



"Advocating for responsible stewardship of land and natural resources in landscaping and horticultural practices."

Stewardship = Presence

June 15, 2016 in **Invasive Plants**

by Michael Bald

Persistent, Relentless, Tenacious...such are the words we deploy to describe our nemesis weeds and invasive species. It's all in the perspective, of course.

Many of our native plant species can be aggressive and somewhat weedy, think sumac and burdock. Some will even cause serious harm to human eyes and skin, think poison ivy, cow parsnip. At the same time, some non-native plant species are largely beneficial, at least to us, think apple trees and numerous crop plants. In the end, however, a handful of high-impact, aggressive non-natives that affect soil health, biodiversity, and even land access do cause many of us tremendous frustration. Who wants to hack their way through a tangle of unyielding multi-flora rose, common buckthorn, and oriental bittersweet? Completely overwhelmed, we turn to our chemical options, forgetting that we too can draw upon Persistence, Relentlessness, and Tenacity. We do carry these traits; I suspect that we lack only some detailed knowledge and a good deal of patience. So let's explore those – the knowledge needs and the patience thing.

Stewardship = Presence

Happily, the necessary understanding and patience wrap neatly into a tight little phrase: Stewardship = Presence. Are you present on your land? I mean, really present? Like...no cell phone. OK, you can have the phone, but strictly for plant ID. Look at your land. Do you know

which way the wind blows and how the water flows? Do you know the deer trails and the patterns of the woodchuck? Do you know what's uphill of your little spot? What about the soil conditions? Are you lacking in organic content as nearly all sites are? Which native plant species are actually thriving? And can you live with them or accommodate their presence, since it's clearly much better to have burdock, pokeweed, sumac, and purple-stem angelica as opposed to the "invaders"? What is the orientation of your land to that all-important energy source, the sun? Finally, have you looked at your land with...let's not call it a tactical perspective, (I'd rather avoid the "war on weeds" theme) how about, a view toward gateways and chokepoints? If you manage your land at critical access points or along transmission vectors like roadways, would you then be able to protect the remaining ground with minimal effort?

I would submit that you absolutely CAN work that way. But in order to be effective and responsive, you have to know your land. You'll gain that knowledge through patient Presence on your landscape; the informative books were not generally written to address your specific patch of dirt, so that piece is all on you. You can call in the pros for good information on the most troubling invasive plants in your area. This information is absolute gold (propagation, spread patterns, best timing for control work, and even safety considerations). Combine that knowledge of the plant species with your observations on the landscape, and you get to some fine math: Knowledge = Power.

Care & Control without Chemicals

To apply this new-found power in a precise, effective manner brings you to Stewardship. I illustrate with two photos that capture the notion of Presence and my philosophy on non-chemical weed control. They are different takes on the idea of caring for the land through constant Presence. I really need no other images to support the message.



Mike Bald of Got Weeds? protects a hay field from intrusion by noxious wild parsnip (foreground); the roadway is both a transmission vector and a physical barrier.

These pictures both address wild parsnip, a plant with sap that causes serious burns on skin exposed to sunlight. The first photo shows me protecting or guarding a roadside field (behind me), while in the foreground yellow flowers indicate overwhelming numbers of wild parsnip. The key here is that the field space yields an economic product: clean hay. I educated the landowner about the plant, the dangers, and the threat to his hay quality. With that information, he goes into “early detection” mode and pulls a hundred or so wild parsnip colonizers from the edge of his field each summer. Where do the seeds come from? They wash or blow across the road from the school property in the foreground. This insane infestation generates thousands of seeds per plant, but his property uses the impenetrable road surface as a barrier line, a “do not cross” obstacle. I come through towards the end of summer and snare the plants he missed or the late-bloomers.



Close-up of wild parsnip and its Competitor. Timing is everything with invasive species, but unrelenting Presence is also vital.

The school property across the road highlights the result of even a one- or two-year delay in addressing invasive species. After three years of inaction, the school board asked me to eradicate the parsnip population, an insanely difficult task, but somewhat necessary from a safety standpoint. I've never seen chemical treatments work against wild parsnip, nor is mowing effective since there are always survivors around telephone poles and parsnip will flower at four inches in height. So the only approach for me was to break the seed cycle. I interrupt the seeding process by pulling many thousand mature plants each year.

Focus the Effort to Break the Seed Cycle

Given parsnip's seed life of four to five years, I can achieve the goal of eradication with a patient pulling effort that allows other plants to re-establish. No other plant species are pulled; I do not even go after first-year wild parsnip. The species is a biennial, but the first-year plants present no immediate threat. Nor do they pull well, tending instead to break off, which does not serve the goal. So that explains the second photo; each plant receives singular attention and the impact of Presence.

