

A Species of Land Like No Other ©

Oak Thank you June for those kind words and thank you for allowing me to speak on behalf of the oaks this evening. I know that many of you have either read or are planning to read Doug Tallmeyer's excellent book "The Nature of Oaks". I will be touching on a few of the same personality traits, or "Quirks of the Quercus" tonight but not nearly as in depth as in Doug's book. I highly recommend it to anyone who has not had the chance to enjoy the read and it is full of more detailed information on oak topics of all types.

I would like to begin our evening by sharing a story with you

Opening

Dream Job Thirty-five years ago, in the midst of a March thaw, a young man reported for the first day of work at a new job, the dream job, the one he waited for his entire life. The pinnacle of years filled with reverie and wishing, a job conserving the land. He barely slept the night before in anticipation and skipped breakfast in the desire to be on time for that first day.

As with all new jobs, there were the perfunctory introductions, the brief tour of things, a pile of forms to sign and finally, the first assignment; grading a gravel road, just installed the year before to service a new nature center.

Tractor. By noon that young man managed to bury the tractor up to the back axle twice in the thawing shoulder of the road, the hitch pin had sheared repeatedly and a job that should have taken an hour remained unfinished. When his new supervisor showed up at lunchtime there was no mistaking the look of disdain at the rutted road shoulder and equally rutted looking new ranger.

The afternoon went from bad to worse, and by quitting time what should have been the long anticipated perfect first day had disintegrated into a series of mistakes, misfortunes and misjudgments.

The young man decided a walk might steady his mind before beginning the long drive home to a wife and new child waiting to hear every detail of that first perfect day.

Stone Boat. A mile down the trail a flat glacial erratic rested on the edge of a former hay field, exactly where a team of draft horses dropped it decades before when the land first felt the iron of the plow and the young man stopped to rest for a moment before heading back. The disastrous events of the day played in a continuous loop and he wondered if maybe all of his conservation dreams were just that; only dreams.

Blue Jay. As those thoughts swirled one upon another a blue jay swooped down off a nearby tree and began picking his way along the piles of rocks that marked the once upon a time edge of that old hay field. The bird stopped every few seconds and cocked his head as if listening for something. He paused in front of pile of boulders seeming to listen even harder and out of a rocky crevice pulled forth an acorn. Pleased with himself the bird was in flight in an instant.

As the jay took flight, the young man felt the rest of the fence line snap into view as if someone removed a blindfold from his face, unveiling the world for the first time. All along

the rocky edge, oaks of various sizes grew from tiny gaps between the stones. Curious, he walked closer to discover that in almost every case they had sprouted from the most inhospitable place possible for a tree to start life.

Oak in Rock. Some random event, a jay that misjudged the depth of a rock crevice, a spring melt that filled that crevice with enough water to support a sprouting nut, a peculiar angle of the sun that allowed ample light to unbend the stem upwards until it could stand on its own. They all conspired to bring oaks to a forgotten fence line in a tiny park somewhere in a rural Illinois county.

It occurred to the young man that maybe everything didn't have to be perfect in the beginning for something truly important to grow. Perhaps that might even be the way nature intended it to be, for oaks and people to grow in their own time and in their own way. As those thoughts rose like the snow fog beginning to unfurl in the evening air, the jay re-appeared not more than a dozen feet from him and carefully dropped another acorn into the rocks. As he did, a breeze flowed out of the east and shook the leaves on the small fencerow oaks as if to say, "Do you understand now?"

That day was the moment I first became aware that oaks possessed an intelligence, the first day the I heard the land speak directly to my soul. It would not be the last.

I have never stopped listening to the land since that long ago March day when an older world first knocked on the door of my spiritual sub consciousness. The land has taught me that the natural world is full of conversations, some the idle chitchat that flows from a planet alive for nearly two billion years, others quite profound. Some entail great wisdom and some are simply joyous mirth; born of the senses and emotions all species possess.

