

SPREADING THE SEED?

HINDERIN' OR HELPIN'? ARE MOUNTAIN BIKERS IMPAIRING THE BATTLE AGAINST INVASIVE WEEDS AND GRASSES, OR SPEEDING PLANT EVOLUTION IN AN ERA OF CHANGING CLIMATE?

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ALL SEEDS TRAVEL, by wind, through an animal's dietary system or attached to fur, clothes or vehicles. This is by design: their shape, size, weight and surface texture have evolved to be dispersed. And thanks to a 2016 study by a research team of Germans and New Zealanders, it's now clearer how mountain bikes play a role in seed dispersal and their impact on spreading invasive species.

The scientists scattered 12,500, spray-painted seeds from five different species on a sloped trail near Freiburg, Germany, and invited 65 mountain bikers to ride by during 10 trials over multiple days. They recorded an average of 300 seed attachments in semi-wet conditions and detachment occurred at distances up to 500 metres.

"Mountain bikes have the capacity to act as a substantial vector for long-distance dispersal," the team concluded. They recommended riders clean their rigs between excursions in different habitats, before travelling and especially before entering sensitive natural areas. They also cautioned against thinking their results promote roping off susceptible land to keep mountain bikers out, because "the awareness gained from outdoor recreation is likely to have greater benefits to conservation than preventing mountain bike riding in natural areas."

Calgary, Alberta-based ecological consultant David Roberts says he expected the assessment to return more incriminating data, because bikers can travel long distances and often cross different habitats in a single ride. "The rate of dispersal is key... dosage is always the rubbing point," Roberts says. Results from the study indicate that while mountain bikes do distribute seeds, they don't do it particularly well or often, whereas hikers have been found to transport seeds up to five kilometres.

The assessment is far from a death knell for environmentally minded mountain bikers. That said, the thought of negatively impacting a beloved spot is scary. Concerned trail users can learn about invasive species through organizations such as the Central Kootenay Invasive Species Society and the US Department of Agriculture. They can also clean their bikes after every ride.

So long as invasive species aren't part of your local ecological picture, there's even a silver lining, Roberts points out. As dispersers, bikes may lend a helping hand to plants struggling to move uphill or north to cooler habitats, where they could better survive the warming climate. "Mountain bikes will probably not transport that many seeds," says Gesine Pufal, one of the lead scientists on the project. "But sometimes one seed is all that it takes."

