# A Song for the Asking

***The Electronic Newsletter of***
***EarthSong Photography***
***and***
***EarthSong Photography Workshops: Walking in Beauty***

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## Hello to All:

In This Issue



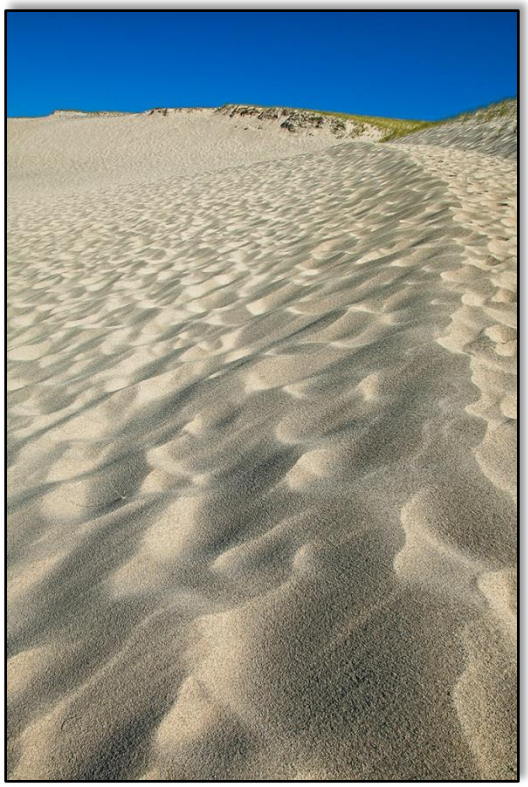
### Good Dirt: Spread the Word

> "When I considered the history of agriculture through a geological lens I saw a boomerang effect – **how we treat land determines how the land will treat us**, and for how long. I also saw that we can avoid the common fate of ancient societies as long as we do not repeat their grand folly of stripping off fertile topsoil at an unsustainable rate. Unfortunately, that is exactly what we are doing, only this time on a global scale.
>
> **David Montgomery**
> from: *Dirt, The Erosion of Civilizations*

"…How we treat the land determines how the land will treat us…." What an interesting idea – that land should treat me one way or another; or any way at all. After all, it's only dirt, and dirt merely lies inert, waiting to be acted upon by humans, a few other creatures, or some of the larger forces of nature, say plate tectonics or the gravitational process of erosion, for instance. Plate tectonics might be the organizing principle behind the forces that created these beautiful old hills I call home, but neither it nor its offspring, these Great Smoky Mountains, have ever treated me with good or ill; only people do that, right; and occasionally they do so in deference to something called the Golden Rule, "Do unto others as you would have them do unto you."

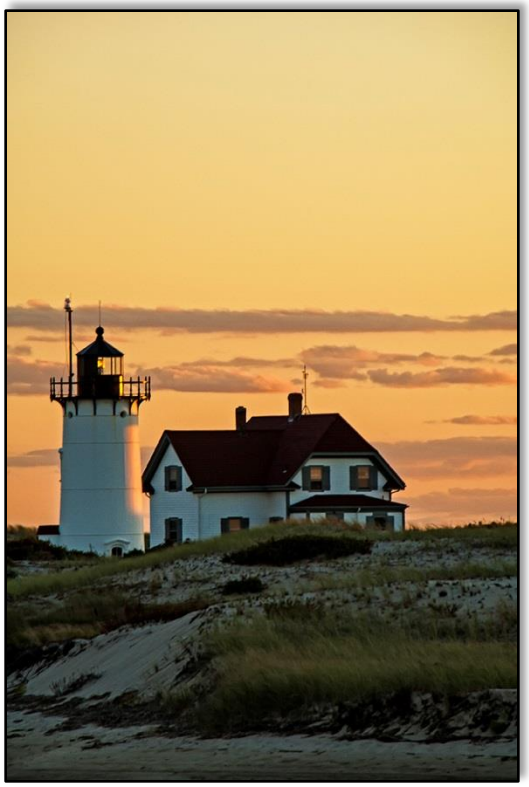
Somehow those two propositions sound somewhat alike, don't they? Now don't become concerned, I'm not going to sermonize, but I am both interested and curious; and please keep in mind that in the same vein that prompted Will Rogers to remind his audiences, "My ancestors did not come over on the Mayflower; but they were there to meet the boat," my view of the Universe may not quite fit the mainstream.

Once, when I had just completed a presentation at Grandfather Mountain, a lady in the audience raised her hand and asked, "What part of your heritage is Native American?" To which I answered, "I am 100% Native American, and I don't have a drop of Indian blood in my body." And I mean that quite literally; but we're not



**The Dunes of the Provincelands**

concerned here with my ancestors, rather our collective behavior toward each other and toward the land of the planet, the dirt of home, as it were.



**The Light at Race Point**

When we think about the ancient Egyptians, the thing that probably comes most readily to mind are the magnificent structures that have come down to us through the centuries, almost as a statement of arrogance and excess; and for most of us the pharaohs and their pyramids are the full embodiment and our complete understanding of that wondrous, antiquated time. What they believed and how they lived their daily lives based on those beliefs is enigmatic and mysterious unless you happen to be an Egyptologist.

But we do know this: at least as early as four thousand years before the present there had developed among those people a concept known as *Maat*, which ultimately became the basis for Egyptian law. In its full-blown reality Maat was the undergirding and overarching principle of truth, the glue that held society and all of its parts together, the fulcrum on which all the universe ultimately balanced through order and justice. Its original examples are found in recordings from the Old Kingdom (2375BCE and 2345BCE) which we know as the Pyramid Texts of Unas. Here are the earliest known inscriptions of what can be called the Golden Rule: "Now this is the command: Do to the doer to cause that he do thus to you." Over the succeeding two thousand years it evolved into the simpler statement of "That which you hate to be done to you, do not do to another." It is said that **Maat**, as embodied in the goddess of the same name, was represented as an ostrich feather usually worn in her headband, which was placed on one pan of a scale and countered by the soul of a deceased on the other. Only souls which balanced the feather could successfully enter the life hereafter, reason enough it would seem to "do unto others…."

The honorable Chinese sage, **Confucius** (551-479BC), taught likewise that one should "never impose on others what you would not choose for yourself." And that other revered Chinese teacher, **Laozi (Lao Tse),** considered by many, if not most, scholars as a contemporary of Confucius and the author of Taoism, said, "The sage has no interest of his own, but takes the interests of the people as his own. He is kind to the kind; he is also kind to the unkind: for Virtue is kind. He is faithful to the faithful; he is also faithful to the unfaithful: for Virtue is faithful."

**Siddhartha Gautama**, the Buddha, (c.623-c.543BC) taught in several forms the basic notion that one should "hurt not others in ways that you yourself would find hurtful."

In the Judaic proscriptions found in the Old Testament writings of Leviticus 19-18 it is set out that one should "forget about the wrong things people do to you and do not try to get even. Love your neighbor as you love yourself." This is otherwise known as the Great Commandment.

**Succession Comes Slowly**

The word "deuterocanonical" is an interesting one. It means "of, pertaining to, or constituting a second canon, or the books of Scripture contained in the Septuagint, but not in the Hebrew canon. As you might recall, the Septuagint is the oldest Greek translation of the Old Testament. In two of the Old Testament volumes of the Septuagint, Tobit and Sirach, there are expressions of the Golden Rule in negative form. Tobit 4:15 says, "Do to no one what you yourself dislike." **Rabbi Hillel**, the great Jewish scholar and older contemporary of **Jesus**, speaking to this verse, said, "That which is hateful to you, do not do to your fellow. That is the whole Torah; the rest is the explanation; go and learn."

**In Hatcher's Harbor the Light Collects**

And, of course, there is Matthew 7:12: "Do to others what you want them to do to you. This is the meaning of the Law of Moses and the teaching of the prophets." With these words Jesus joined a long and distinguished line of teachers in announcing what would seem to be the one mental/philosophical/psychological/spiritual construct which might have any chance at all of separating man in his behavior from the remainder of the animal kingdom." How easy to recite; how difficult to execute, regardless of whether it's couched in the negative or positive form of expression; but we try, most of us most of the time, to reach some rough approximation of this precept for living a good and honorable life, even as we so regularly fail to achieve it. And we can only hope that the collective consequences of our efforts are sufficient, on balance, to tip the scales more in the direction of the good; but it's not easy to be awake, conscious, and present every day, all day long. Moreover, we seem to live in a world that considers it more on the edge of quaint that such an idea as "do unto others" should ever have existed in the first place.

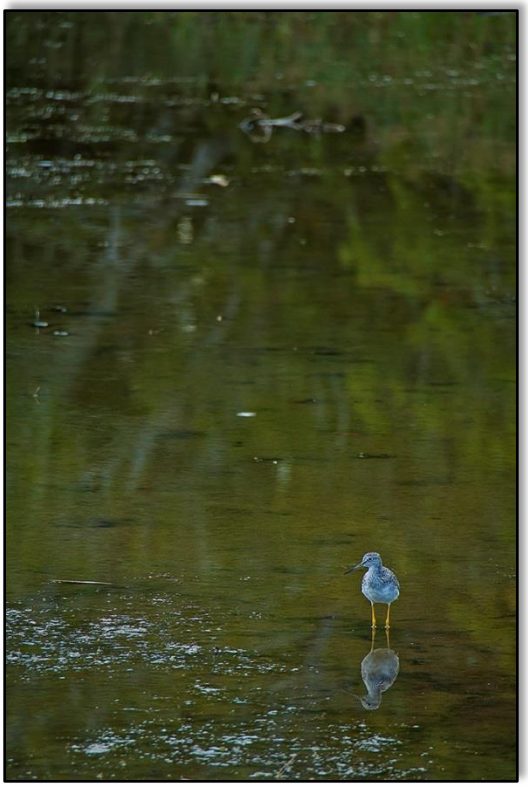
**Contrasting into Creation**

And if it is next to impossible to consider that we should have a Golden Rule- relationship with our fellow humans, then we might as well admit that, with respect to the land, the task is beyond all hope whatsoever. Except that with respect to the land – which just so happens to be our basic link to the natural world – it is beyond dispute that in the baseball game of life, the land always bats last; and we're always playing catch up as the land has chosen to eschew the Golden part of the Rule in favor of a more elemental concept which says, "Whatever you do to me, in the end, I'm going to return the favor in spades; and keep in mind – quaintly please – that everything you eat, the nourishment that keeps you alive to play another day, the reservoirs for the water that you drink, all ultimately come from me. What the land might as well be saying is that whatever you do to me, you are, in the last analysis, doing to yourself.

