Access Action

KUDZU INFESTATION - JOHNNY RANDALL, NORTH CAROLINA BOTANICAL GARDEN, WWW.BUGWOOD.ORG

Keep Your Trails from Getting Too Exotic

by J.P. Wares

It's time to add another set of tools to your pack. As mountain bikers, most of us are on the front lines of a war that we will probably lose, but we can still keep fighting. Whether your ride is a quick bolt down a gravel alley, or on marginal unused or agricultural land that hosts many of our near-urban trails, and even seemingly pristine trails through the backcountry, every ride we take is a transect along disturbed patches of land. Our trails often follow cattle paths through mountain country or old fire roads. The disturbance of hooves, graders, trucks, and plows creates prime habitat for exotic species introduction and spread. Many riders are learning that this is not only an ecological nightmare, but also a threat to the very trails we use. So load up the clippers, the yard gloves, and a bag to haul out your harvest—let's ride into battle.

On a recent ride in northern Georgia, on a twisty trail near Highway 441, as I climbed along a barbed-wire fence line past old washing machine parts and tattered plastic bags—standard urban and suburban trail habitat—thick curls of kudzu (Pueraria montana) reached out to brush my face, to tangle in my chain, to infuriate me. I hate kudzu. This plant, intentionally introduced from its native Asia to stabilize soil and reduce erosion in the southeastern U.S., is known as the "foot-a-day" plant because of its rapid growth and ability to quickly colonize new areas, even covering buildings and cars that aren't protected from the vines and giant, sun-absorbing leaves. The only good things about the plant are the flowers, which smell like grape soda. About twice a month, I head into the woods behind my backyard with a machete and sometimes a small applicator of herbicide—perhaps the lesser of the two evils—to clean away patches of kudzu. Each time, I pull up yards and yards of vine root and make a small dent in the growth, and each time encounter some growth that has filled in my previous effort. I do the same on local rides, stopping to rip up six or eight feet of ground runners, knowing that my gesture is probably only psychologically beneficial. The Nature Conservancy literature on this species says that the only way to remove it from an area is to mow frequently for at least two growing seasons. Often, though, the terrain our trails plow through is not conducive to frequent mowing.

Kudzu isn't the only species that encroaches on our trails; we've probably all experienced something like it. In California, amidst native poppies and non-native grasses, the introduced starthistle plant (Centaurea solstitialis) is a painful reminder of how our abuses of the land can lead to rapid changes in the local ecology. The small set of trails at Peña Adobe, near Vacaville, were seasonally rideable when I first moved to the area. Those trails wind through hilly cow pasture and small groves of blue and valley oak. Each year it got worse: during the summer, the growth of starthistle brought agony to unprotected shins along a huge swath of trail and began to persist later into the fall. Bloody shins, rashes, even a few thorns stabbing through my shoes on a rocky downhill section made me start to avoid what was otherwise a really nice local ride. Beetles, borers and moths were known problems along my rides in New Mexico, North Carolina, and Oklahoma. On one trip to southeastern Oklahoma, we pulled into a campground at night next to where the lake should have been; in the morning we saw nothing but a mudhole, as the lake had been drained to eradicate an introduced predatory fish.

Why are exotic species such a problem? It is an obvious effect of global

KUDZU FLOWERING - FOREST & KIM STARR, U.S. GEOLOGICAL SURVEY, WWW.BUGWOOD.ORG

transport of everything, to everywhere, by humans. Snakes, fish, beetles, plants—all transported with our produce, our cargo containers, on our clothes. The introduction of exotic species is something that is difficult to understand, scientifically, because we cannot ethically set up controlled experiments—we only have the successful gaffes to learn from. But these exotic species can quickly threaten native species, and even change the overall appearance and composition of a community—from one type of sediment, or forest, to another. At the end of a recent ride at the Lake Russell Wildlife Management Area in Georgia, I ran into two ecologists rummaging through the understory plants. What I had thought was a really nice thick native forest grass is Japanese stiltgrass (Microstegium vimineum), so abundant that there is no trace of what it has replaced in many areas.

Invasive species can indirectly cause the extirpation of other species by exhausting resources at the bottom of a food chain, as with the zebra mussels that have been introduced to the Great Lakes and midwestern freshwater systems. Moreover, these species cost us financially. From local communities to the tax dollars you send to the National Treasury every April 15, billions of dollars are spent on combating exotic species and the threats they pose to

Now, come on, who doesn't want to get rid of "Stinking Willie"?

farmers, the fishing industry, and human health. Plus—did I mention this already?—they bleed away resources from agencies that could otherwise be managing and supporting trail networks.

