

Dogs outdo humans at detecting rare noxious weed

June 23 2010

(PhysOrg.com) -- A field test in Montana pitted dog against human in an effort to identify and eradicate spotted knapweed. This weed threatens the survival of native species and can bring about both economic and ecosystem damage. Finding plants in order to eradicate them before they can spread creates a challenge for human eyes, but not for dog noses.

An article in the June issue of the journal *Invasive Plant Science and Management* reports that trained detection dogs can locate spotted knapweed more accurately and at a greater distance than humans. While dogs and humans were comparable in finding large- and medium-sized plants, the dogs had an edge in locating small plants.

[Domestic dogs](#) have been successfully trained to search for specific odors. Their unique capabilities have been used in search-and-rescue efforts and to detect land mines and other buried items. They have the ability to thoroughly search over large areas and to accurately distinguish odors.

In this test, three dogs—one a mixed-breed Shepherd and two German Shepherds—and twelve humans surveyed a field for spotted knapweed during four sets of seasonal trials. The dogs, Nightmare, Tsavo, and Rio, had an overall success rate of 81% while the humans were successful 59% of the time. With small infestations, the dogs registered a 67% success rate versus 35% for the humans.

Humans did rate higher in precision than the dogs, with 100% for

humans and 94% for the dogs. And Tsavo gave more false alerts than either of the other two dogs or the humans. A ground squirrel and Tsavo's desire to give chase created an understandable distraction.

More information: Invasive Plant Science and Management, 2010; Vol. 3(2): 113-121

Provided by Montana State University

Citation: Dogs outdo humans at detecting rare noxious weed (2010, June 23) retrieved 12 May 2024 from <https://phys.org/news/2010-06-dogs-outdo-humans-rare-noxious.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.