You might think this sounds somewhat Native American-ish, or perhaps Tao-ish, with all this implied ultimate oneness stuff, but consider: there is a slowly, but steadily, growing body of research

which suggests that there are certain types of soil that are actually beneficial to your health – the health of all of us. The research is coming from an array of disciplines that include botany, soil science, genetics, immunology, and others.

As much as the "Better Living Through Chemistry" folks would like for us to believe that one day, perhaps soon, all of our nutrition will be fabricated in a lab and delivered in tubes, I, for one, am not buying into the idea, if for no other reason than that such a scheme ignores the basic human-nature connections at the core of our existence. We are inextricably interwoven into the fabric of the natural world; and the more we try to unweave the fabric, the more precarious our relationship to that world becomes.



**Just Me Looking at Myself**

We all learned in Junior High Science that there is a thing called a rhizosphere. It's an area in the soil exactly adjacent to the roots of growing plants. Amazing things happen here. Carbon and other nutrients absolutely necessary for life are transferred from the soil into the plant. This transference is a co-operative enterprise among bacteria, fungi, and root; and what takes place among those entities ultimately comes to us in the form of the food we eat and the life-sustaining nutrition we derive from that food.

Recently, at Washington State University in the Nutrient Cycling and Rhizosphere Ecology Program in the Department of Crop and Soil Sciences, it was shown, using DNA sequencing, that soil containing an abundance of diverse life among those bacteria, fungi, and other species, had a higher likelihood of producing more nutrient-dense food. In back of this finding are the studies that have shown that ecological farming, time and again, produces a greater microbial biomass and diversity of life forms than conventional farming. Ecological farming is that set of practices that include the use of cover crops, minimal plowing, crop rotation, water conservation, limits on the use of chemicals, and the recycling of all animal and plant waste materials back into the soil. Maximizing nutrient harvest is a simple function of ecological farming practice; and it all begins with healthy soil.

**In the Land of Mohawk Grass**

And in the wake of this come findings from immunologists and allergists in Europe which indicate that children raised on farms in Central Europe that are managed ecologically have lower rates of asthma and allergies than either urban children or children raised in industrialized agricultural settings. It has been dubbed the "farm effect."

**Daphne Miller**, M.D., a family physician, writer, and associate professor at the University of California, San Francisco, suggests that this result – that soil and other farm microbes protect against allergen-based diseases – may come from what she calls a "microbiome exchange," which implies that a "healthier and more diverse soil microbiome can foster a more diverse and protective human microbiome."

She bases this on new discoveries in genetics which show

that genetic swaps can and do occur between the human – our – microbiome and the external world, specifically the soil microbiome, and particularly as it relates to our food and where that food is grown. For most of our scientific history we have considered that all of those bacteria and other microbes living in our gut were just evolutionary hitchhikers along for the trip; but now it seems they may be doing so much more to return the favor for that free ride; they may actually be helping us to thrive through an exchange program between similar and symbiotic microbial forms living within us and those living in the world outside.

**Lawrence Must Be Here Somewhere**

And all of this brings me back to **David Montgomery** and his thoughtful book, *Dirt, The Erosion of Civilizations*. In the last issue of "*A Song…*" I introduced you to Montgomery's observations on the history of our species' relationship to the soil of good old planet Earth. You may recall that he is a PhD geomorphologist, MacArthur Award-winning Professor of Earth and Space Science at the University of Washington. That doesn't make him infallible; but it does indicate a fairly high level of interest in the area we are discussing, so what he has to say about the history of our dirt might be worth paying attention to.

**Earth, Sea, and Sky: Coming Together**

In that previous issue I laid out his thoughts on the links among soil formation, soil depletion, the rise and evolution of agriculture, the role of population, and the economics of food production from a historical perspective: a sort of where we've been, agriculturally speaking, since our ancestors began to control their relationships with the plants of the world.

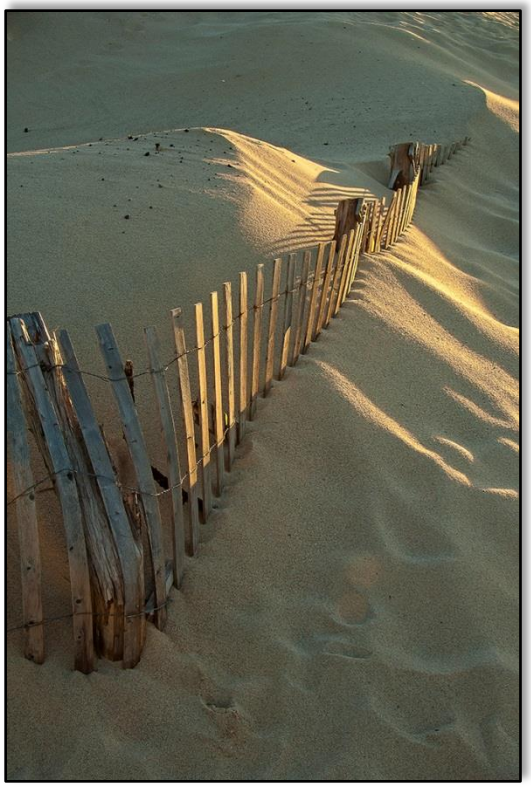
Now I'd like to go bravely forward into the New World of European-settler-dominated North America and tie our more recent agricultural past to our industrially-farmed present.

Although there continues to be disagreement among folks who study these things, a reasonably good estimate of the native population range in North America at the time of European contact is somewhere between 4-8 million people; that's north of Mexico, mind you. Their ancestors had been in-country for 10,000 years, or longer; and how wildly their population demographics may have swung over all those millennia, we will likely never know. And although there is some indication of the presence of soil depletion among those groups that had begun to practice basic forms of agriculture, it cannot stand in comparison to the efforts of the early European settlers, who in their desire for wealth beyond mere sustenance took soil abuse to new heights, or perhaps lows is a more accurate description, in the American landscape.

There is a fairly well-known corollary to the teachings of the Masters we have been extolling. That deduction is this: He who has the gold makes the rules. He also gets to write the history that becomes engrained into the cultural beliefs of the society about who they are and how they got to be that way;

In other words, he gets to write the myths by which the people remember themselves.

One of the myths that I was given as a child was that the westward expansion of settlement in this country was a reasonably orderly process which came from increasing population and the need for new land for those settlers to cultivate. David Montgomery gives a somewhat different tale, and based on the evidence he presents, I would tend to accept his version as more likely. In my education, the Appalachians were presented as a temporary barrier to be breached once freedom from Great Britain had been won; but maybe good old human greed and the slothfulness of convenience were greater factors than I was taught.



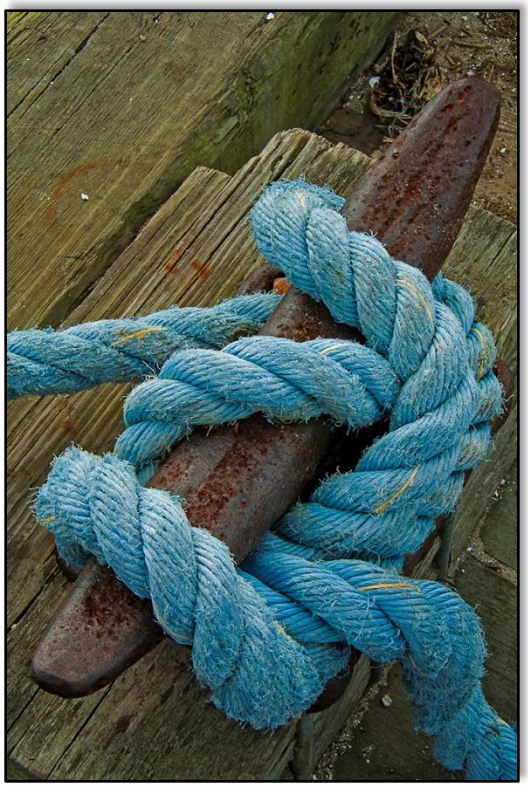
**Don't Fence Me In**

The historical record tells us that the Colony of Jamestown was nearly a failure, that having tried a number of approaches to profitability for themselves and their lords over the sea without success, including silk making, glass making, timber harvesting, sassafras cultivation, and brewing beer, their situation was basically desperate until they hit on tobacco; and not just any tobacco, but rather the Spanish tobacco grown in the Caribbean. Once they imported it to Virginia, the story was told in gold.

From an export volume of 20,000 pounds in 1617, the total arose, by 1630, to one and a half million pounds of Virginia tobacco in English markets. Within a hundred years that amount ballooned to more than twenty million pounds annually. In good years tobacco would command a greater price, by a factor of six or more, than any other crop. It became so ensconced in the economy of the colonies that it came to serve as an alternative form of currency. With the plant that goes up in smoke being so lucrative, there was little incentive for colonial farmers in the South to grow anything else except just enough to feed their families; and that, in fact, is what many, if not most, of them did.

