16th Annual Invasive Species Workshop

Alaska's statewide spotted knapweed (*Centaurea stoebe*) response effort: An ongoing success story

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In 2008, the Invasive Species Advisory Committee wrote to the National Invasive Species Council "…the State of Alaska represents a unique opportunity to act quickly to eradicate existing small infestations of invasive species…" One such species is spotted knapweed. Millions of dollars are being spent in the Lower 48 to control this plant, yet its distribution in Alaska remains extremely limited.

The Alaska Exotic Plant Information Clearinghouse (AKEPIC) database currently has 72 entries for spotted knapweed, indicating roughly 25 distinct "sites." Data have been submitted consistently since 2003, for both initial finds and revisits. In 2008, Alaskans began collaborating on yearly efforts to revisit every documented spotted knapweed site in the state and kill any plants they find. Because nearly all sites had only a few plants when they were discovered, hand pulling has been sufficient to control this species at all but one location.

In general, it takes several years of monitoring for new plants before a species can be considered eradicated from a particular site. It's easier to find knapweed plants when they are flowering than when they aren't, but flowering time varies from year to year. Ideally, a person who lives in the area accepts responsibility for monitoring a site in case multiple visits are needed in a single growing season.

Because spotted knapweed will continue to arrive in Alaska from the Lower 48 and Canada, we'll never be able to declare it eradicated on a statewide basis. Alaskans will need to keep watching for it, reporting it to AKEPIC and assisting with control efforts. For now, we can consider our response to spotted knapweed an ongoing success story.

Alaska's statewide spotted knapweed response effort: An ongoing success story

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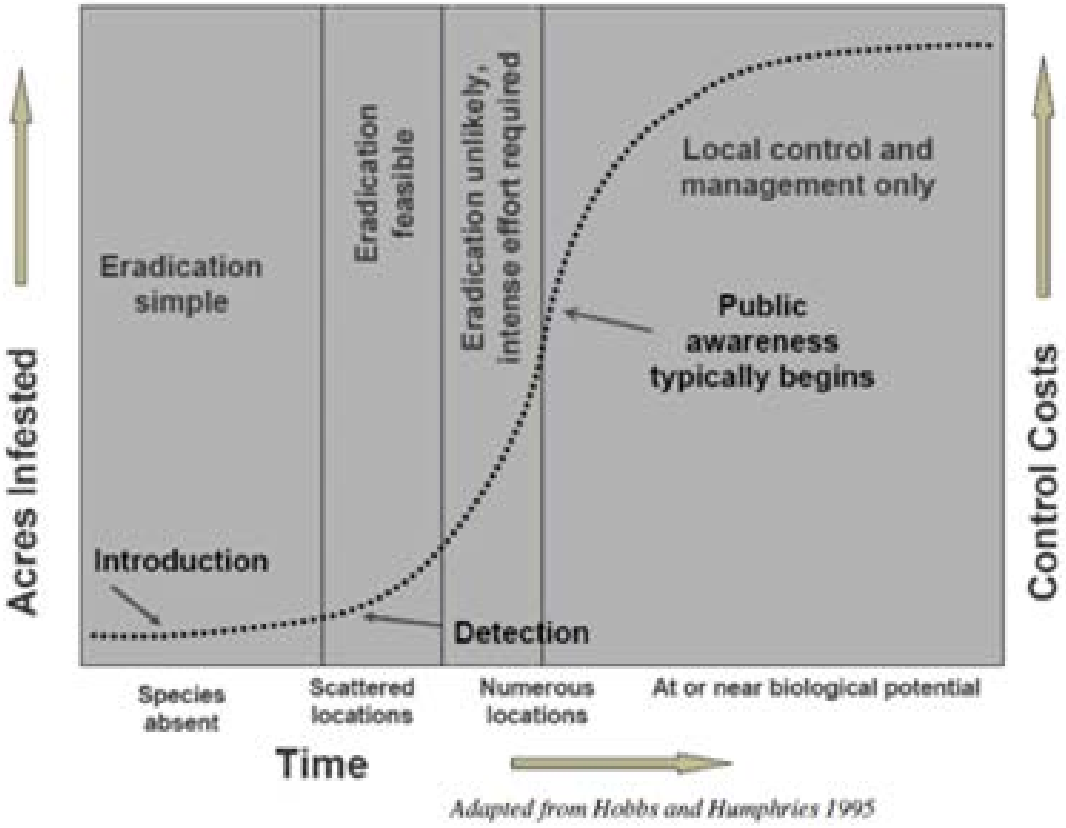
10/27/15