Lady with Moon. In our time together this evening, I would like to share with you some of the insights the land and especially oaks, have imparted to me these many years and why I feel we stand poised on one of the most remarkable transitions to human culture ever to occur. And why of all the diverse partnerships we form in the course of our work, the relationship that binds us to place is the most important we shall ever forge.

I alluded earlier that oaks possess intelligence and I remain firmly convinced of that fact. But what does that mean? So I thought a good beginning would be to explore that ecological intelligence by assessing oaks broadly as a group, how they have come to be a cornerstone of our local ecosystems in northern Illinois and how widening our view to understand our woods as a larger ecosystem can allow us to see both the forest and the trees.

Oak History and Mythology

Comet Oaks have ancient beginnings stretching backwards to the end of the Age of Dinosaurs, some 65 million years ago. On that last day, a piece of wayward asteroid impacted our planet in the Gulf of Mexico, striking the earth as a chip shot and setting off a firestorm that burned most the North American continent to the ground.

Nuclear Winter In the nuclear winter that followed most plant and animal life disappeared. Some scientists speculate that no animal larger than the size of a turkey survived the disaster.

Miocene Oak and Squirrel But in the eons that followed, new forms of life evolved and oaks first appear in the fossil record during the Eocene period some 50 million years ago. This same era produces a mammal that will eventually stake its future on the newly evolving oak species, the squirrel. At least that is until human beings invent bird feeders.

Mexican White Oak Although worldwide in distribution, oaks are primarily a North American invention, with about 90 species found in the United States and 195 in Mexico, the epicenter of oak diversity in the western hemisphere.

Pollen Oaks are wind pollinated with both male and female flowers on the same tree. The end result of all that self-wooding and reproduction is one of the characteristic emblems of oakdom, the acorn.

Acorn Ac is the old English name for oaks and corn or cern is Greek for kernel. A crop of acorns is referred to as a mast crop.

Jay acorns are favored by many types of wildlife for food. Some species such as jays actually are responsible for expanding oak communities by caching acorns in open fields for later use.

Balonoculture Mast is a nutritious food for humans as well. New archeological evidence suggests that while domestication of cereal grains may have begun about 10,000 years ago, collection and utilization of acorns stretches back even longer, representing the first organized attempts by early humans to build a settled culture around a single crop.

Oak King Oaks hold deep cultural meaning for both Old and New World cultures. In the British Isles, the oak king battles the holly king twice each year. In losing to him, the winter landscape is ruled by the holly king and in besting him brings fertility back to the land and herds.

Fairy Both Native American and European mythologies identify the small people, fairies and elves with oak groves.

Luna Moth On a full moon night in midsummer it is still possible to see the fairies as they flit from branch to branch and understand how such legends first came into being.

Dryad The tree spirits related to oak groves are called dryads. Legend says that at the birth of a new oak, a new dryad is also born whose life is tied to the life of that tree. Shy and retiring, dryads still inhabit oak woods even today, disguised during the daylight as trees only to emerge at night to dance and revel among the oaks.

Ogham In northern Europe, Ireland and Scandinavia an entire system of writing using representations of various sacred trees, including the oaks, evolved. Known as Ogham. This writing features a central line representing the trunk and horizontal hash marks representative of the branches of different trees.

Druid What investigation into oaks would be complete without mentioning the druids. The oak was the principal sacred tree of the druids, symbolizing truth and knowledge. Individual trees could be awakened or brought into consciousness by the careful application of druidic knowledge, just as they could be put to sleep. Even the word druid may have its roots in the old Indo-European word for oak, druis or druin.

Oak Ecology

Ice While oaks have a fascinating cultural history, they possess just as rich an ecological history. Here in the upper Midwest, oak species comprise the foundation of a number of natural community types. How these trees came to be such an integral part of northern Illinois ecosystems reflects the dramatic changes to our region over the past 100,000 years.

Recent glaciations pushed the natural communities of the upper Midwest into continental refugias 100,000 years ago. Areas not directly glaciated still saw widespread changes to their ecological systems due to the climatic influence of ice lying in close proximity.

Refugia Map Many components of oak ecosystems occupied areas further south and reinvaded our region as the ice sheets began to melt some 20,000 years ago.

