

News & Views

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The Importance of Forest Connectivity and Oak Trees to Migrant Birds

Maggie Jones

I have lived in Crawford County since 1976 on 115 acres of land with 90 acres of forest, surrounded by our neighbor's pastured forest. Early on we joined the Managed Forest Law Property Tax Program, and received tax breaks on the forest land for twenty-five years. By the time our program expired, I realized I cared more deeply about the forest and the creatures living in the forest than I did in receiving the tax break. I needed to learn more.

I began attending outdoor education classes, and attended a variety of programs including:

The Aldo Leopold Foundation's Woodland School, Kickapoo Woods Cooperative field trips, and outings and opportunities on land protected by the Mississippi Valley Conservancy. I asked questions, read books and gathered as much information as possible. I read Bernd Heinrich's "The Trees in my Forest" and found it to be a lifetime's worth of education in one volume, sweetened with beautiful writing and astonishing insights.

To the casual observer forests are everywhere in the Driftless Area, but the reality is, we have shockingly few areas of larger forests. I learned the larger a forest is, the richer habitat it is for its inhabitants. The interior is cooler in summer as strong drying summer winds don't penetrate in as far, therefore there is more food abundance for insect eaters. Edge nest predators like white-tailed deer, raccoons, exotic house cats and cowbirds don't penetrate into the interiors of the larger forests like they do the smaller forests. Forest birds have better reproductive success in larger forests.

Everything land owners can do to increase the size of their forests is very important. Landowners protecting forests from development with conservation agreements have a powerful and positive first step in place, but if adjoining owners can work together to protect more acreage that is even better yet.

Maggie Jones is an experienced conservationist who loves to snowshoe and hunt rabbits and squirrels in the winter alongside her red-tailed hawk and dachshunds. She also birds and is constantly obtaining knowledge on her property and all of the occupants therein, but finds the most joy in the continuous surprises her 115 acres of property in Crawford County yields. Maggie Jones and her husband David are members of the Mississippi Valley Conservancy Stewardship Circle, she states, "David and I are happy to be part of the Stewardship Circle and want to do all we can to make sure that MVC can continue to save land from development far into the future. We see permanent land conservation as vital to all of our futures."

During my studies, oak ecology grew to fascinate me, especially the integral relationship between fire and oak trees. Oaks must have fire or some other method of beating back highly competitive trees that inevitably beat them in the battle for sunlight. Not only do oaks depend on fire to survive and reproduce, that same relationship exists between fire and most all of our natural landscape: prairies, wetlands, savannahs. When I finally saw the wholeness of the evolutionary role of fire, it was like tumbler's shifting on a safe I had been trying to crack for decades.

An important tumbler fell a year ago when I went to hear Eric Wood talk about his doctoral research on the feeding methods of the tiny insect eating birds that fly up from Mexico, Central America and South America. The birds he studied pass through Wisconsin on their way to nest farther north. These birds need calories to gain the weight they lose on the first leg of their journey, and even more calories to continue on their migration to their breeding grounds in Canada. These birds need to find food while expending the least amount of energy possible.

The Importance of Forest Connectivity and Oak Trees to Migrant Birds (cont)

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Eric and his students laid on their backs with binoculars looking into the treetops and watched these birds forage. They noted which trees were used most, which used the least, and everything in between. They documented the birds' methods used in obtaining the insects; did they have to remain in flight like a hummingbird to access the insects? Could they perch and walk to access their food? The more energy it takes to get at the insects, the more they need to forage to gain the weight they must have to continue their long migration.

After conducting the research, Eric found that it was the early succession trees, the oaks and hickories, that provide the easiest, least energy demanding way to get food. Coincidentally, these same oak and hickory trees are the species that depend on fire to survive. I thought about all the discussion I had heard, in all the classes, nature hikes, where people argued about land and forest management. There's an oft repeated question among people who realize how important fire is to our forests: How should I manage my property? Should I manage it as those in the past have, if so, how far back should I go? The problem with this question is many believe it to be much too complicated.

I don't think it is complicated. Birds have been migrating to our forests for hundreds of thousands of years, and fires, natural or not, have been roaring across the landscape for hundreds of thousands of years as well. During that time, birds, trees, insects, amphibians, reptiles, butterflies, shrubbery, all the living things have been adapting to these fiery conditions knocking back succession. Europeans, by stopping fire have altered the natural condition in an instant, and have eliminated what our fellow creatures have depended on and adapted to for millennia. I support and encourage burning to stop forest regeneration to maples and basswood. It is, in actuality, not the natural progression of things.

Late succession forest is vastly dominant here in the Driftless Area. Everywhere you look oaks are being crowded out by maples and any remaining early succession that hasn't been saved is headed inexorably on to late succession; therefore, the individual landowner who wants to preserve a vital declining ecosystem for wildlife will never regret it. The opportunity to give a once abundant but now very rare habitat to survive again is a never-ending legacy.