Hobbs, R.J. and S.E. Humphries. 1995. An integrated approach to the ecology and management of plant invasions. Conservation Biology. 9(4):761-770.

Spotted knapweed (*Centaurea stoebe*)

Native to eastern Europe

First introduced to North America in early 1890s, in contaminated crop seed

Aggressive invader of pasture, rangeland, fallow land

Has spread from the Intermountain West to the East

Spread in hay, stuck to undercarriages of vehicles

"…may remain for several years in a confined location and then spread rapidly to adjacent areas" (Lym and Zollinger 1992)

Biennial or short-lived perennial.

Alaska Natural Heritage Ranking of 86.

Reproduces by seed; single
plant can produce 20,000 seeds

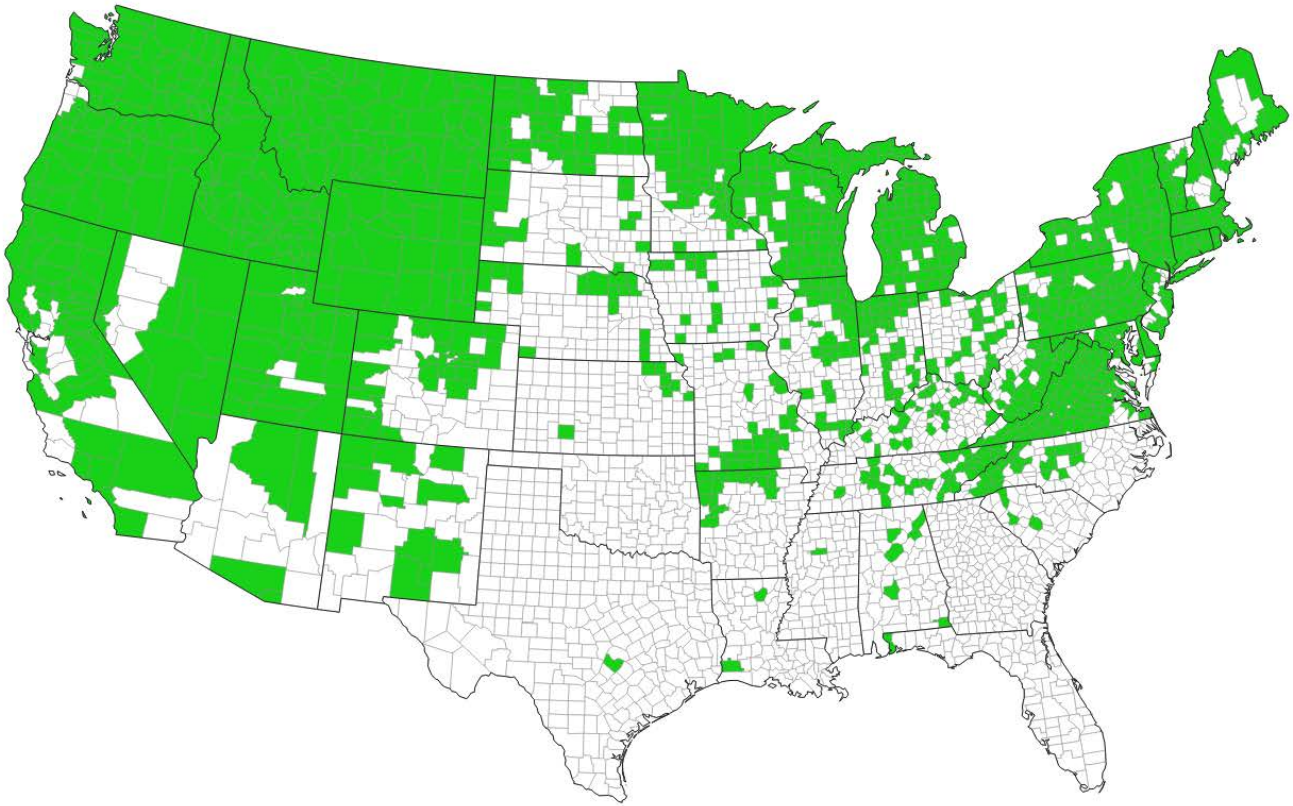
EDDMapS
Early Detection & Distribution Mapping System

