



CENTER LINE

SPRING 2012

INSIDE OUT OBSERVATIONS – THE YEAR 2011

Seasonal observations were made while sitting in my cozy living room, on a comfortable chair, using a commendable pair of binoculars. My viewing area was focused on our large back yard, and no matter which season passed or whatever climatic conditions concurred, Mother Nature became a scope of interest. Pleasurable times were had, when she would throw an unexpected surprise into the mix.

From out of the blue, the winter months of 2010-2011 brought the words of Henry David Thoreau to mind. His quote “All good things are wild and free” sprang into view. And you’re right, I was sitting in my cozy living room, on my comfortable chair, but without my commendable binoculars. Last weeks of winter were hanging on like the jaws of a pit bull. Month after month, the season had stormed. Snow mounded in inches, then feet. Shoveling had become an art form; snow removal one huge nightmare. And spring couldn’t lift a sprig because of the two-foot-plus snow blanket. But then it happened. Striding thru the snow, Mother Nature’s surprise! A male *Odocoileus virginianus*, or White-tailed Deer, crossed the yard along our back lot line. Balanced muscles and graceful hoofs danced on the icy landscape. Dark eyes looked in my direction, and his breath fogged up in the cold air, but his tail didn’t rise in alarm. I doubt if the animal could even see me as he wandered up the city block, in a southerly direction toward U.W.W. This beautiful animal ambled along like he belonged on my territory. This white-tail’s rack was massive. Did you know that the age of a deer cannot be told by the size of the antlers, or the number of tines or points? Male antlers are shed each winter, and the size of the adornment is determined by nutrition. It must have been two and a half weeks later when this magnificent animal made his way across the backyard again. He moved with greater speed, but followed the same trail. It was the last time I saw him, and I hope he found a safe space.

Jaws of winter clenched tightly onto spring. For a time I thought winter would kill global warming. My Wisconsin Birds-Field Checklist, notes of February 16th, recalled a blue jay pair spotted in the back yard. Also several juncos decorated the snow-packed landscape. My notes also stated that this was the time of a first slight warm-up in the year, and snow was melting. Hooray! Then March brought in a sighting of robins to lift the spirits. In fact, robins settled in, in abundance. Earth, frozen for so long, must have bent a few beaks as they tried to reach meaty worms for dinner. But the robins persisted. 2011 became the year of the robins. And it was the robin, Wisconsin’s State Bird, which became another unexpected surprise in Mother Nature’s mixture.

The surprise robin (*Turdus migratorius*) arrived in early spring, and he became my back yard neighbor for most of the summer. First discovery of that bird, and I had to grab for binoculars. What in the world—a large black bird with a dark black head, wearing a wide, ermine-white scarf around his neck. When he bounced around, a brick-red breast could be seen. It was a robin! However, he was the lone robin in the clan, ever to be seen (at least by me) wearing an ermine-white scarf. Very

distinguished, by the way! The notable visitor flew in daily, grabbed worms from the lawn, drank and bathed in the birdbath. We both enjoyed each other's company. It became apparent that my distinguished robin had also found a mate, for later in the season, fledglings were following their leader, chirping and begging and fluttering. A good time was had by all. Just try to remember my words, "You can always plan a great backyard party, but if you want to be noticed, wear a designer scarf".

It is really weird, but when making observations, there are times when you notice things you don't see. For instance, I never saw a single rabbit in the area. Not a married one either, but what the heck had happened to all the bunnies. Another anomaly, the flowers in full seasonal bloom, and only two Monarch butterflies ever appeared in the garden. One morning I did see a Mourning cloak, but he must have been lost. In early autumn, however, a pair of Yellow Swallowtails made daily tours thru the herb gardens. This lasted for two weeks. Their visits were just becoming habit forming when they were terminated. Butterfly watching had also become a futile effort.

Wisconsin's season, however, rotated as usual. Winter melted into spring. Spring melded into summer and summer became a magnificent fall. Inside-out observations continued from my cozy living room, on a comfortable chair, using my commendable pair of binoculars.

Mother Nature goes all out when organizing the cornucopia of autumn, so much time was apportioned for watching her extravaganza. The splash of colors in the deciduous trees became magnetic, and I wanted to open my acrylic paint tubes. Last blooms of the year have that special glow that is difficult to capture on canvas. From my vantage point, when the harvest moon shone down, on the abundance to be gathered from the garden, my mouth watered. Hear – Hear, to the hearty feasting. Holiday season soon would be on the horizon.

