The Value of Phenology

By Ted Gostomski

Standing there on the ground, you can feel the land filling up, feel something physical rising in it under the influence of light, ... I came to think of the migrations as breath, as the land breathing. In spring a great inhalation of light and animals. The long-bated breath of summer. And an exhalation that propelled them all south in the fall.
~ Barry Lopez

What is it about the way the land breathes – these migrations – that fascinates us? Why should we care when the ice goes out on the lakes, when the first phoebe is heard, or when the hepatica begins to bloom? Is it simply an innate need to make sense of the world? Or is it a desire to understand what’s happening around us, and in the process, what is happening to and within us?

In its purest and most simple form, phenology – the study of visible or perceivable changes caused by changes in climate or weather – is a way to mark time, and I think this naturally leads to a sense of anticipation for coming events. But I do not think that all phenology is concerned with migration and blooming. Some phenological markers are cultural manifestations of the changing seasons: the Detroit Tigers’ home opener, deer season, or when the first person is seen wearing shorts in the spring. I keep track of when the Soo Locks open in the spring and close in the winter and when the first “salties,” or ocean-going ships, arrive in our northern ports. In Wisconsin, we know autumn is on the way when the Green Bay Packers play their first televised exhibition game.

Phenology is also a way to be mindful of the larger world, to focus on things beyond ourselves.
To anyone who has spent a winter in the north and known the depths to which the snow can reach, known the weeks when the mercury stays below zero, the first hint of spring is a major event. … When March comes in, no matter how cold and blustery it is, the time is ripe for signs.

~ Sigurd F. Olson

The coming of spring stirs the phenologist in me like no other season, and when March comes around, my record-keeping jumps into high gear. Notes begin to fill each day on my calendar and my pocket notebook becomes an accessory to my outfit. In recent years, my excitement over the coming of spring has become too much for me to handle alone and I have reached out to share it with my friends. It usually starts in mid-to-late March when a daily walk reveals some significant change, usually a new bird song, that I cannot simply note and move on. When that happens, I start sending Email to friends, telling them what I saw. It feels like a secret note, a sounding to others that change is afoot, and an implicit request to corroborate what I have seen. Some of them respond with their own observations and a pattern begins to emerge. Soon I am receiving urgent cables from far and near and compiling them into a weekly newsletter.

Keeping track of these changes also helps to establish a sense of place and a sense of belonging. Having grown up in the Midwest, I am a phenologist at the most basic level. I am an observer and a participant at the same time. I know when the snow will begin melting, when the grass will turn green and begin to grow, when the spring peepers will be calling, when the first mosquitoes will torment us, when the leaves begin to change colors, when to put away shorts and T-shirts and pull out the sweaters and a wool jacket, and when to expect snow. Watching for these signs motivates me to go outside and look around, to winnow the air with my nose for smells of water or pine needles or wood smoke, to listen for new bird songs, and to watch for the first changing color of maple leaves.

Phenology also serves a scientific interest. We can discern patterns in the arrivals and departures and use that information to learn about how nature “works.” Growing up, my second favorite pastime after baseball was birds. Learning about birds set the hook within me, and it is
the basis of my involvement in phenological record-keeping to this day. When I was younger, I made a daily list of the birds I saw. Most days the list was comprised of the same dozen or so “backyard birds.” As I have grown and moved around and learned, my lists have grown as well. When I went to college and began studying biology, I learned to make notes about things I saw and heard, to draw pictures, and to keep lists of plants and animals. Over time, I learned I could compare these notes from one year to the next and begin to discern patterns of arrival and departure, emergence and blooming. I learned that variations in these dates could be caused by weather and other phenomena, so I had to learn what aspects of the weather caused these variations.

Similarly scientific, but with more intangible roots, being outside and attentive naturally leads to other discoveries and more questions. What smells like that? Who sings that way? What is that flower? This in turn leads to learning the names of plants and animals and people and places. There is great intrinsic value in developing a first-name relationship with the larger world. As Paul Gruchow writes, one way to understand our relationship with nature is to undertake the basic work of naming its constituents. ... We will love the earth more competently, more effectively, by being able to name and know something about the life it sustains. Keeping track of the phenology where you live is one way to begin building such a relationship. It is a bond that can lead to a lifetime of deeper knowledge and greater connection to the place where you live.

About the Author

Ted Gostomski is a biologist and writer whose internal compass always points north. He has studied loons on Isle Royale in northwestern Lake Superior, been marooned in Wisconsin’s northernmost lighthouse during a two-day thunderstorm, and, with his canoe partner, is currently tracing the fur trade canoe route from the fort at Grand Portage on Lake Superior to Fort Chipewyan on Lake Athabasca in Alberta, Canada. Gostomski’s writing arises from these experiences as well as an over-arching interest in how people relate to their environment and the natural world. Ted works for the National Park Service, Great Lakes Network Inventory and Monitoring Program, and is the co-author of Island Life: An Isle Royale Nature Guide.