I do not yield the space. Clearly, it's worth pointing out that the early detection model is much preferred over the relentless toe-to-toe pulling approach.



At a tree farm in central Vermont, thousands of noxious wild parsnip dwarf the smaller Christmas trees.

Thus, Presence brings us to the desired vision, the long-term goal. The invasive plant population has no chance to seed successfully. The plants have flowered, yes, but I have timed my intervention precisely to get good pulls before viable seed is formed. There is a window. It takes a couple weeks for the seeds to form up below the pollinated flowers. I will not attempt to define that window; the plants flower in waves over a long time frame, and every site is different in terms of resource availability.



After several years of pulling to break the seed cycle, the same farm is shown with the managed area on the right, unmanaged rows on the left, and a "haystack" of pulled material visible in center.

Eradicating an invasive species is not a single pass (not even with chemical methods, in my opinion). Thus, unrelenting Presence is the preferred tool. I get the early bloomers, the late bloomers, the tall ones, the short ones, and everything in between. I do not remove plants from the site; that would be an unnecessary risk and a waste of money. If my timing is right on, the plants will sun dry and I can pile them in a single location for regular monitoring. No worries, even if the pile contains a few viable seeds, I've got them all in one tidy spot.

Be Present and Patient

Stewardship... We cannot manage our landscapes remotely or from the desk. The feet must get muddy; the sweat's gotta roll. I certainly do not mean this article as an attack on chemical treatment methods, but I would submit that trusted professionals are the ones for that work. Homeowners, in my experience, do not have the patience, and I'm sorry, but "more is not better." Chemical treatment is one of the tools in the box, but it absolutely cannot stand in for stewardship. And having acknowledged herbicides as a valid option for land management, I must confirm that the Persistence, Relentlessness, and Tenacity of landowners should not be underestimated. Whether applied to invasive plants or human residents, those traits are a potent, impressive combination. Call upon willpower as the first option; move your land toward your vision and feel the sense of connection.



"Advocating for responsible stewardship of land and natural resources in landscaping and horticultural practices."

So Why Don't You Use the Chems, Mike?

September 15, 2016 in **Invasive Plants, Weeds and Weeding**

by **Mike Bald**

I get this question occasionally in my work managing invasive plants. When people are interested in hiring me, they do like to know the reasoning behind the company philosophy embracing only manual/mechanical methods. Since I always ask landowners about their vision for the property, I weave that exploration into the response about the methodologies.

It goes something like this:

Me: "So what long-range plans do you have here? Do you plan to keep the land wooded; will you keep the openings clear of re-growth? Any plans to have grazing animals on hand? Are there places where kids and visitors need safe access, like around the pond? Will you be brush-hogging areas, and does that equipment come in from elsewhere?"

Landowner: "Well, this is what we're thinking Mike...(insert plan/vision here). So in the end, we just want a healthy place where our grandkids can run around safely, and we don't want our forest understory to get overrun by barberry and buckthorn and all those vines. If we can make that happen without spending a fortune, we'll be feeling pretty good."

Me: "OK, so I think I see the plan. So we DO want things to grow here. Along the wood lines, in the forest interior, and around the pond. It's just that we want to 'phase out' certain non-native

plants while we do what we can to support the native trees, shrubs, and flowers, pollinators, etc.”

Landowner: “Sure, that sounds about right.”

Me: “Got it... so once again... we DO want things to grow? We just want to get a little transition underway, replace the invasives with native species.”

Landowner: “Oh yes, absolutely.”

Me: “Nice. So you’ve asked me why I choose non-chemical methods, and we’ve just now confirmed that we truly DO want a plant population in place. A healthy, native population. So since we DO want things to grow here, if it’s simply a transition that we’re after, why would our first step in that process be Add Toxin? Am I missing something? Help me out here....”

There may be a Ponder Moment, but this is where we usually nod our heads together and consider it good. It really is that simple.



A roadside giant hogweed infestation in central Vermont; the landowner “sprayed the bleep out of it.” The culvert might raise serious questions about water proximity and herbicide usage requirements

There is more thinking and background behind my insistence on non-chemical methods. Whether in managing vegetation or some other pursuit, I’ve never been impressed when people tell me something just outright cannot be done. Those claims stir questions from the scientific standpoint and deep interest from my competitive nature. We put people on the moon, we put gadgets on Mars...so what’s the problem? We can’t subdue a vine without going ballistic? Really? That sounds so lame.