Before closing observations of 2011, another surprise from nature's stores tumbled onto the scene. There were times when the most gratifying moments that appeared in the lens of the binoculars, emanated from the smallest of my outdoor visitors. Recall all those bunnies that had mysteriously disappeared. They were replaced by abundant numbers of *Tamias striatus* – the greatest entertainment group of the year. The group performed under the name of the "CHIPMUNKS", and the "CHIPMUNK FOLLIES", became the hit of the year!

With these facts in mind, a confession. At first sight, the little critters seemed a bit vexing. As the small group became a giant ensemble, their stage became a holey place, and their holey place was set in our impeccably groomed back yard. However, entrances to their underground stagings were kept very tidy. Never did find where the dirt was swept under the rug. So much for vexing. The little chipmunks' costumes consist of dark and light strips on their backs. When mature, they can be 8 to 10 inches long, from head to tail, and they possess enough energy between this space to tire any observer. Don't confuse the chipmunk with the ground squirrel. If tails are held up when running, you have the chipmunk in your sights.

Chipmunk Follies had a long run. The troupe grew into a circus of entertainment. Tiny youngsters of the family became gymnasts. Acrobatic feats were performed over the length of the yard. Pairs of exhibitionists, running at break-neck speeds, their tails held high of course, would leap over each other, and bound up and down the trees. At times one of the players in the act would stop short, and hang up in a knot-hole of the tree. His partner, who could brake on a dime, would reverse the game plan, with a "Coup de Theatre". Both would return to go again. Some of the performers would run horizontal races on the stone-block wall bordering one side of our backyard. Over the top of this neighboring barrier, spreading juniper draped. The trick was to see which horizontally-running marvel could go the farthest without falling off the wall. The winner, who didn't fall from the wall, would jump

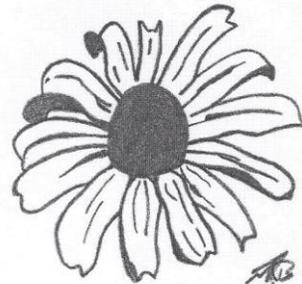
into the juniper branches. One second later, out of the blue-green, the victor (wearing his laurels) would pop up, and become as still as garden statuary. Very Amusing!

The year 2011 would soon be a statistic. Performers in the backyard would go on hiatus. The troupe would now only deal with activities concerning hibernation. Burrows had to be provisioned with winter supplies. The chipmunks developed big smiles on their tiny faces as their cheek pouches filled to capacity with nuts from neighboring trees. They worked like crazy when the sun shone, but as days shortened, I saw less and less of the little entertainers. Late scramblers, however, would dash across the patio, jump into our concrete flower pots and enjoy the last geranium buds of the year. Now all are sleeping.

So its time to wrap up the 2011 observations. The year has been put to bed, and I'm heading in that direction too. All my notes are closed, but I just remembered a quote from the great observer, William Shakespeare. He wrote, "One touch of nature makes the whole world kin." And that's the way it seems to be.

See you on the trail,
Shirley Blanchard

THE LAST PRAIRIE



Prelude: When I began this article, Shirley Blanchard was finishing hers. When she turned it in, I received it at the front desk, made a scan and handed it back, thanking her for her contribution. I read it later at my desk, where I discovered we had the same idea/fascination. Shirley's article will appear in the next Centerline, and it significantly differs from the following text. In other words, you should read it! Until then, please enjoy the following article, which was never intended to steal Ms. Blanchard's thunder.

Eight is Enough

Spiders are not insects! Now, say that over and over again in your head until you believe it. Most of us already know this, but it is easy to forget. There is a great deal of commonality between spiders and insects. They both have exoskeletons, they are both a little creepy/crawly, they are both kind of small (you hope), and they both sort of crunch and squish under your foot; mistakenly, of course. They are also both Arthropods. Phylum Arthropoda is an organization for all things exoskeletal. You also need jointed appendages to join the club, but it is the external armor that most folks associate with these creatures. From here, Class Insecta and the infamous Class Arachnida go their separate ways.