But here's the thing: at best, tobacco can produce a highly profitable crop for three, maybe four, years. It strips from the soil more nitrogen by a factor of ten and more phosphorus by a factor of thirty than most other food crops.

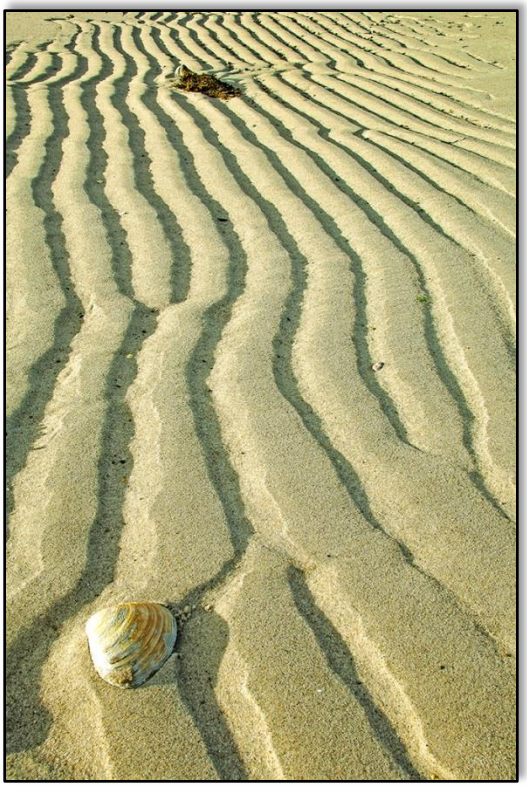
By the end of five years, tobacco has stripped so many nutrients from the soil that it is good for growing almost nothing. And with so much open land in the direction of the setting sun just sitting there, those farmers and planters almost constantly cleared away and opened up new fields, while their abandoned fields, now bare of cover, lost what fertile dirt remained every time a sudden shower passed overhead. To give you an idea of how quickly this process became a part of the landscape, it was in 1619 that Virginia planters made their initial request to the Crown to be allowed to open up new land inland from the coast. With that land readily available, there was no incentive to practice crop rotation or to collect and spread manure on old fields as a means of replenishing the declining soil fertility and productivity.



**Clove, Snuggle, or Ground-line?**

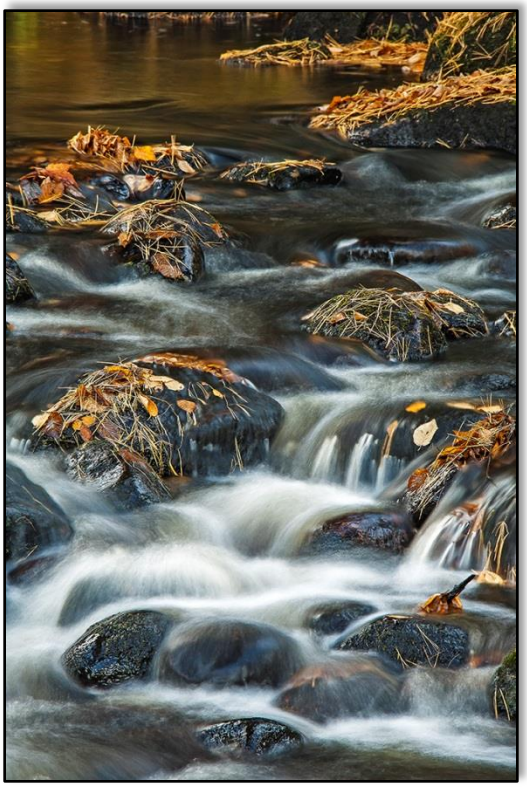
In 1748, **Jared Eliot**, a Connecticut farmer and doctor, published a collection of writings entitled *Essays Upon Field Husbandry,* outlining his findings of how to prevent soil degradation. His having bothered to engage in such an undertaking in the first place would be some indication of the state of Colonial agriculture at the time; but the interesting fact is that one of his readers was none other than America's most esteemed scientist, **Benjamin Franklin**, who wrote to Dr. Eliot in 1749, "Sir: I perused your two Essays on Field Husbandry, and think the public may be much benefited by them; but, if the farmers in your neighborhood are as unwilling to leave the beaten road of their ancestors as they are near me, it will be difficult to persuade them to attempt any improvement."

And, **Dr. Alexander Hewat**, the first historian of South Carolina and Georgia, for whom Charleston's Hewat Square is named in honor, said of the southern farmers during the Revolution that they were attentive to short term results and paid slight attention to the state of their land, "Like farmers often moving from place to place, the principle study with the planters is the art of making the largest profit for the present time, and if this end is obtained, it gives them little concern how much the land may be exhausted… The richness of the soil and the vast quantities of lands have deceived many… This will not be the case much longer, for lands will become scarce, and time and experience, by unfolding the nature of the soil…will teach them to alter their careless manner of cultivation."



**Lines in the Sand**

Example after example could be cited to demonstrate what was happening in American agriculture as the Revolution came and went, and the century waned and rolled over anew; but perhaps the words of the Father of Our Country sum it up best. At home after the war, **George Washington**, in 1803, wrote, "The system of agriculture, (if the epithet of system can be applied to it) which is in use in this part of the United States, is as unproductive to the practitioners as it is ruinous to the landholders."

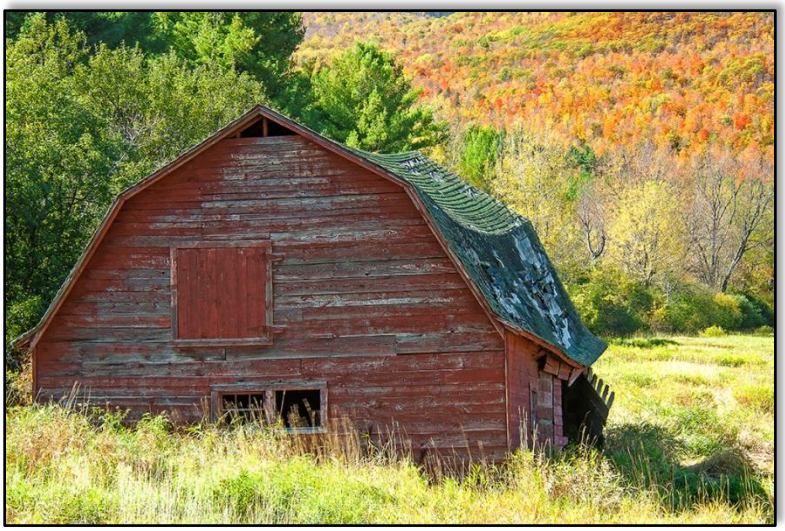


**Where the Rocks Wear Toupees**

By this time in our history one cultural pattern was becoming clear: when the land began to wear out, as it inevitably did in the absence of any real attempt at stewardship, the easiest fix was to move on, move west, move further away from the coast into the foothills and over the mountains; after all, Native Americans had more land than they knew what to do with, and what they did with what they had made no sense at all. You got to use it or lose it, n'est-ce pas?

Among the wealthier plantation owners there came to be an interesting pattern of land development: As a rule, plantation owners would wear out their land growing the profitable crop tobacco and then use their slaves to clear new ground to start afresh. Their old, exhausted fields they sold to less-well-to-do farmers who had neither the laborers nor the money to establish and maintain a tobacco

plantation. The large estates commonly bought food for their families from these neighboring smaller farmers. Records show that by the time of the Civil War the South as a region was a net importer of grains, vegetables, and farm animals. Where Washington saw ignorance as the primary causation for this state of affairs, **Thomas Jefferson,** less charitably, saw greed, writing, "The indifferent state of agriculture among us does not proceed from want of knowledge merely; it is from our having such quantities of land to waste as we please."



**Leaning into Life**

There were those who cautioned against the hit-and-run tactic of lying waste and moving on. In a noteworthy address to the Albemarle County (Virginia) Agricultural Society in May 1818, the year following the end of his tenure as the Fourth President of the United States, **James Madison**, hailed as the Father of the American Constitution, suggested outright that the drive of westward expansion which was beginning to grip the country was not the same thing as progress. He opined that building a nation that had a viable future unquestionably required both caring for and improving the land itself. Madison suggested that agricultural expansion be moderated and that "westward ho" was just a temporary fix whose only long-term, real solution was maintaining and restoring the soil.

The words of Madison and others, for the most part, fell on deaf ears, as planters from the Eastern Seaboard states picked up in numbers and streamed to Alabama, Mississippi, and Louisiana, only to start over where they had left off back east.

**Side Light on Dune Face**

There were, of course, exceptions. Farmers who embraced the philosophy of the *Cultivator*, edited by **Jesse Buel**, tended to practice land conservation measures: crop rotation, manure gathering and spreading, and contour plowing. They built great barns that not only housed their livestock in winter, but also promoted the collection of manure for use as fertilizer; and they typically embraced the more progressive European approaches to land treatment, as Europe, after centuries of abuse, had finally begun to consider and promote land stewardship. These conservationists were represented, in the main, by German and Dutch farmers who had immigrated to Pennsylvania after the Revolution. In Buel's estimation, the land was a trust to be passed to succeeding generations in at least as good condition as one had acquired it, if not better.

It was, however, **Edmund Ruffin**, who ignited the agrochemical revolution in this country with his findings of the impact on acidic soils of crushed limestone (in the form of fossilized shell) fertilizer, known as marl. Ruffin, a Virginia planter, had nearly given up and gone west with all of the others before he decided to experiment with this new idea, based on his observations that the pH of Virginia's soils was uniformly too low to support strong plant growth. His results were so dramatic

that South Carolina ultimately hired him to undertake a geological survey of the location and extent of that state's marl beds for agricultural development; but ten years afterward, in 1852, Ruffin accepted the presidency of the new Virginia Agricultural Society, and returned, if only temporarily to his home state.