Whatever the most obvious impact is on your trails, it benefits us to fight this problem. It is a component of trail maintenance that benefits other trail users and makes our local organizations look good. Combating exotic species is an activity that can be done by combining forces with equestrian or hiker groups, something that just may give you an inroad on some trails that have otherwise limited access to mountain bikers, or provide greater cross-talk among the user groups. Mountain bikers are in a unique position in this fight, actually, because we can travel far, we can carry stuff in our packs or on our bikes (I've equipped my Big Dummy for a few such trips—I don't like carrying a machete in my pack!), and we see the "edge" habitat for hours on end. We have the power to make a small change on each ride, and as an army of trail maintenance soldiers, we can fight the exotic species and hold them back. It should be noted that at least one recent mtbr.com forum discussed anti-mountain bike forces using the perceived threat of exotic seeds arriving on bike tires as a reason to limit access to bikers—never mind that the seeds, burrs, etc. that could spread a plant species are as likely to be moved by horses or hikers or native animals as by bike tires.

IMBA supports the removal of exotic plant species from areas where trail work is being done, but has little detailed information about this in its scientific support material or trail work information, according to Mark Eller, the communications director for IMBA. Their focus has been on planting native species to reduce runoff and on preventing aliens from taking off in disturbed soil (such as new trails). However, they recognize more research is needed on this element of trail sustainability. In some cases, local chapters have explicitly dealt with the problem during trail construction, as with the Wakefield Park trails outside of Washington, DC. In that case, new trails were intentionally

STARTHISTLE INFESTATION - STEVE DEWEY, UTAH STATE UNIVERSITY, WWW.BUGWOOD.ORG

STARTHISTLE CLOSEUP

TANSY RAGWORT (STINKY WILLIE) NEAR OLD TRUCK - TOM HEUTTE, USDA FOREST SERVICE, WWW.BUGWOOD.ORG

routed through patches of invasive species to kill two birds with one stone, ensuring that rehabilitated areas were replanted with natives. A number of other local and regional chapters, including groups in Wisconsin and the Middle Tennessee IMBA/SORBA chapter, have worked with other recreational user groups to develop management practices for their local aliens.

So how can you help in the struggle against invasive species? First, find out who shouldn't be in your area—much of the focus here has been on plants growing in disturbed soils, but there are clearly equal impacts from exotic animals, fungi, and so on. We often claim that mountain biking brings us out to nature, and this is a good time to learn the natural history of your area. There are good resources on the web, many of them specific to particular regions. For example, in the northeast you can check out The Invasive Plant Atlas of New England (nbii-nin.ciesin.columbia.edu/ipane) and learn that "Stinking Willie" is an exotic species. Now, come on, who doesn't want to get rid of "Stinking Willie"? Another good resource, once you know what is non-native in your area, is to look at the online Invasipedia (wiki.bugwood.org/Invasipedia) for some techniques of removal or control.


JOHNSONGRASS CLOSEUP - TED BODNER, SOUTHERN WEED SCIENCE SOCIETY, WWW.BUGWOOD.ORG

Even better, though, is to contact local land managers at state or regional parks, The Nature Conservancy, or your local Department of Natural Resources or Fish and Game office. Certain species will be more vulnerable to management and removal at some times of year than others—cutting back growth too late in the year may not prevent the seeds from being spread. The use of herbicide is something that should be cautiously considered, as obviously these chemicals have the potential to kill native plants as well as exotics, and have plenty of other impacts as well. Some herbicides like glyphosate, the active chemical in Round-Up, degrade relatively quickly and don't stay resident in the ecosystem for very long, but it is still worth asking local experts about the best practice for spot treatment and removal to minimize impact.

One element to consider, since the idea here is that we mountain bikers can be the infantry in this attack, is the most effective ways of being prepared on any given ride. For example, some management websites suggest that herbicide be applied only directly to the invasive plant with a sponge or eye-dropper to avoid collateral damage; these are approaches that also lend themselves to only needing to carry small amounts of chemical and equipment in a pack or frame bag. Similarly, carrying loppers and machetes is a pretty bad idea if you intend to actually go for an all-out ride; handheld clippers or even battery-powered hedge trimmers can fit neatly in a pack with the blade assembly removed and in a separate case, with quick assembly for spot clean-up. As you remove the invaders, be sure to bring gloves and other protective gear, as some of them have thorns or chemical deterrents. Fire ants love the disturbed areas around trails in the southeast, and will protect their homes fiercely, so watch out! Do be sure to watch for burrs and seeds on your bike and clothing at the end of a ride, too.

However you tackle it, recognize that our trail systems are not just for recreation. They are a chance to monitor our natural resources, a chance to interact with other users, and a chance to understand how our planet is changing all the time.

There may also be biologists—ranging from agency biologists and ecologists to geneticists and agriculture experts—interested in what you find. Now—get to work before the kudzu (or whatever is invading your backyard trail) starts expanding this year. ☮