregular strands placed in protected locations including, to the dismay of housekeepers, in homes. The spiders hang upside down in the cobweb (usually at night) or in a retreat at the edge of the cobweb (during the day). The web strands attached to the substrate are sticky. When prey hits a sticky strand, the strand breaks pulling the victim further into the tangle of silk. The spider then uses special comb-like bristles at the tip of the fourth pair of legs to throw viscid (sticky) silk over the prey. Once the prey is wrapped, the spider administers the bite to inject venom.

Cobweb Weavers occupy a variety of habitats that offer protected, dry locations for the cobweb such as hollow logs, stone fences, openings in cliffs, burrows, low vegetation, and buildings.

Theridion species live in low vegetation, grasses, and bushes. Their web has a small tent, not much larger than the spider. Adults are found from midsummer into fall.





Bowl &amp; Doily Web



## Sheetweb Weavers & Dwarf Spiders (Family Linyphiidae)

Body length: 1 to 7 mm



This is a large and diverse family of small to tiny spiders that is sometimes split into two subfamilies: the Sheetweb Weavers and the Dwarf Spiders. Together they make up a very large portion of the spider fauna in almost all habitats, but are rarely seen because of their small size. On

dewy mornings, you have probably seen their webs in footprints, grass, litter, shrubs, woody branches, and other spots when tens or even hundreds of their small webs seem to magically appear.

Both the Dwarf Spiders and the Sheetweb Weavers are champion ballooners, especially in the fall months.



## Roaming Spiders



## Roaming Spiders

### Jumping Spiders

(Family Salticidae)

Body length: 1 to 22 mm



These lively spiders are visual hunters, using their excellent eyesight to stalk their prey like a cat. Their large eyes and relatively short legs are characteristic of this family. They do not spin a web but use silk for draglines, retreats, and egg sacs. They hunt in open sunny habitats including the ground, vegetation, and buildings.

This family is one of the largest and most diverse in Illinois (over 70 species), North America (over 300 species), and the world (over 5,000 species). Some of the species are brightly colored while others are camouflaged and some even mimic ants and beetles!

Males are usually more brightly colored and may have special ornamentation used in complex courtship displays. Some even use stridulation (sound) in their courtship. Also interesting is the aggressive behavior between males. This behavior starts with a visual display but escalates to pushing and even locking chelicerae until dominance is established and one male retreats.

Females usually lay egg sacs in a silken retreat and guard them until the spiderlings emerge. Some species mature in early spring and overwinter as sub-adults, and others mature later in the summer and overwinter as young spiderlings.

These spiders are great fun to watch. They are extremely curious and orient visually to anything that moves, including you! Once they locate their prey, they move toward it, first rapidly and then slowly as they approach. When within striking distance, a sudden increase in blood pressure to their third or fourth pair of legs (depending on the species) extends the legs rapidly propelling the spider several times its body length to capture the prey. A jumping spider is not afraid to attack prey much larger than itself, occasionally leading to amusing (to us) situations.

## Roaming Spiders

### Brilliant Jumper (*Phidippus clarus*)

Body length: female 8-10 mm, male 5-7 mm

This common prairie jumper has been found in virtually every native and restored prairie, as well as old fields, in northeastern Illinois. When found, it is usually abundant. The males mature sometime in late June or early July and the females mature a short time later.



The mature males wander the prairie looking for females who are preparing for their last molt to sexual maturity. These females build a silken retreat in the vegetation, usually in a rolled up leaf or under a flower.



*Phidippus clarus* female

When a male locates a female molting retreat, it first checks to see if the female is mature and receptive. If not, it will build a silk retreat next to hers and cohabitate with the female until her final molt. During this time the male is very aggressive toward any intruder, including humans. If another male appears, they spar for the right to guard the female and mate with her when she matures.