As tensions between the North and South billowed, he returned to South Carolina upset that Virginia had not been the first to secede, and what he might have contributed further to our understanding of agronomy was lost to a misguided political philosophy built on a slave-based economic system when he committed suicide in 1865. Yet the 1832 publication of his *Essays on Calcareous Manures*, for good or ill, remains the earliest light on our path to chemical agriculture.

**The Potato Chip Lighthouse**

The burden of soil exhaustion was not limited to the Deep South. In Kentucky and Tennessee the sad experiences of Maryland and Virginia were being replicated. The same could be said for New York and New England; however the broader economic diversity of these areas made the soil issues less prominent.

Along with the massive problem of soil depletion was the accompanying specter of soil erosion, initiated and exacerbated by cleared land improperly stewarded or not stewarded at all. The primary evidence for this was the extensive presence of large and expanding gullies throughout the East and, again, especially in the South.

By now the cycle of clear-cultivate-crash and burn was pushing farmers even further westward into Texas and Arkansas; but the wake of falling crop yields they left behind, by the middle of the nineteenth century, was becoming too obvious to ignore. What was devastating the soils in the original states was known, as we have already seen; but there were sociopolitical drivers of these outcomes, for which the connections back to the land now seem altogether too apparent: slavery, cheap land too easily abandoned, and the impulse toward the greatest short-term returns from the earth were the most significant of these. Yet the Earth, like it or not, is serenely unconcerned with the motives of people; they act, it responds. Depending on the nature of their act, the land's response will either be ultimately to their benefit or to their detriment.

One of the gifts to us from modern scientific understanding is the capacity to reconstruct the reality of colonial soils using soil profiles and valley sediment analyses. These show us the intensity, timeframe and extent soil erosion along the Eastern Seaboard from the time of European contact. From David Montgomery's and other geomorphologists' work, we now know that soil erosion along the coast and into the Piedmont accelerated "by at least a factor of ten under European land use in the colonial era." Is that problem behind us living in our modern world? Not so, this same scientific acumen shows that today in the Eastern United States agricultural land continues to lose soil at four times the rate of forested land.

Here's a number to reflect on: According to Montgomery, "By the early 1900s more than five million acres of formerly cultivated land in the South lay idle because of the detrimental effects of soil erosion." And here's the interesting thing: When the United States Soil Conservation Service, in the 1930s, began in earnest to promote intensive soil conservation efforts, it did not offer a single new radical idea; instead, "Most of the erosion control practices in use at the present time, such as the use of legumes and grasses (cover crops), deep plowing, contour plowing and hillside ditching, the prototype of modern terracing, were either developed by the Virginia farmers or became known to them during the first half of the nineteenth century." And as Montgomery points out, they actually

had been used for centuries in Europe and were known in Roman times.

As the American tendency to take the gift of precious soil for granted continued its westward march, it was not alone. American technological ingenuity was right there with it, and as that technology became more and more sophisticated it forever changed the relationship of labor, land, and capital. Historically the size of a farm, or a plantation, was determined by the amount of labor available to a family or an owner. In the case of a family, that would typically mean how many children or other extended family members, or apprentices or tenants might be included in the workforce. As regards a plantation owner, it usually meant how many slaves there were. In either instance, agriculture was hugely labor intensive and no more land was brought under cultivation than the labor force could accommodate.

**Beginning to See the Light**

The technologies used by that force had been around for centuries with little alteration. Then in the mid-nineteenth century that began to change. In 1838 **John Deere** invented a steel plow capable of turning the thick-rooted topsoil of the mid-western prairies. As much as this might seem to have been a blessing, it could just as easily be looked on as a curse. That soil, which began accumulating more than two and a half million years ago, is, underneath its overlay of mold and grass, a fine deposit of loess – fertile in extremis, but dry when exposed to the semi-arid air of the plains and easily blown away in periods of drought. And beyond Minnesota, Iowa and Missouri where the tall grass turns into the mixed and short grass of Oklahoma, Kansas, Nebraska, and the Dakotas, dry periods are nothing if not inevitable.

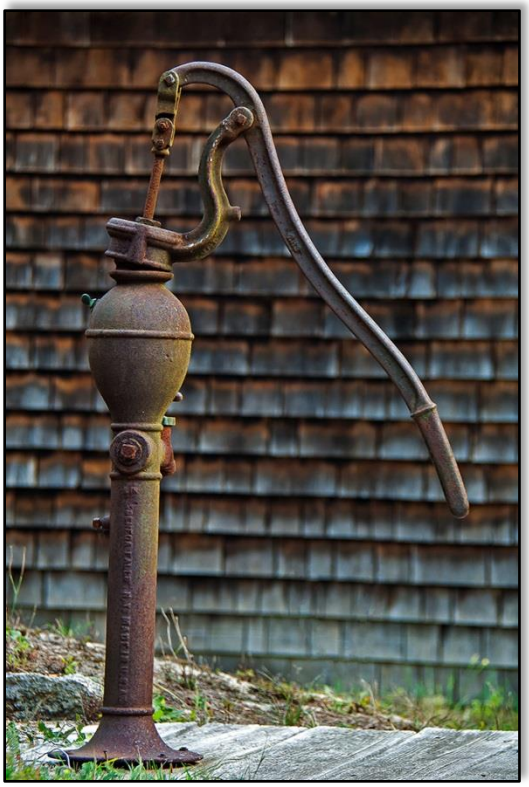
On the heels of Deere, **Cyrus McCormick** came forward with his mechanical reaper, so that by the 1860s a farmer with a Deere plow and a McCormick reaper could easily work more land by himself than his ancestors could even imagine with all of their family combined. When the fossil fuel revolution ushered in the technology of the tractor in the early 1900s, the change was exponential. Farmers with these tools in the early twentieth century could work fifteen times as much land as their nineteenth-century grandfathers; and not just that, but these technologies turned previously marginal lands into agricultural oases, or so it was widely believed and claimed.

In 1889 the stage was set for catastrophe; and again it involved Native Americans and their refusal to treat the land like White Folks treated it. The Dawes Act of 1887 was aimed at breaking up tribal ownership of tribal land and turning Native Americans into farmers. Tribal land remaining after the general allotment was doled out to each family was to be surveyed and sold on the open market. On April 22, 1889 – how ironic that it should be on the same day as Earth Day – at noon the ribbons were cut and settlers streamed into what that morning had been Indian Country. Within a week Indian Country had 50,000 new residents. Within a month Oklahoma City had five banks and six newspapers.

The upshot of all of this was that between 1870 and 1900, as Montgomery points out, “American farmers brought as much virgin land into cultivation as they had in the previous two centuries.” That this took place during a relatively wet period was fortuitous, that a dry period would come was without question.

In order to avail themselves of all this new opportunity farmers began financing their purchases of land and equipment. This meant they had to take up the same practices of aggressive production that the Jamestown tobacco growers had followed. By the end of the first decade of the twentieth century farmers across the plains had plowed up forty million acres of virgin prairie in order to take advantage

of high grain prices, although it was soon enough apparent that flat line crop yields in the face of all the technological advances could only mean that soil fertility was declining once again; and along with it soil erosion remained one of the most elemental resource conservation problems with which our country had to contend. By 1909 the National Conservation Congress could report that nearly eleven million acres of American farmland had been abandoned due to damage caused by soil erosion.



**You've Got to Prime the Pump**

In the 1913 *Yearbook of the United States Department of Agriculture*, **Royall (R.O.E.) Davis** emphasized that reclamation of all but the most severely impacted farmland was possible, but that new attitudes and practices would be necessary. His dour assessment was that, "Many farmers when approached on the subject of erosion will show interest and agree that the loss is great. They will say, 'Why, yes, some of my fields are badly washed, but it doesn't pay to try to do anything with them.' They expect reclamation, if it is ever accomplished, to be undertaken by the Government, and it is only with difficulty that they can be induced to make an attempt at stopping the ravages of erosion. It has been cheaper in the past to move to newer lands."

Between the First World War boom when prices for agricultural products were high (and so were the profits from operating farm machines) and the beginning of the 1930s, farmers saw a post-war drop in prices that made operating machinery a difficult proposition for many. Somehow the answer to their dilemma seemed to lie in bigger machines with which they could work even more land; and so the debt cycle from greater borrowing and paying off the interest was ratcheted up a notch. New disc plows were all the rage. These implements sliced through the upper layers of soil creating a pulverized layer highly susceptible to the fierce winds of dry years.

On November 11 the first major windstorm of 1933 blew across South Dakota. There were farms that on that day lost all of their topsoil; but that was merely the beginning. On May 9, 1934, not quite six months later, winds slammed across Montana and Wyoming. By the time they reached the Dakotas they were gusting at up to a hundred miles per hour and they held in suspension some three hundred and thirty million tons of topsoil. By May 11 dust was settling on the Eastern Seaboard from a cloud that could be seen for miles out into the Atlantic. According to the National Resources Board the year 1934 ended with dust storms having destroyed an area larger than Virginia.

In April, 1935 **Hugh H. Bennett**, one of the pioneers of soil conservation, made a convincing case before a Congressional committee of the need to establish a national soil conservation program. The Soil Erosion Service, established in 1933 within the Department of Interior, was transferred to the Department of Agriculture in early-1935 and recast as the Soil Conservation Service (SCS), the agency Bennett would lead until 1952. The task faced by the agency was daunting. Where short grass prairie had once existed, there was now desert. In 1934 the remaining public lands of the High Plains and West were closed to further settlement, but the damage was past done. During the decade of the 1930s in excess of three million people emigrated from the plains, many heading west to California to become laborers in someone else's fields. The Great Dust Bowl had taken its toll; the federal government had spent more than a billion dollars in relief; but soil conservation was on the radar as an issue of national survival.