But here's the real issue. Though I'm personally not a botanist, those I've met seem pretty intelligent and bright, impressively so. Yet over and over, in meetings and at field sites, I've watched these strong minds look at a runaway monoculture of whatever species and quickly conclude that a chemical treatment plan is clearly needed. Conversation instantly turns to the permitting process and the relevant hoops needing jump-through. Rarely is there deep consideration, and even less often is there any thought given to a long-term approach (stewardship, right?). No, the decision process is short and applicable to the immediate term (results and deliverables now, thank you).

Competing Viewpoints

Now I like to think the human mind is our most powerful tool, so seeing human creativity and problem-solving skills sidelined in favor of harmful chemicals is the issue that drove me to give our approaches more thought. Oftentimes, perception is a big player in decision-making. I've learned that what I see as a complex site of moderate difficulty requiring an initial effort of four treatment days is completely different seen through the eyes of others. The very same site may be "completely overrun, inaccessible, unsafe and virtually unmanageable."

Inaccessible is the term I get the most chuckles from. I mean, yes, sometimes I do have to walk a bit...while carrying a tool...my lunch...maybe a rain jacket or bug netting. Sure, when conditions are clearly too steep, bring in the goats! But most often, that sense of hopelessness on project sites is simply a reflection of inexperience. The work CAN be done, and better yet, done safely without chemical intervention. But does anyone know how to use a scythe anymore? Somehow we've lost perspective on what natural landscapes look like, with complexity and biodiversity manifested in a degree of chaos, and few of us can really quantify what dedicated manual labor can overcome and accomplish. With that loss of perspective and the rush for instant results, we go the chemical route.

The Intersection of Volunteers and Chemicals

So I ask, where is the opportunity for learning the nuances of a site when we exclude volunteers and interested citizens from participating in landscape rehabilitation? I've seen chemical treatment actions combined with volunteer outings, and my conclusion is that the two do not mix. Period. Volunteers are brilliant when they connect with a goal and a site and pull off serious manual control work. Garlic mustard is an invasive species perfectly suited to volunteer contributions. It's even edible, adding an element of fun and culinary creativity to the day. Volunteers have no place, however, on a project site undergoing chemical treatment.

To begin with, who will wash their clothing at the end of the day? The safety manuals (USDA and Cornell Cooperative Extension) call for three washings of clothing used in chemical application efforts. Furthermore, the washing is to take place in a separate, dedicated machine which then SHOULD be run empty once just to clean it out. I've never seen anyone do this, nor

do I do know anyone in the community with a twin set of wash machines. More likely, community members have no such set-up and rely on a local laundromat. So it is entirely possible that baby clothes go into a wash machine immediately after a load of clothing that was exposed to pesticides. This defies the government's detailed precautions, but who takes care of the enforcement? There is no enforcement. There is only a small child now exposed to unknown quantities of powerful synthetic chemicals. So it goes.

Managing with Stewardship

I close with a thought on stewardship. A community leader once followed me around a pond dabbing herbicide on honeysuckle stumps that I had just cut. I had been hired to cut, nothing more, and I had suggested that a few more follow-up outings to strip off re-growth would bring about the end of these non-native shrubs. She wanted nothing to do with return visits. Nothing. I quote: "I just want to get it done. I never want to have to come back out here."

Sadly, this conservation leader had an impressive volunteer pool at her disposal. A simple email could muster a dozen volunteers anytime, guaranteed. Yet, she expressed no interest in building a sense of ownership at this community resource. No bonding and connecting would take place this day. She, like conservation leaders everywhere, talks up the importance of relationships and connection with nature as a matter of routine. It is my opinion, however, that actions like hers on that day torpedo our intentions and fall short of true stewardship. I like to see deep connection between people and the places they work; this above all else is my grounds for patient and non-toxic approaches to vegetation management and landscape transition.

I DO want things to grow, and that can include people as well as the plants.

About the Author

Mike Bald has worked with invasive species since 2003 and founded his company, Got Weeds? in early 2011. Offering non-chemical weed management options to landowners in much of Vermont and New Hampshire, Mike's focus is on long-term site stewardship, soil health, native plant diversity, and education of landowners. Cooperation across multiple ownerships is also crucial to the control effort. Got Weeds? has come to specialize in "the danger plants" and the technique of solarizing. Species commonly addressed include the non-native shrubs, black swallow-wort, wild parsnip, and Japanese knotweed. Mike appreciates the importance of healthy habitats, site specificity and ecosystem resilience; his goal with the treatment programs at Got Weeds? is to demonstrate with careful documentation that manual/mechanical methods can succeed over extended timeframes.