MVC Lands and Archaeology

By Ed Hill

Although Mississippi Valley Conservancy (MVC) has as its mission "conserving native and working landscapes" of southwestern Wisconsin, it also helps protect special features and life forms within these areas. There are many protected and threatened species of animal and plant life in our nine counties of coverage. These receive attention not only from MVC staff and MVC work projects but from other state, regional, and national organizations as well. These features are a priceless and informative part of these lands, and the plants and animals living here deserve our attention as well.

There have been other lives here too, and MVC is committed to identifying and protecting the evidence of their habitations. This evidence of early Native American cultures in Western Wisconsin and along the Upper Mississippi River can be found at thousands of sites in this region, and with the help of such organizations as the Mississippi Valley Archaeological Center (MVAC) in La Crosse, The Archeological Conservancy, and the Wisconsin Historical Society, these places are being identified and studied. MVC's protected lands are home to many of these native cultures. MVC's Conservation Specialist Abbie Church provided for me a listing of about a dozen such sites within our conservation easement properties.

One of the most interesting examples is within the 661-acre Cade Archaeological District in Vernon County. MVC has recently purchased seventy acres here with additional financial support from Wisconsin's Knowles-Nelson Stewardship Fund and The Archeological Conservancy. This parcel is on the north fork of the Bad Axe River, and it contains two well-preserved collections of effigy mounds.



MVC Lands and Archaeology (con't)

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The Effigy Mound Culture lived in this region about 1,000 years ago. The mounds these people left, typically in the shape of animals, can be found in great numbers all over the region. Most of the original mounds have been destroyed by agriculture, road-building, and modern development, which makes their careful preservation increasingly important. These early native populations left no written record. Their mounds and artifacts are their record, and MVC will work to assist with the research and study to help us understand these early builders. Property owner Jim Theler, now retired from MVAC in La Crosse, has signed a conservation easement with MVC for his forty-eight acres adjacent to the Cade Archaeological District, and his land includes two rock shelters and six living sites, as well as other artifacts, including evidence of Late Woodland Native American cultures. MVC's Abbie Church points out that "when you stand on the Theler property, you can actually stand in the habitat that was there two hundred years ago when the site was being used by Native American cultures." This will be a meaningful place for visitors to contemplate the wheel of seasons and the flow of human life. To put our own lives here into scale, MVAC archaeologists have dated the earliest sites in the Cade District to about 13,500 years ago. A number of springs in the District also flow into the Bad Axe River which may have been a factor influencing the residency of these earlier cultures.



Among other examples of such sites is a large bird effigy mound in the Cassville Bluffs State Natural Area. It is located along a bluff above the hill prairies in the DNR portion of this area, and with its 270-foot wingspan, is likely one of the largest remaining legally protected mounds in the region.

MVC's Kings Point Tract within the Tunnelville Cliffs State Natural Area includes multiple rock shelters overlooking the Kickapoo River Valley.

On another of our conservation easements, the 117-acre Swennes farm property near Holmen, artifacts date back as far as 12,000 years, and include a prehistoric mastodon bone and evidence of Native American winter camps. The Swennes

brothers, Otto, and John, now deceased, permitted MVAC archaeologists to conduct field schools and other research projects with the findings important enough for this farm to be described as one of the most significant archaeological sites in the region.

Near Ferryville is a site described as a part of the Copper Creek Mound Group. It includes at least three conical mounds on a ridge top overlooking the Mississippi River. Pottery found here is linked to the Woodland Cultures that originated in about 500 B.C.

MVC's Abbie Church points out that much of this Driftless Area is largely unexplored for potential archaeological resources. MVC's protected lands are sheltered from destruction from residential development and mining. By protecting the landscape of the Coulee Region, MVC helps preserve potential undiscovered features and evidence of earlier cultures. Church also notes that every year, MVC staff members hike every conservation easement property to verify that the natural resources are protected. Discoveries occur often, as when Church and landowner Maggie Jones visited an easement property near Blue River. As they hiked, a hawk flew over and caught their attention, and at that moment Church looked down and found a Native American spearpoint, subsequently identified by Joe Tiffany of MVAC as a Galena Chert point from the Late Archaic period, some 3,000 - 6,000 years ago.

This culture was followed by the Woodland Period with its villages and more advanced bow and arrow hunting techniques. These were Wisconsin's first potters and gardeners, and they left many of the mounds, including effigy mounds, that were built throughout the state.

MVC is working to help protect what is beautiful and significant for future generations. These protected lands contain evidence of earlier residents, whose contributions to our legacy are becoming better understood and valued. With the help of the Mississippi Valley Conservancy, the role of landowners in finding and protecting the artifacts, artwork, and cultural history of our earliest residents can hardly be overestimated. It is important that we study who they were and how they lived. We are all within the same flow of time, living near the same great river.