If you wish to live and thrive, let the spider run alive. Old English Nursery Rhyme

Arachnids are fascinating! Maybe you are in awe of their great strength. Perhaps you marvel at their incredible mobility. It is possible their unique appearance simply astounds you. Ultimately, their overall creepiness (they do sort of creep along) might disgust or even frighten you. But, Miss Muffet aside, you must admit that they are indeed fascinating with their lack of antennae or wings, and four pairs of legs. Now, let us filter out the Scorpions, Whip Scorpions, Tailless Whip Scorpions, Wind Scorpions, Pseudoscorpions, Schizomids, Mites (mostly microscopic, and includes Chiggers), Ticks (thank heavens), and Ricinuleids; I refuse to filter out the Harvestmen, which includes the beloved Daddy Longlegs (Levi and Levi 1968). We are left with the very awesome Order of Araneae, which are the True Spiders!

What a frightful looking beast—half an inch across at least!

It would frighten even Superman or Garth.

There's contempt it can't disguise—in the beady little eyes

Of the spider glowering in the bath. Michael Flanders and Donald Swann

Let us begin with the body. Spiders have a **cephalothorax** (cephalo=head, or of the head—thorax=chest, breastplate, or part of the body between the neck and the diaphragm) and an abdomen, which make up their two-part main body. The 'tube' that connects the two is called a **pedicel**, the same term given to a leaf stem. The cephalothorax is covered by the usually hard, **chitinous** (a glucose derivative similar to cellulose—combined with proteins for durability in exoskeletons), **carapace** (shield), which is also the name for the upper dome of a turtle's protective shell. Up front, there are the famous piercing/sucking mouthparts called **chelicerae**. These are the spider's "jaws" that bite, and often inject poison (note: not all spiders have poison). Next to the chelicerae, the **pedipalps** are small and leg-like in females and young spiders, but enlarged in adult males for mating. In back, most spiders have three pairs of **spinnerets** at the bottom-rear of the abdomen that issue their glorious, herculean strands of silk. The amazingly strong legs are five-segmented or more, and can move in eerily hypnotic ways, propelling the spider with inhuman (obviously, I know) grace and speed (Levi and Levi 1968). At the leg tip is the secret to how in blazes these wall-crawlers hang on; the **claw**.

Weaving spiders come not here;

Hence, you long-legg'd spinners, hence. William Shakespeare, "A Midsummer Night's Dream"

The spider's claws are what they use to defy gravity. There is no "stickiness" on them, like glue or any viscid secretion like their silk. The claws are sticky more like Velcro®. There are five "grabbers", two upper claws, one opposing median claw, and two smaller **setae** (modified hairs) to help their deft grip. What exactly keeps the spiders from sticking to their own webs? We do not fully understand (read: no clue). Some of the hunting (do not construct webs, but stalk or ambush their prey) species have only the two upper claws and a fine tuft of brush-like hairs called a **scopula**. This allows them to gain purchase on smooth surfaces, and some can even cross calm waters (Levi and Levi 1968).

What a number of products to come from that curious factory, a spider's belly! I behold the results, but fail to understand the working of the machine. I leave the problem to the masters of the microtome and scalpel. There are no masters nor apprentices in their guild; all know their craft from the moment that the first thread is laid. J. H. Fabre, "The Life of the Spider"

We should also spend a little time on silk. Not just webs as we know them, but simply the sheer strength and wonder of the individual strands themselves. Also because not all spiders build webs, but all spinners utilize silk in interesting ways. The material produced by the Araneae is a fibrous protein that is insoluble in water, which is a good thing for those rainy days. It is a liquid when it leaves the spinnerets, but hardens instantly, **polymerizing** (single molecules with 'extra' double or

even triple bonds, break those bonds and form up into a structure or chain) into a consistent substance; a substance that is the strongest natural material in our world. Silk is physiological and chemical magic. Most spiders use it for a drag/life line, attaching it at regular points as they travel. Along with general safety in winds, they use it to find their way back home, and can also do a little rappelling as they drop on a single strand to escape danger. Many also construct silken egg cases and nurseries, as well as wrap prey (Levi and Levi 1968).