Ice Age Fauna Our region 12,000 years ago was a vastly different landscape of taiga forest, tundra and shrub lands. Oaks were present on drier sites but did not yet compose a major natural community type.

Fire About 3,000 years ago, a period of intense periodic drought began that bred landscape scale fires. These fires selected for open grasslands in areas of gentle topography and thinned existing forests on higher ground. Oaks, because of their abilities to withstand mild fires and to resprout vigorously after more intense ones, became a dominant species in many wooded Midwestern ecosystems.

Oak Diagram Across the region, fire, landscape position and topography drove the density and type of woody species, including oaks. The more fire protected the area, the higher the woody plant density and the less fire sensitive the species composition.

Barrens Four major oak community types occupied much of the northern Illinois landscape on the eve of settlement. These included barrens in the areas most prone to intense fires and higher fire frequency.

Savanna On slightly more protected ground savanna occurred, characterized by increased sunlight, high shrub densities and more open grown trees. In these oak communities fire intensity was mitigated slightly by landscape position even though fire return intervals were still frequent.

Woodland Wherever fire protection on the landscape was higher, tree densities became higher as well. In these areas woodland persisted with better developed shrub layers, more shade tolerant plant species and larger diameter trees.

Forest Finally, the least common component of these oak ecosystems, true forest, occupied only the most fire protected portions of the northern Illinois landscape. Here multi-layered shrub and understory zones developed and a greater size and diversity of trees were present, including less fire tolerant species.

First Hand Accounts

One of the most helpful methods to understand the original structure and composition of these oak communities, prior to widespread change, is to read the accounts of those who first saw them in an unmodified state. Early written descriptions of barrens, savanna and woodland can be a useful tool in managing these systems and often contain real surprises.

NE Prospectus As early as the 17th century settlers in the New World were describing the natural world around them. This description of woods comes from a New England Prospectus written in the 1660s by William Wood.

Canoe and Quote By the early 18th century French Voyageurs were penetrating the upper Midwest on a regular basis in search of furs. Jesuit priests often accompanied these expeditions and wrote vivid descriptions of the people, colonization and landscape.

NW Ordinance We even find written laws in the territories covered by the Northwest Ordinance, attempting to control the regular fires that were common enough to warrant punishment by lashing for those found to have started them.

Pecks Gazetteer As the waves of settlement washed over the northernmost tier of counties in Illinois, gazetteers were published to aid the new settler in understanding the mosaic of prairies and oak communities they were likely to encounter. Peck's Gazetteer is typical of such books of the era, and talks about the succession of prairie to barrens, giving us a real time picture of the structure of those early oak barrens.

Vasey-Bebb Pic First hand scientific knowledge from the settlement period exists as well, including some remarkable correspondence between early botanists. George Vasey collected plants in McHenry and Kane County while Michael Bebb lived and worked in Winnebago County during the mid-19th century. They exchanged over 300 letters and were lifelong friends.

Vasey Quote In a letter to Asa Gray Vasey offered to describe the landscape and plant species of the newly settled northern Illinois landscape.

1849 Species List Vasey's 1848 plant list and what it tells us about the nature of the wooded communities he found. **List**

- Raised in upstate New York
- 1849 less than a decade after settlement
- Two natural communities no woods or forests
- Contemporary with the gazetteers

Watershed map The public land survey notes, completed for each county in Illinois prior to it being opened for settlement also contains important documentation on the nature of original oak communities in northern Illinois. The following information was taken from an analysis of these notes for the Nippersink Creek Watershed in McHenry County.

Oak diameter classes It tells us a great deal about the structure of the oak communities in this portion of Illinois a year prior to large scale settlement. Each species shows the number of individuals in the diameter class below 20 inches constitutes 70%-82% of the total witness trees marked.

Undergrowth types It also hold important clues to the composition of the shrub layer? Note that over 80% of all understory notes include hazelnut as a component. Finally we see that over 96% of all the understory descriptions mention either hazel, young oaks or a combination of the two.

Changes since Settlement

Burning savanna The firsthand accounts and early data available define very open; fire adapted oak ecosystems as common.