In its aftermath, in the 20/20 clarity of hindsight, the causes of the Dust Bowl were sketched and debated. It was determined that the tremendously increased amount of land under cultivation, much of it marginal, and much of it the victim of poor farming practices, was to blame; but the circle of

inclusion goes back to what I have already mentioned, the economics of World War I's boom and bust which drew the farmers in with promises of good times and then forced them, when times were not so good, to continue to borrow in order to try to remain viable. Thus for example, between 1910 and 1920 the value of farm implements of the average farm in Kansas tripled. In the next decade those values (read "costs" if you're the farmer) tripled again. When grain prices dropped, the equipment debt remained; solution: buy more equipment. The only way to even think about keeping even is to aim for the methods that produce the greatest results in the shortest term. If you want an answer to most of the questions in our society, the place to begin is at the trailhead that follows the money. He who has the gold makes the rules.

**Rustoleum and a New Coat of Paint?**

When SCS did a county-level national map of soil erosion it showed that at least one-quarter of the soil was missing from nearly a billion acres of land. So in 1953 **Walter Lowdermilk**, the associate chief of SCS, could describe that almost three-quarters of American farmland was losing soil faster than it formed. He made the timeless comparison of where we were going agriculturally with the road down which Rome and other ancient civilizations had traveled.

In the lee of World War II, military assembly lines had retooled for civilian production, and with this conversion the mechanization of the American farm was complete and the saga of industrial farming was about to begin. By the end of the 1950s several million tractors were working US fields. This was ten times the number of the 1920s. With it, the numbers of farmers working the land dropped like a stone as the average farm size increased. Those who remained followed the path of maximizing cash crop output to pay off the debt on their new equipment, designed and built to save even more labor than ever. Agencies such as the SCS had little leverage to convince most farmers to do otherwise. In some respects mechanization was, and is, directly analogous to slave labor in that it requires that the same thing be done to the land everywhere rather than adapting appropriate farming methods to specific acreage.

It is a fairly well-established cycle that droughts recur in the Great Plains about every twenty years. The wet period of the early 40s, which allowed for record productivity to support the war effort, gave way to the drought years of the late 50s when the wheat crop nearly failed. The 50s drought lasted almost as long as the 30s' and was as severe as the drought of the 1890s; however soil conservation programs in place by then are credited with preventing a second Dust Bowl. Small farms went under while large farms grew larger and purchased more equipment. The conservation programs included subsidies to encourage soil conservation and crop multiformity. There were programs aimed at stabilizing farm incomes and ensuring flexible credit. It is David Montgomery's observation that this last item had the ultimate impact of changing farming in this country in ways never before conceived or experienced. He notes that within a decade farm debt more than doubled while farm income rose by barely one-third. In spite of continuing increases in government subsidies, over forty percent of American farms ceased to operate between 1933 and 1968. Institutional farms, better able to finance capital outlays for increasingly expensive machinery, and agrochemicals became more and more dominant in American agriculture by the end of the 1960s. As American farmers once more were forced to choose to squeeze every cent of profit out of their efforts and their land in order to service the debt on their expenditures, they were choosing to promote rapid soil loss as a necessary by-product of their endeavors.

Bigger is more, and more is better, right? He who has the gold makes the rules; and he also gets to write the myths by which the people remember themselves. One of the great myths of industrial agriculture is that larger, more mechanized farms are more efficient and profitable than smaller traditional farms. In 1989 a National Research Council study explicitly rejected the notion that bigger is better in American farming, "Well-managed alternative farming systems nearly always use less synthetic chemical pesticides, fertilizers, and antibiotics per unit of production than conventional farms. Reduced use of these inputs lowers production costs and lessens agriculture's potential for adverse environmental and health effects without decreasing – and in some cases increasing – per acre crop yields."

**Reflections in Blue and Gray**

A 1992 U.S. agricultural census report concluded that small farms can produce more food on the same amount of land – two to ten times as much per acre. As compared to farms greater in size than six thousand acres, farms smaller than twenty-seven acres were more than ten times as productive. But it's not necessarily an apples-to-apples comparison: As Montgomery suggests, "A key difference between small farms and large industrial farming operations is that large farms typically practice monoculture, even though they may grow different crops in different fields. Single crop fields are ideal for heavy machinery and intensive chemical use. Although monocultures generally produce the greatest yields per acre for a single crop, diversified polycultures produce more food per acre based on the total output from several crops;" and we already know what large monoculture acreages tend to do for soil exhaustion and erosion.

Yet in spite of this, the trend is toward larger, more industrialized farming operations. Montgomery notes that, on average, more than two hundred farms in the United States have gone under every day for the past fifty years. Less than twenty percent of farms in this country now produce more than ninety percent of the food grown; and by the 1980s the largest farms in the country showed on the ledger sheet just about half of all farm income.

The next time you want to complain about the high cost of food think about this: "As crop yields increased two- to threefold from 1950 to the 1990s, the cost of machinery, fertilizer, and pesticide rose from about half to over three-quarters of farm income. Two types of farms survived: those that opted out of industrialization and those that grew by working larger areas for a smaller net return per acre."

If small farms can be as efficient as Montgomery suggests, why do they continue to die? The high capital cost of mechanization is a huge obstacle; and economies of scale require large farms in order to make profitable use of this technology instead of intensive labor. For those that succumbed to mechanization, the debt, too often, proved to be insurmountable, and so their lands fell to larger farms that could afford to lay out the capital. As this process continued, mechanization turned farming into an industry and simultaneously accelerated soil loss. At the same time, soil, as most everything else in our culture, became a commodity, the least expensive input among an assortment of inputs to agricultural manufacturing.

There's another elephant in the barn, too. Its name is Development. Between 1945 and 1975 enough American farms were covered over with concrete to pave the State of Nebraska. In the decades of the 1970s and 1980s over a hundred acres of American cropland were converted to non-agricultural uses every hour of every day. As mechanization in American farming became rampant, non-farming development of agricultural land became epidemic. Typically, at least since the late 1950s, more and

more influenced by the thoughts and wishes of Big Business and Big Agriculture, the Department of Agriculture's (USDA) assessment of situations, especially problematic ones, tends to downplay the severity of problems and minimize the definition of risks facing us agriculturally.

USDA's current "acceptable" rates of soil loss, which were developed during the Cold War, are in the minds of many thoughtful observers – agronomists and geomorphologists like David Montgomery – unsustainable in the long term. Simply put, they allow soil erosion to go forward at a rate of four to twenty-five times faster than the rates of soil production. He points out that, "After two centuries of independence, erosion has stripped away a third of the nation's topsoil. At this pace we would run out of topsoil in less time than has passed since Columbus reached the New World."

Somberly he adds, "In the short term…it can be cheaper for farmers to disregard soil conservation; the cost of reducing soil erosion can be several times the immediate economic benefit of doing so. Farmers with high debt and/or a narrow profit margin can be forced to choose between conserving soil and going bankrupt or working the land until it becomes economically futile. Economic and political incentives encourage practices that destroy soil productivity over the long run, yet preserving the agricultural foundation of civilization requires protecting land from accelerated soil erosion and conversion to other uses."

**As Long as the Grass Grows and…**

It's not really a matter of whether we will run out of topsoil in 2015 or in 2250. That line of inquiry completely misses the larger reality that we are losing soil faster than it is being formed and ultimately something has to give. Folks like Montgomery are pragmatic. Soil loss, he says, is not inevitable. There are farms that operate at a net zero loss of soil.

In the long run it's about how we view the business of agriculture. It is foundational to all other business, and yet we increasingly treat it as yet another industrial process; and along with this view has gone hand in hand the increasing market for and use of chemical fertilizers, which obviated the need to limit the size of a farm to the area in which its soil's fertility could be recycled.

The "father of the chemical fertilizer industry" was the noted German chemist, **Justus von Liebig**, who prophesied in 1843 in his *Chemistry in Its Application to Agriculture and Physiology* that "a time will come when fields will be manured with a solution…prepared in chemical manufactories." In 1840 he had shown that plants can grow without organic compounds; and he went on to demonstrate that plant growth was limited by the element in shortest supply relative to the plant's needs. From these efforts he derived the view that crops could be grown continuously without the need to fallow a field simply by adding the right nutrients to the soil.

British farmer-turned-amateur-chemist, **John Bennett Lawes**, adapted Liebig's ideas to show that the proper additions of nitrogen and phosphorus to the soil yielded equal or better crop production than well-manured fields. He found that nitrogen was absolutely essential for plant growth. The interesting thing is that about the time this agrochemical revolution stood poised to take off, the chemical truths behind the traditional methods of manure spreading and crop rotation began to be discovered; for as it turns out, these are just nature's way of accomplishing the return of nitrogen to the soil to provide for plant growth without a chemistry lab. But as these realizations began to unfold, the lure of the artificially-created chemical promise to enhance agricultural productivity had already taken hold. Nutrient application was sexier than nutrient cycling.

While John Lawes inferred that adding phosphorus to the soil was required for positive plant

growth, it was known for certain by the early 1900s that it, too, was essential, as was potassium and several other elements. These discoveries were part of the growing realization that soils were, in effect, complete ecological systems which were influenced by geology, chemistry, biology, and meteorology. In fact, as the nitrogen fixing properties of legumes were becoming known, it was becoming clear that the soil is the chemical matrix that combines geology and biology.