*A lover may bestride the gossamer
That idles in the summer air,
And yet not fall: so light is vanity.* William Shakespeare, "Romeo and Juliet"

Do you **balloon**? Spiders do; at least young, dispersing spiders. After hatching, many species of tiny spiderlings climb as high as they can, and let out long strands of silk. When the breeze catches their line, they let go and float on the winds of autumn to places yet unknown. If you get enough of them, you have an afternoon filled with **gossamer** (very fine threads of silk, usually reflecting the light of the sun). Such events have inspired artists for centuries. They can travel some distance. Charles Darwin observed them in the rigging on the *Beagle* sixty miles offshore (Hillyard 1998). Well, all this floating and dispersing is well enough, but let's get to the cool stuff. Of course, spiders can also build webs and other ingenious creations like trap doors (sorry, no trap door spiders in Wisconsin).

On foggy mornings, Charlotte's web was truly a thing of beauty. This morning each thin strand was decorated with dozens of tiny beads of water. The web glistened in the light and made a pattern of loveliness and mystery, like a delicate veil. E. B. White, "Charlotte's Web"

The famous Orb Weaver spiders (family Araneidae) are mainly responsible for the intricate, circular webs we all know. The genus *Nephilia* favors warmer climates (there are a few species in the southern U. S.), and builds the strongest webs known to humankind; they can be one to two meters across. If they can get the spider to create one in a prepared hoop, some native tribes use these webs as fishing nets (Hillyard 1998), which is incredible when you stop and think about it. There are other web-builders in our state. We have Funnel Weavers, Sheet-web Weavers, Cobweb Weavers (we are all too aware of these), Cellar Spiders (these are the small-bodied ones with really long legs that hang in loose webs in our houses), Nesticids, Ray Orb Weavers, and... you get the idea.

*"Will you walk into my parlour?" said the spider to the fly;
"Tis the prettiest little parlour that ever you did spy.
The way into my parlour is up a winding stair,
And I have many curious things to show when you are there."
"Oh no, no," said the little fly, "to ask me is in vain,
For who goes up your winding stair can ne'er come down again"* Mary Howitt, "The Spider and the Fly"

Do not forget the hunting spiders that help make up our thirty Wisconsin Araneae families. Wolf Spiders have excellent vision and camouflage. They hide under rocks or dig small burrows, then run and ambush their prey. Jumping Spiders also have great vision (among the finest of all invertebrates), but where wolf spiders are great runners, these things move very fast over short distances. So fast, they seem to disappear, and instantly reappear an inch or two away. They slowly stalk their prey, jumping on it when in range. They attach a web line in case they miss the mark. Wisconsin is even home to Pirate Spiders, which hunt other spiders in the other spiders' own webs (Levi and Levi 1968). So much for solidarity, but who are we to judge? In the natural jungle, food is food.

With spiders I had friendship made,

And watch'd them in their sullen trade Byron, "The Prisoner of Chillon"

Are there poisonous spiders in Wisconsin? Reason to be somewhat afraid (or at least cautious): There are very few spiders in our area that can seriously threaten us with their poison. Admittedly, science does not know enough about spiders and the effects of their bites, but there aren't many species on record that can cause us much harm. Some cannot break human skin, others have venom that is less than effective on such large mammals. Like snakes, spiders also do not inject their poison with every bite. The well known, dangerous exceptions are the Brown Recluse (*Loxosceles reclusa*—exotic), and the Northern Black Widow (*Latrodectus variolus*—native). They are also relatively timid spiders, but have no problems biting when they feel threatened. The Widow's bite is more life-threatening, but usually will not take down a healthy human. They are both infrequent in Wisconsin, with the Recluse as the more reclusive; only two individuals recorded in the past twenty five years (Pellitteri et al. 2009). While there may be some bites not on record, do not let this stop you from investigating spiders. Be brave, enthusiasts! *Fac fortia et patere!*

I am at present red hot with spiders, they are very interesting, and if I am not mistaken, I have already taken some new genera. I shall have a large box to send home very soon to Cambridge. Charles Darwin to John Stevens Henslow during landfall in Brazil

Postscript: Finally, I hope you have a place in your heart for spiders, or at least you are considering the possibility that they are somewhat not all bad. They have gripped the human imagination for millennia. Consider the Greek story of Arachne (more on this in Shirley's article), the Hopi tribe's story of Kótyangwúti—the Spider Woman, the Japanese Tsuchigumo, the African Anansi, and our very own Ojibwe's Dream Catcher origins. There are over five hundred recognized species in the state, but we think there are as many again yet to discover; perhaps by you. Some of us might be a little repulsed or even afraid, but I double-dog dare you to take a closer look at our eight-legged companions that walk (or crawl) this planet with us. They are awe incarnate.

Mike

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