### Bold Jumper (*Phidippus audax*)

Body length: female 8-13 mm, male 6-10 mm

Our largest jumper, the Bold Jumper is a generalist found in a wide variety of habitats (often around buildings) and feeding on a variety of insects. This dark, husky, "hairy" spider is often encountered on vegetation, fences, walls, and occasionally in houses. The fierce appearance of this jumper is ameliorated by its genuine interest in watching and responding to the movement of a



## Roaming Spiders

human spider watcher. While the fangs on its blue-green, iridescent chelicerae are large enough to pierce human skin and the bite can be painful, it is completely uninterested in attacking unless it is threatened.

The Bold Jumper is also a generalist in terms of its life cycle with males found over a broader time period than most spiders – from spring through summer. Mature females are found throughout the warm months. Both sexes overwinter as sub-adults. Like the Brilliant Jumper, males may be found guarding sub-adult females in their silk retreats. Females commonly make their egg sacs under the loose bark of logs.

At Midewin, this jumper is common on bunker walls and it overwinters between the bunker door and doorframe. A dozen or more overwintering silk retreats are sometimes found inside a single door!

### **Zebra Jumper** (*Salticus scenicus*)

**Body length: female 4-6.5 mm, male 4-5.5 mm**



This is one of our most easily identifiable jumping spiders due to its distinctive black and white striped body. It is also associated with human buildings throughout the northern hemisphere.

This spider can be found on the sunny side of many buildings at

Midewin including the Welcome Center. Watch for females with enlarged abdomens full of eggs and waiting to lay an egg sac, or males with elongated chelicerae and enlarged pedipalps. The elongated chelicerae are used in ritualized displays between males to determine dominance.

Mature males are found from spring through early summer; females are found from spring through fall. Overwintering is done in the sub-adult stage.

## Roaming Spiders

### **Crab Spiders** (Family Thomisidae)

**Body length: 5-10 mm**

These day-hunting spiders do not build webs to capture prey but instead sit very still in a spot likely to be visited by prey and then ambush the prey when it approaches. Brightly colored crab spiders are often found in yellow or white flowers waiting to ambush pollinators such as bees, flies, wasps, butterflies, and moths while others



are drab-colored and hide under tree bark or leaf litter. They have a crab-like appearance because of their flattened body combined with the front two pairs of legs being longest and facing forward. The third and fourth pair of legs are significantly smaller and usually face backwards. Their habit of often walking sideways adds to the crab-like effect. Their movements are typically very slow.

The crab spider grabs prey with its front legs, then immediately injects venom. Its ability to catch and subdue prey, often much larger than itself, is impressive. Less impressive is its tendency to kill beneficial pollinators such as honeybees!

The male, which is much smaller than the female, often wraps the female loosely with silk as part of the courtship ritual.

Crab spiders mature in early summer and adults can be found throughout the summer. After mating, it usually places its egg sac in a rolled-up leaf or under an object on the ground (stone, board, etc.). Spiderlings emerge in late summer and fall and overwinter as immatures.

### **Goldenrod Crab Spider**

(*Misumena vatia*)

**Body length: female 8-10 mm, male 3-4 mm**

This crab spider is easily found in the late summer and fall on goldenrod, daisies, and other late-blooming plants. The spider is typically white,





## Roaming Spiders

but turns yellow when placed on a yellow background. The yellow color becomes more intense the longer a spider remains on a yellow substrate. Further color changes may occur, especially in juveniles, when their prey is strongly pigmented and the color may show through the spiderling's abdomen. In the field, juvenile crab spiders may have pink, orange, brown, green, yellow, or white abdomens.

The female spends all her time on the flower. Adult males wander searching flowers for females. The male is much smaller and dark brown in color making it difficult to recognize the different sexes as belonging to the same species. The male must approach the females on the flower very carefully to avoid becoming her next meal. Watch for males at the edge of or under the female-inhabiting flower in June.

## Running Crab Spiders

(Family Philodromidae)

**Body length: 6 to 10 mm**



These spiders superficially resemble the Crab Spiders but are rarely brightly colored or found on flowers. Instead they move about on stems, leaves, and tree bark, sometimes very rapidly. Their flattened bodies are usually a mottled gray or brown.

They do not use silk for hunting, instead they either actively run after prey or wait in ambush. Egg sacs are laid in early summer and the spiders overwinter as sub-adults.