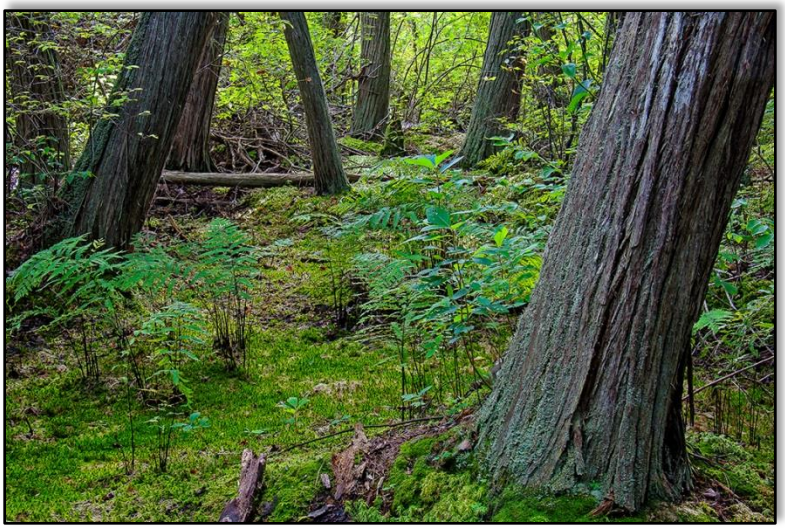
**Where Once the Embattled Farmer Stood**

Just as nitrogen is depleted from soil that is continuously in production with crops other than the legumes (and a few others), phosphorus is depleted as well; and since there are no plants that "fix" it, replenishment must come from some other method – naturally occurring or otherwise.

Nonetheless it was nitrogen that presented challenge as far as synthesis was concerned. Nitrogen makes up 79% of our atmosphere, but in its gaseous form it is unavailable to plants as a nutrient. The stable $N_2$ molecule must be broken into a soluble form combined with oxygen, carbon, or hydrogen before it can be taken up by a growing plant.

There are bacteria associated with the roots of legumes that can do this, but capturing atmospheric nitrogen was not possible until 1909 when **Fritz Haber**, a German chemist, succeeded in synthesizing ammonia. His efforts were commercialized by another German, **Carl Bosch** and became known as the Haber-Bosch method. In the 1920s the original process was modified to use methane gas as the feedstock for the ammonia production. Following World War II the enormous capacity for nitrogen synthesis was diverted from munitions to fertilizer, and the agriculture of the world has never looked back. Global production of ammonia more than doubled in the 1960s and redoubled in the 1970s; and, as David Montgomery notes, by 1998 the world's chemical industry produced more than 150 million metric tons of ammonia each year, though by now natural gas has become the primary feedstock in the process.

He points out that, "The agricultural output of industrialized countries roughly doubled in the second half of the twentieth century. Much of this newfound productivity came from increasing reliance on manufactured fertilizers.... The ready availability of cheap nitrogen led farmers to abandon traditional crop rotations and periodic fallowing in favor of continuous cultivation of row crops. For the period from 1961-2000, there is an almost perfect correlation between global fertilizer use and global grain production."



**A Swamp on a Sand Dune**

It is problematic, this growing dependency of ammonia production, and agriculture generally, on the fossil fuel industry. As of this moment, agriculture consumes some 30 percent of our oil usage. It is Montgomery's opinion that petroleum-based agriculture will end sometime

before the turn of the next century. So what does all of this have to do with dirt? According to Montgomery, "The USDA estimates that about half the fertilizer used each year in the United States simply replaces soil nutrients lost by topsoil erosion." Thus we have put ourselves in a position of consuming fossil fuels, one of the rarest and most useful geological resources ever discovered, to provide a substitute for the dirt we are so carelessly squandering; dirt, the least expensive and most widely available agricultural resource we've ever known.

And we know if we stop to think about it that is doesn't have to be that way. We have bought into a house of cards that is the ultimately empty promise of industrial agriculture to make our lives better through the use of technology and chemistry, to provide us with nutritious food, and to hold our precious soil free from harm and safe from loss. We have watched while the backbone of our country, the family farmer, has been squeezed off the land, both from self-inflicted economic wounds and the vice-turns of the moneyed interests; and we have stood still while the earth beneath our feet has been literally washed and blown away so that greed could move freely about. We are all complicit it this tragedy; and it is all of us who must decide whether we will continue like sheep down a path of meek acceptance, or say, "No, it is enough."

We can learn what living in the land requires for the land's sake, and we can adapt ourselves to the practices that promote the land's well-being, knowing that in the long run those habits will sustain not only the land, but us as well. We can live in ways that benefit all of us, which seems to me to be what the Golden Rule I am familiar with is all about; and we can act toward the land in the ways we would wish for the land to behave toward us, not necessarily a rule made of gold, but one made of fairness, which, quite possibly, is even better.

# What's Now?:

## On Being Consistently Inconsistent

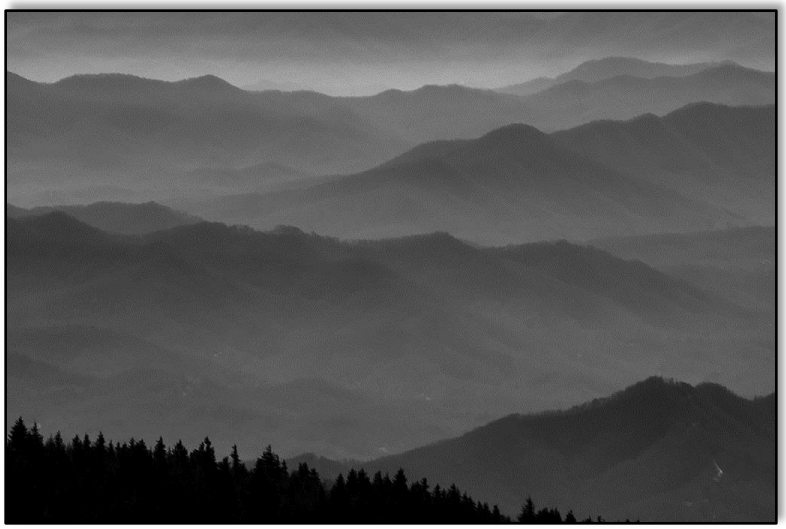
> "...we need to recover our vision, our ability to see. In the opening paragraph of *The Human Phenomenon*, Pierre Teilhard de Chardin (1881-1955) tells us: 'One could say that the whole of life lies in seeing. That is probably why the history of the living world can be reduced to the elaboration of ever more perfect eyes.... See or perish. This is the situation imposed on every element of the universe by the mysterious gift of existence.' We need to see the whole of this land."
>
> **Thomas Berry**
> "The World of Wonder" from: *Spiritual Ecology, The Cry of the Earth*

It was one of my favorite jurists, **Oliver Wendell Homes, Jr.,** who opined that, "Once the mind has been stretched by a new idea, it will never again return to its original size." And it seems like in recent years there has been no dearth of new ideas by which my mind has been challenged and stretched.

**A Masa-eye View from Kuwahi**

Perhaps Justice Holmes was thinking about **Henry Thoreau**'s great good friend Uncle **Waldo Emerson,** who reminded us in his *Essay on Self-Reliance* that "foolish consistency is the hobgoblin of little minds, adored by little statesmen and philosophers and divines." I'm reasonably sure I know what consistency is; however I'm somewhat less certain about when that consistency becomes foolish. For instance, I've become fond of the consistency of seasons, so I appreciate when there's autumn that gives way to winter, which is then followed by spring. That doesn't mean

I'm intolerant of overlap. Blackberry Winter and Indian Summer are fine, and so are occasional early and late snow storms to kick off and conclude the season of dormancy. I've also come to appreciate the regularity of certain events within the larger seasonal framework, again understanding that these occurrences aren't particularly beholden to a strict calendric definition of seasons.

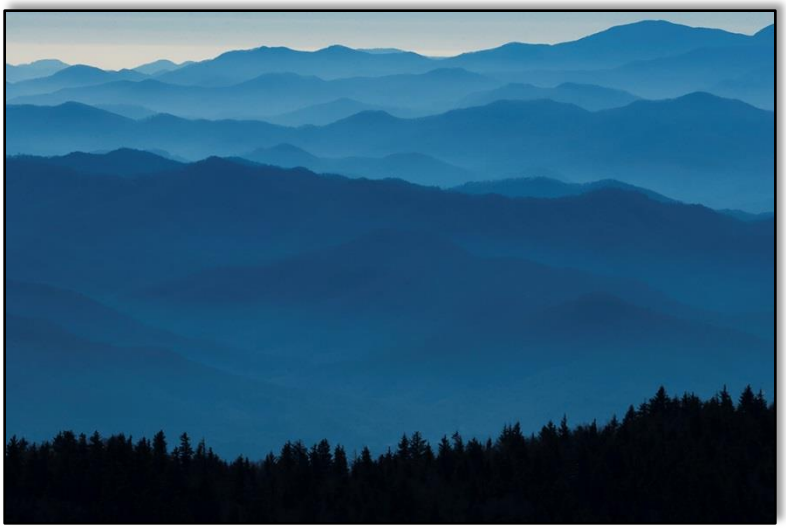


**Shaconage in Grayscale**

Thus, for example, I've come to admire that the drier season in these old mountains usually comes in the months of June – November – roughly what we'd call "summer and autumn;" and that the rainier season usually spans December – May, which we'd typically describe as "winter and spring." Imagine my chagrin, then, when it was the months of June, July, and August earlier this year that allowed these mountains to establish record annual rainfall amounts even before the rainy season had arrived. June through August averages usually total just under 15" of precipitation. For 2013, those three months saw a total of more than 25.5" of wet stuff.

Then to top it off, the welcome wagon for the wet season got here with very little moisture in tow. October was .6" below normal, and the totals for November are not in; but I'm not going to be surprised to see less than average results there as well. Given all of the other changes afoot in the world, from climate to soil to population, I think it's safe to say that consistency has gone out the door, and, foolish or not, it has taken with it whatever we once dared label as normal. At this point in time I don't really care who, or what, caused it; my concern is simpler: what are **we** going to do about it and when can we get started?

