

Boot brushes installed at trail heads reveal a surprising source of exotic plant seeds: Us.

Giving Invasive Plants the Boot

Story By Joe McFarland

It's a traditional courtesy everywhere: People wipe their boots before stepping indoors. It keeps the indoors clean. But could that same courtesy work outdoors? Could nature be saved from exotic plant species popping up along trails if hikers were to extend the same courtesy toward nature by wiping their feet before hitting the trail?

Sure, it sounds unusual. But here's something you might not know about the hidden underworld of your dirty boots: Those bits of mud embedded in the soles of your hiking boots almost always contain tiny seeds.

"Probably every piece of dirt stuck to every dirty boot everywhere contains seeds," explained Misty McElyea, a plant biology research student at Southern Illinois University-Carbondale. In 2010,

Does cleaning your boots off before hitting the trail stop invasive plants? The seeds found germinating at boot brush stations include such invasives as garlic mustard.



(Photo By Joe McFarland.)

McElyea collected dirt samples from boots that were brushed off at dozens of trail heads in southern Illinois, then germinated the seeds she found.

"Seeds come in all shapes and sizes, including incredibly tiny seeds that most people don't realize are stuck to their shoes," she pointed out. And when fragments of that dirt fall off along some distant hiking trail, guess what? Those seeds can germinate and spread plant populations. If the seeds happen to be from an exotic, invasive species, the accidental introduction can be disastrous.

Habitat-watchers have long recognized the connection between human visitors and the appearance of exotic, invasive plants along hiking trails. Dozens of boot brushes installed at trail heads throughout the state are now providing direct evidence of the hidden

threat underfoot. Even dedicated conservationists, those good citizens who would never intentionally spread invasive plants, can be unsuspecting carriers of seeds when hiking from one place to the next.

When McElyea collected the dirt from beneath boot brushes in 11 different counties, she found plenty of evidence in every case indicating hikers brought along hitchhikers from home. Seeds found under boot brushes at woodland trails germinated to reveal crab grass and switch grass—common household and agricultural weeds not found in a healthy forest. To compare the results, McElyea collected soil samples farther along the trail, and found seeds not native to the forest had fallen off other boots.

Although it might seem obsessively peculiar to brush off one's boots before hitting the trail in your local state park or nature preserve, stepping up to this Green task can help keep our forests and sensitive habitats free from the wrong kind of green.



(Photo By Chris Evans.)



EXTRA EXTRA

To see a list of plant species germinated from seeds collected at boot-brush stations in 2010, visit www.dnr.illinois.gov/OI/Pages/MoreInfoGivingInvasivePlantsTheBoot.aspx.