PV Fire While we still utilize fire to manage today's oak ecosystems, the character of those fires have changed dramatically. Historically, fires were likely to have occurred more frequently in the fall or late summer. They were far more intense with the capability to damage or top kill larger trees and shrubs thus creating gaps in the woody plant coverage.

Grubs From the abundance of oaks on the landscape, as noted in the public land survey notes, oak reproduction did not seem to be an issue. This occurred through both natural reproduction and from long-lived oak grubs that possessed the ability to re-sprout after fires.

Merged Oaks and Even Aged Stand This re-sprouting ability resulted in merged oaks as well as many of the even age oak stands that dot the landscape today. Both phenomena trace their origin to the mid nineteenth century and the cessation of landscape scale fire.

Oak Study The overall distribution, abundance and ecological importance of oaks has been altered since settlement began in fundamental ways. The McHenry County oak study began in 2003 as an attempt to understand the distribution of remaining mature oak stands in McHenry County as well as understand their original distribution.

Maps 1839, 1872, 1939, 2012 The results were telling.

All Size Blocks The reduction in continuous size of oak ecosystems was even more concerning

Oak Recap The McHenry County Oak study grew into a much larger regional study and that into the Chicago Wilderness Oak Ecosystem Recovery Plan.

All Oaks Matter If there is a single lesson that can be drawn from the oak study it is that even the smallest grove of oaks matter. It is wonderful to preserve a 100-acre block of woods but it matters deeply and ecologically to save a 20 acre woods, a ten acre woods or the ten trees that are part of one's own back yard. All mature oaks matter.

Seeing the Forest and the Trees

Snowy Woods My final thoughts today center on both the responsibility and the possibility that being the owner of one of those few remaining woodlots that have come down to us still intact entails. It speaks also to the efforts of each individual that allows a small piece of wilderness, be that a pollinator garden or the planting of a next century oak, to flourish as part of the place they call home.

Finally it speaks to a future lived in close communion with things wild and free, a future unfolding in dramatic and positive ways each and every day in front of our eyes.

Energy vibration woman Oak ecosystems are more than the sum of their trees, more than the sum of their board feet of timber or firewood, age ratios and harvest plans.

They are the sentience of living beings that were born in a planet wide natural disaster 65 million years ago. Of ancient groves that hundreds of wildlife species depend upon for survival. Of trees who felt the weight of passenger pigeons crowding their branches and were growing when young men from the farms of northern Illinois were dying in places called Shiloh and Gettysburg.

How do you honor in words a three or four hundred-year-old creature when your experience of existence is lucky to top a single century?

Such words are not in the vocabulary of men, but they do exist in the language of the trees themselves if only we have the patience to listen to an ancient language that rises from the very bones of the earth itself and which we still remember how to speak in our deepest souls.

Let us allow the oaks to speak for themselves.

Fungi Every woodland begins at its literal roots, and includes soil, mycorrhiza, soil invertebrates and fungi.

Grasses and Sedges It is the grasses and sedges, lichens and vines that have evolved to live in the shade and provide the root matrix that holds the soil in close embrace to the forest floor.

Wildflowers It is the canvas of wildflowers and ferns that appear in first warm days of April and continue until the asters and goldenrods have had their say in late October.

Ephemeral Pond It is water in all its forms, from the dew that moistens every layer of the woods on misty mornings to the ephemeral ponds that beckon spring peepers and salamanders every spring as the trees stretch awake from the winter.

Shrubs It is woodland shrubs like black haw and arrow-wood and copses of hazelnut in the openings that provide nesting habitat for woodland birds.

Layers It is understanding that the forest exists vertically and horizontally and each layer supports an intricate web of life.

Dappled Light It is the equations of light that allow each of those layers to flourish.

Large tree It is the community of trees that compose the forest, not simply the most valuable trees and the understanding that the life of the forest depends on death within the forest. Thus nature attaches as high a return on a living forest monarch as it does on the decomposing body of that monarch a century later. Board feet is only one measure of a tree's value. A healthy forest has room for trees of all ages and all conditions.