My dear friend, **Chuck Summers**, recently posted on his Facebook Page a beautiful thought I'd like to share with you. It's from **Anthony Douglas Williams**: "It is our collective responsibility to help the helpless, house the homeless, mother the motherless, love the unloved, and care for the uncared. This applies to other humans and other animals." To which I would add "… and to dwell on this planet on which we live, as if it were a sacred place. It is."

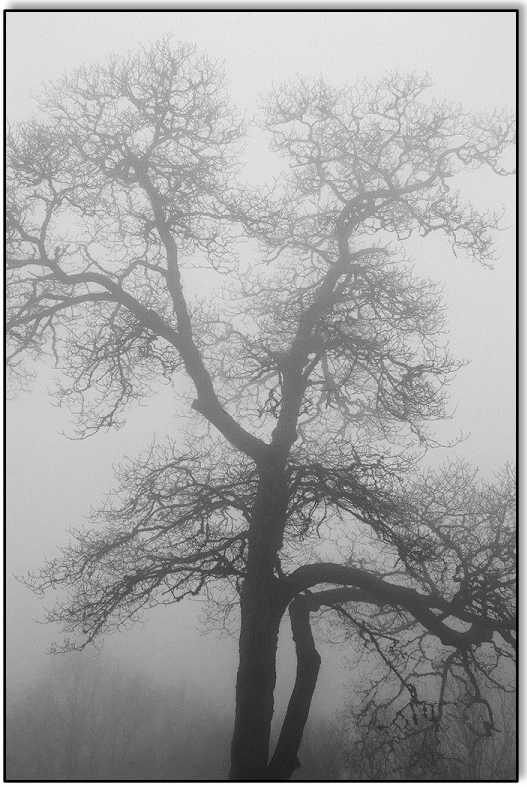


**Shaconage**

We arrive at this time of the year just as these old mountains enter the time of the long sleep. The foliage from fall's color display is on the ground and the hardwoods are bare, and there is beauty everywhere you look. The fallen leaves create wonderful opportunities for golden reflections in places like Little River, Tremont, Greenbrier, and Oconaluftee. Mid-morning and mid-to-late afternoon are typically be best times to experience this amazing light show.

In the higher elevations it's the time of year when the receding blue ridges offer awesome images for your consideration. All along Thomas Divide, in Newfound Gap, and on the Tennessee side of Newfound Gap as well, the haze of summer has mostly disappeared and the ridges roll away before you like the swells of an

undulating sea. Longer focal lengths usually work better, but normal and wide-angle images can also be found. And while you are playing with these ideas, don't forget to create some exposures with the idea of converting them to grayscale when you're doing post-processing.



**There's a Tree in the Forest**

Ideas of conversion to grayscale work well almost anywhere in the Smokies during the winter months. Great gnarled trees with their stark branches can be found everywhere. And when there is light fog among them, as there regularly can be, the dramatic effect is merely heightened.

Water levels in the Smokies' streams usually run a bit fuller over the coming months. After all, we are entering the rainy season. Waterfalls can be dramatic, and it doesn't matter whether you combine the color from surrounding greenery such as rhododendron, or find an interesting angle that emphasizes the bare rock, or consider conversion to grayscale. These same approaches can be used also for the streams themselves.

There are some seasonal road closures that you should remember. Today Roaring Fork Motor Nature Trail closes until April 2014. Tomorrow (December 1) Clingman's Dome Road will close until April 1. Cades Cove Loop Road stays open year-round, but Rich Mountain Road is already closed for the season, and Forge Creek Road is subject to closure at any time due to muddy conditions. On December 31, Little Greenbrier Road will close until April 12. Other Park roads should remain open unless snow, ice, or mud dictates temporary closure.

One of the primary significances of Clingman's Dome Road being closed is its impact on available sunrise-sunset locations for the next few months. With the sun now setting completely behind Sugarland Mountain, Morton Overlook has little appeal as a sunset location. It can still be a wonderful late afternoon spot; and, of course, it's wonderful with snow if US 441 is open. Without a substantial hike, there is no spectacular sunset location available until spring.

Luftee Overlook on the other hand is an amazing sunrise location right now and for the remainder of the winter. Although the trees that make up the foreground are completely bare except for the conifers, the sun is coming up almost directly down the valley of Beech Flats Prong. Moreover, with some atmospherics for color it can be quite beautiful. Remember, it will be cold at 5000', so dress accordingly.

Sunrise-Sunset Times, Oconaluftee Visitor Center, North Carolina

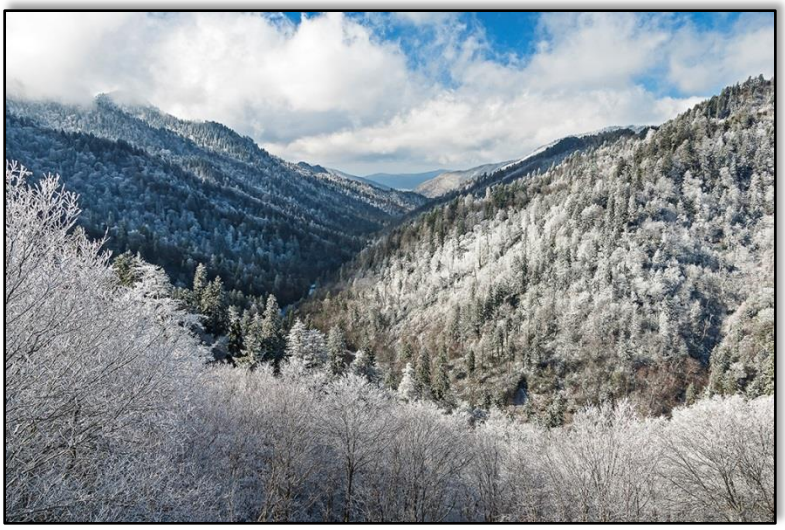
| Date: | December 1 | December 21 | January 1 | February 1 | February 28 |
|---|---|---|---|---|---|
| Sunrise: | 7:24 a.m. | 7:39 a.m. | 7:43 a.m. | 7:33 a.m. | 7:05 a.m. |
| Sunset: | 5:20 p.m. | 5:24 p.m. | 5:31 p.m. | 6:00 p.m. | 6:27 p.m. |

Perhaps it's wishful thinking on my part, but I'm going be positive and hope that we have enough snow this winter to make things really interesting. It can be a questionable proposition as to whether Newfound Gap Road (US 441) will be open after a snow event; however, the area around Oconaluftee Visitor Center, including Mingus Mill, is usually accessible, even after a moderate snowfall. On the Tennessee side, if Laurel Creek Road is open, then the Cades Cove Loop Road is probably open also. You can always get the current road condition report by calling (865) 436-1200, then 631 as soon

as you begin to hear the voice prompt.

Greenbrier Road is generally open to the ranger's station which means there is access to the first rapids on Middle Prong of Little Pigeon about a quarter of a mile from the entrance. This is a tremendously beautiful location when there is snow on the ground.

If you are fortunate enough to live close to the Park you should always pay attention to weather conditions that might foretell a hoarfrost event. If you think there is a chance one has happened and there has not been an accompanying snowfall, then checking the status of the roads and finding them open can put you in position for a wonderful photographic experience.



**A Hoarfrost Comes to Morton**

It never ceases to amaze me that relatively so few people come to the Smokies in winter for the specific purpose of being photographically creative. I think that winter is as photogenic as any other season of the year and that there are an infinite number of ways in which it can be expressed – grayscale conversions and receding blue ridges are just a couple of the more obvious.

What is consistently consistent even in the face of our inconsistent love and care is the beauty that shines through these old hills, like backlight through spring foliage, like dawn's glow above the line of a distant ridge. We did nothing to earn it; it is not through anything we have done that this awesome gift has come to us. There is one and only one response appropriate in recognition of such a gift; and that is gratitude, a humble gratefulness that acknowledges our awareness that we have received something far beyond our capacity ever to repay.

# A Tip Is Worth…?

## Being Committed (Without Hospitalization)

"The relationship between commitment and doubt is by no means an antagonistic one. Commitment is healthiest when it is not without doubt, but in spite of doubt."

**Rollo May**
*The Courage to Create*

"Coach said, 'The quality of a man's life is in direct proportion to his commitment to excellence, regardless of his chosen field of endeavor.'"

**Sherman Alexie**
*The Absolutely True Diary of a Part-Time Indian*

In my mind's eye I can still see them, and though they existed at separate moments in my life their presence in it overlapped so that they are remembered simultaneously. They appear like giant fuzz sticks waiting to be lit by some enormous match in abetment of the ignition of some great bonfire in my soul. What they are really are baseball bats, the wooden kind that existed in 1959, abused beyond destruction in the service of a greater good only a twelve-year-old boy could rationalize. When we moved from Athens to Milledgeville, Georgia I had no experience playing fast-pitch, Little League baseball. At the "Y" in Athens, where my athletic career had resided for six years, I had played only slow-pitch softball; but in my new home baseball was the game. The difference between picking up a baseball leaving a pitcher's hand, even another twelve-year-old's, and drawing a bead on that slowly

arcing hefty sphere of a softball as it dropped toward me was considerable. I wanted badly to succeed, to be accepted, to fit in. And so I enlisted the help of a pair of my old bats, nothing wrong with either of them; they were otherwise perfectly good, but they fit the plan I had, and so they were sacrificed. I took one, or the other, of them almost everywhere I went, and everywhere I went I found rocks; rocks the size of golf balls, rocks the size of ping pong balls, rocks the size of red oak acorns, and rocks that were smaller. Whenever the opportunity arose, as it did every time we were at my grandmother's in rural Walton County, I threw up the rocks I had collected, one at a time, and swung at them as if they were miniature fastballs coming across home plate. In a single summer's time I must have tossed a thousand of them.