## Oblong Running Spider

(*Tibellus oblongus*)

**Body length: female 7-10 mm, male 6-8 mm**

While this is not a "typical" Running Crab Spider in that it has an elongated rather than crab-like body, it is a very common spider in prairies and

## Roaming Spiders

fields. The elongated, striped body combined with its stretched posture makes this spider almost invisible on prairie grasses.

## Lynx Spiders (Family Oxyopidae)

**Body length 3.2 to 8.2 mm**

Lynx spiders are visual daytime hunters recognized by their long spiny legs, tapered abdomens, and a high level of activity such as running and jumping on tall grass or woody shrubs. They build no web to capture prey, but capture it by either stalking and pouncing (like a lynx) or waiting in ambush for prey to approach. Long spines on their front legs act like a basket and aid in capturing prey. Lynx spiders can be distinguished from the only other similar group, the Jumping Spiders, by their long, spiny legs and smaller eyes.



## Striped Lynx

(*Oxyopes salticus*)

**Body length: female 5.7-6.7 mm, male 4-4.5 mm**

The Striped Lynx is named for the stripes on the female and immature males. The adult male, however, looks completely different with a brown head and silvery black abdomen. The large black pedipalps, used by males in courtship and mating, are also distinctive. The pedipalps of females look like small legs and are simply used for moving food to the jaws and sensing the environment. Adults are found throughout the summer months. Egg sacs are produced during the summer months and are guarded by the females until the young hatch in late summer and early fall.



## Roaming Spiders

### Wolf Spiders (Family Lycosidae)

Body length: 5 to 20 mm



Wolf Spiders are typically brown, sometimes with black or gray stripes. While widespread in almost all habitats, they are almost never found off the ground. They may be found in leaf litter in wooded areas, hunting on the ground in grasslands, or running across the floor of your home.

Rather than building webs to catch prey, these spiders use their good eyesight to stalk their prey. Most hunt at night, pouncing on prey and using their strong jaws to hold and crush the prey. While most hide under litter or rocks during the day, some are active. One species in our area builds a tubular burrow extending as far as 12 inches straight down in sandy areas.

Like cats and other nocturnal animals, their eyes contain a reflective layer, the tapetum, which gives them better night vision and makes their eyes shine green at night. Arachnologists often search for Wolf Spiders at night using a flashlight to illuminate its bright green eyes.

The female has the distinctive behavior of carrying the egg sac attached to her spinnerets. When the spiderlings emerge, they climb onto her abdomen and she carries them around for several days until they are able to feed themselves.



### Stone Spider

(*Pardosa lapidicina*)

Body length: 6-9 mm

This fast runner is found in rocks, usually along beaches, rivers or rocky slopes. At Midewin, look for this grayish wolf spider in the rocks

outside the Welcome Center. The rocks under the large flood lamps are a favorite hang-out for these spiders. They apparently feast on the insects attracted at night by the lamps.

## Roaming Spiders

Courtship occurs from May until mid-summer. Watch for the males displaying to females among the rocks. The male display includes "push-ups," leg waving and other visual cues to attract the female. Watch for females with grayish egg sacs under their abdomens after mid-summer and then with spiderlings on their backs in late summer.



### Nursery Web Spiders

(Family Pisauridae)

Body length: 15 to 25 mm

This family of large spiders includes the Fishing Spiders (*Dolomedes* species) and the Nursery Web Spiders (*Pisaurina* species). Fishing Spiders are commonly found near water and can often be seen running over the water's surface. Nursery Web Spiders are not so closely associated with water and are fairly common in shaded understories at Midewin.

These spiders do not use a web for catching prey. Instead they sit quietly on vegetation waiting to pounce on approaching prey.

*continued next page*





## Roaming Spiders

*continued*

During early to mid-summer, courting males offer a fly to a female. Only if she accepts will courtship and mating proceed. In mid-summer the female deposits an egg sac in a “nursery web” spun around one or more folded leaves. The female then remains in the “nursery” several weeks until the spiderlings have hatched and begun to disperse.

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Correction:

*Araneus trifolium* p. 11 by Wendy Tresouthick