Forest Definition Long ago in my first forestry class I was taught the definition of a forest; A forest ecosystem is a dynamic complex of plant, animal and micro-organism communities and their abiotic environment interacting as a functional unit, where trees are a key component of the system

Woman gazing upwards But the forest, and an oak in particular is a teacher asking only for us to sit and mark time as a tree does in order to learn the lessons it has to impart.

Oaks have imparted to me many lessons but five of the most important I share with you tonight on behalf of the trees.

All Land is Sentient

River As difficult as it was for my ordered, scientific and analytical mind to accept I have come to realize that I work in a self-aware landscape, a landscape awash in sacred places, places that have always been in dialogue with humanity for millennia. Land is a living entity possessed of a knowable energy that can be accessed and understood.

Snake In our western tradition, these energies were once expressed as a *numen* or presence, a sort of *genius loci* or the protective spirit of a place, often portrayed as a snake in classical civilization.

The entire cosmos is scripture

Moth All of creation is possessed of the same shared history stretching backwards into deep time to the moment of creation, thus all of life is also sacred. I share an ecological sentience with my planet and every oak is a sacred text waiting patiently for a reader to open its pages.

Murmuration Along with big bluestem, Murmurations of blackbirds and smooth green snakes I am a chapter in a Great Story that has unfolded from the first hydrogen atoms to life, to consciousness and finally to self-reflective awareness.

A Gift asks of us a Gift in return

Story tellers The commitment to individual action is the promise that conservation asks of us from the moment the natural world first allows us inside to see with deeper clarity. Giving voice to the land is the trade we make for the days we spend in the embrace of the wild.

Cardophonia It asks of us to use our voice, to tell our stories. It does not ask of us elaborate sagas, it simply asks us to speak from our heart.

Spirit Speaks in the Voices that Are Available

Antler The natural world speaks in the language that is all around us, in our own mother tongue. In the morning mist and the evening moonrise. In the rustle of oak leaves and the January fallen antler.

Woman in River And once we are attuned to its voice it can speak in even more direct ways

We are all on the Hero's Quest

Woman on Path I mentioned to you the event that began the journey for oaks and ended the journey for the dinosaurs earlier this evening. Unlike oaks we humans are the younger siblings of creation, and we now hold the future of all of that creation in our hands.

The stakes are high, the odds long and the duty sobering in its ramifications. But these are the very components of every quest ever made by every hero, and each person in this room by the very nature of your commitment to nature and the work you have undertaken deserves the title of hero.

Cranes Long ago, an older world revealed its wisdom, precisely at the moment a young man's dreams threatened to slip away. It requested of him, a simple reciprocity in return for that wisdom. That world of bur oaks and compass plants, of northward bound geese and spring wildflowers asked him to give voice to a world without one.

Knights It is the same question each of you have answered in the same way as that young man did three and a half decades ago. The Earth is not without her knights and shield maidens and today they fill this room.

Stones I will close with a poem, a look into that future I believe to be at our fingertips, that moment of grace we are already embracing.

It defines how our work shall come to be understood by the greater global culture in the decades to come, long after our atoms, free from the bounds of human form, may if we are lucky, merge as one with a nearby oak.

Each of you here assembled this day, define the "we few".

We Few We So Fortunate Few ©

This story shall the good man teach his sons and daughters,
From this day on to the ending of the world,
Of those who stepped forward to answer the call
To bind up the wounds of a hemorrhaging world

And in such tales we shall be remembered.
We few, we happy few, we band of dreamers.

Those who have shed sweat and tears and hope with me.
Shall forever be my brothers and sisters bound deeper than the ties of kinship

And those now a-bed, those for whom the gentle earth did not sing in ancient rhyme to,
Shall think themselves accursed they were not here, that they did not rise against impossible odds,

And hold their humanity cheap whiles any speaks
of those that fought with us for river and prairie, savanna and ancient oaks,
Who sought only the beauty of the wildflowers and song of the meadowlark as payment for
that sacrifice

We few, we so fortunate few.