**The Tide Rushes In and Washes My Castles Away**

During my second season in Little League my batting average was over .600 and I led the league. By that time, my two faithful old wooden bats were no longer recognizable as such. They had become fuzz sticks, but I will never forget them.

This is a story about passion's twin. Passion, as you may recall, was the subject of my last issue's "Tip," and this is about **commitment** and its role in the pursuit of creative excellence. As **David Ulrich** so correctly points out in *The Widening Stream*, "We all have inborn talents that must be respected, honored, and continually nurtured. Great talent must be accompanied by disciplined and sustained work, if it is to be realized. The potential of some form of genius is undoubtedly present in everyone, but the fulfillment of it depends upon the full employment of our talents, the intensity of our encounter with the process – and perhaps just a little luck."

In **Henry W. Longfellow**'s epic poem, "The Song of Hiawatha", the child Hiawatha is taught by his aged grandmother, Nokomis. She so carefully guides the youngster's attention that his learning becomes a game, and by the time he is a young man his knowledge of the world around him is rich and full. Longfellow goes into great detail to say the things the child is learning in order to emphasize the attention to detail that is being imparted by the older woman. It appears as a given that Hiawatha's desire to be attentive is sent out from him into everything he is told, as if he understands that this commitment is the beginning of all that will come later when he is grown. And it is true, I believe, that all we need to do in order to find passion is to learn to carefully observe. The world is infinitely interesting; and as we give ourselves over to the observation of this world, we are transformed; the connections we perceive and create among diverse phenomena become catalysts to further desire and exploration.

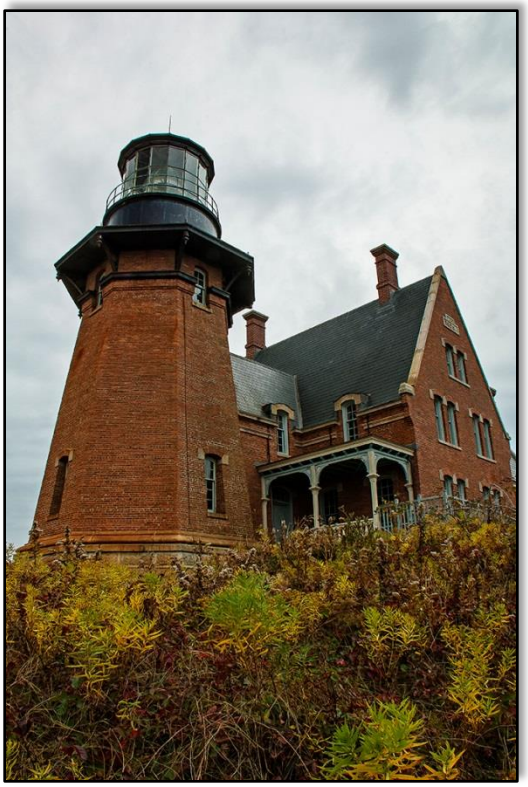
Again, David Ulrich, "Look around. Take the time to see and feel. Go beneath the surface. Everything has meaning. Everything is a reflection of the ultimate cause, an unseen esoteric reality that is the source of creation itself."

Initially, in the beginning of this effort, what comes back will do so only in bits and pieces, in incremental amounts rather than floods, although occasionally it may be otherwise. In the beginning where the understanding and inspiration come from may seem like a mystery; but it is our own hard work, our willingness to remain devoted to each and every part of the task of seeking clarity and fullness of expression that will ultimately bring our effort, in its own time, to completion.

And here, I believe, is the crux of the matter: passion stems quite naturally from commitment. As Ulrich says, "No matter what we want, or what we strive toward, it will only grow out of a sustained and committed interaction. There is no other way. Commitment, in this context, means not holding back, doing what is necessary vigorously and unreservedly – to have a 'no-holds-barred' relationship

with our creative work."

Being fully creative means that we have to constantly challenge our egos and the false persona we have created. We know full well that the ego is constantly chattering inside our heads, and its voices of self-calming (it's good enough), self-adulation (how great I am), and self-loathing (how awful I am) must be resisted continuously. They are only voices in our head, they mean nothing in reality. What means something are the hard work, the discipline, and the joyful acceptance of creative frustration – working through regardless of the level of difficulty – that we can cultivate within ourselves. These are the means whereby we grow and allow ourselves to become who we really are; and what allows us to engage in this undertaking is commitment.



**A Light off the Old Block**

Here, again, Ulrich's words ring true, "Though it seems contradictory, through firmly standing behind our intent, and passionately, diligently approaching our creative aims, we can let go into the broad current of creativity. Here we are swept along by forces, both inner and outer, that give our work and our lives meaning and direction."

In simple terms, the flow of creativity is a reciprocal process. You do have to prime the pump, you do have to have faith and believe, you have to give of yourself and then you are worthy to receive. It is with practice and discipline, with experimentation and play, that our work is refined and distilled, and blended into what it is – a combination of the talent we were born with and the effort we have sustained. If we allow ourselves to see and feel deeply, in time our experiences will inform our efforts, and our creative expression will arise. Our work will come forth from the core of who we are.

To bring the circle to fullness, David Ulrich reminds us, "To explore, to challenge, to take risks, to try in spite of our limitations, to embrace the evolving process, to bear the glorious discomfort of not knowing, to knowingly step into the unknown – these are the things a body likes, a soul strives for, and an artist or creative individual joyfully requires."

I think, in the lee of all this, about a pair of tattered baseball bats; how small their contribution may have seemed at the time, and how large the lesson they inspired about what it means to commit to a worthy goal and to work unremittingly to achieve it.

## As for EarthSong/Walking in Beauty…:

**Walking in Beauty**

As I walk with Beauty
As I walk, as I walk
The universe is walking with me
In beauty it walks before me
In beauty it walks behind me
In beauty it walks below me
In beauty it walks above me
Beauty is on every side
As I walk, I walk with beauty

**Traditional Diné Prayer**

> "Absorption, being caught up in, wholly involved, and so on, are used commonly to describe the state of the artist or scientist when creating, or even the child at play. By whatever name one calls it, genuine creativity is characterized by an intensity of awareness, a heightened consciousness."
>
> **Rollo May**
> *The Courage to Create*

It never ceases to amaze me how time can slip right past me. It was only yesterday, wasn't it, that we were where we are now talking about the coming and going of yet one more year. Could it really have happened so quickly?

I can't thank you all nearly enough for the wonderful year you have shared with us. Yes, wonderful. In May I had the opportunity to have a new hip to replace the one which has been slowly wearing out over the past sixteen years. Your good wishes and thoughts were a great part of the healing process. In April, and again in November, Bonnie and I were invited to exhibit our work at the Grateful Steps Gallery in Downtown Asheville. Dr. Micki Cabaniss Eutsler, owner of Grateful Steps was a gracious host and made us feel completely at home. We are grateful for her kindness and support of our work.

To conclude the year Bonnie and I traveled to New England and enjoyed wonderful workshops in Cape Cod and Rhode Island. Both of these locations will appear again on the schedule somewhere down the road. In fact, we returning to Rhode Island in the coming year, and we hope you will join us there.

I suppose that brings me to the first big announcement: The 2014 workshop schedule has been posted to the website, www.EarthSongPhotography.com. Check out the awesome places we'll be sharing and plan to come with us to one of them. There's Acadia in the spring, Rhode Island on the cusp of autumn, and two old favorites, the Upper Peninsula of Michigan and the White Mountains of New Hampshire.

Here's a brief rundown of the calendar as it is presently structured:

- January 25-February 1: Wilderness Wildlife Week, Pigeon Forge, Tennessee.
- April 3-6: Arrowmont School of Arts and Crafts Heritage Weekend, Gatlinburg, Tennessee. This will also be a fundraiser for Friends of Great Smoky Mountains National Park.
- April 20-26: John C. Campbell Folk School, Brasstown, North Carolina
- April 28-May 2: Road Scholar Program, Lake Junaluska, North Carolina
- June 21-27: Acadia NP/Mount Desert Island, Southwest Harbor, Maine
- August 10-16: John C. Campbell Folk School, Brasstown, North Carolina
- September 6-12: Rhode Island Coast, Narragansett, Rhode Island
- September 27-October 3: The Upper Peninsula of Michigan, Baraga & Munising, Michigan
- October 11-17: White Mountain National Forest, Glen, New Hampshire

Of course, Kendall and I will be doing a workshop somewhere in 2014, so keep a lookout for that event. It will be scheduled soon. And there will be at least one weekend workshop, and possibly two, added a little later. If you have any questions about any of these, or about anything else we're up to for the coming year, please do not hesitate to contact me.

One upcoming event I want to mention is the Annual Fireside Sale at John C. Campbell Folk School on December 8, 2013. I will be there with a selection of prints for sale including framed pieces, matted pieces, and unmated prints. The sale hours are 10:00a.m.-5:00p.m. and my booth will be in the Community Room of the Keith House, as it has been for the past several years. If you are anywhere near Brasstown next Sunday, I hope you'll stop by and visit with me. There's always a great crowd and lots of fun.

We hope each and every one of you, our EarthSong friends and family, had a healthy and happy Thanksgiving; and we wish all of you a joyful Holiday Season and a great 2014! We hope you'll join us for a creative adventure that will inspire you on your artistic journey.

Until next time, may the Spirit of Light guide your shutter release.

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Sunset, Massachusetts Audubon Sanctuary, Cape Cod Bay, Wellfleet, Massachusetts