USDA PLANTS Symbol:CESTM
Invasive Plant Atlas
Species Information

spotted knapweed
Centaurea stoebe ssp. micranthos **(Gugler) Hayek**

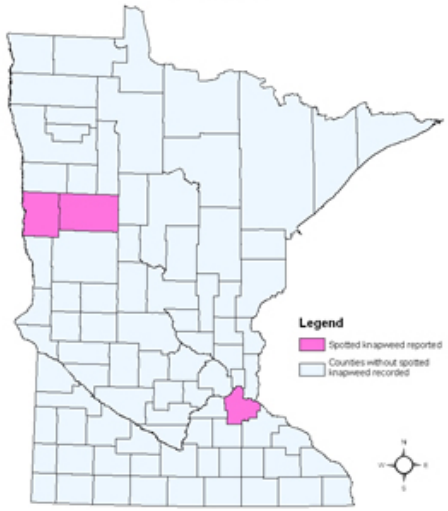
States | **Counties** | Points | GIS | List

XLS KML GPX Shapefile
Share Download Flag Fullscreen



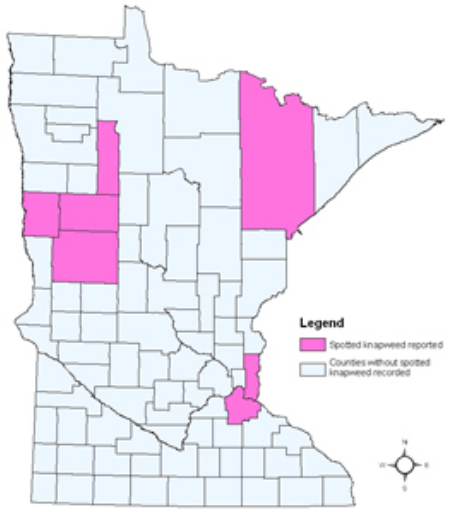
LEFT
TURN
LANE

1920-1940



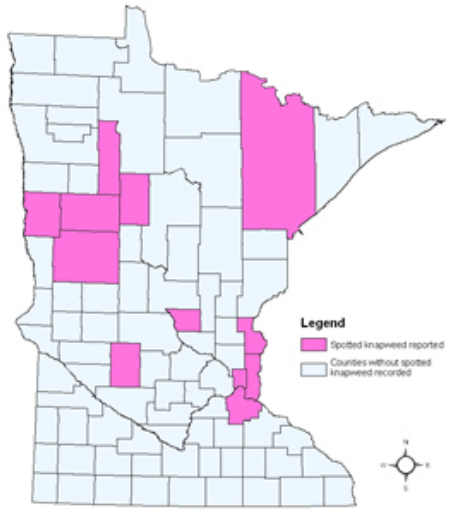
Counties with spotted knapweed recorded in University of Minnesota Herbarium records. Spotted knapweed was first recorded in Minnesota in 1918.

1940-1960



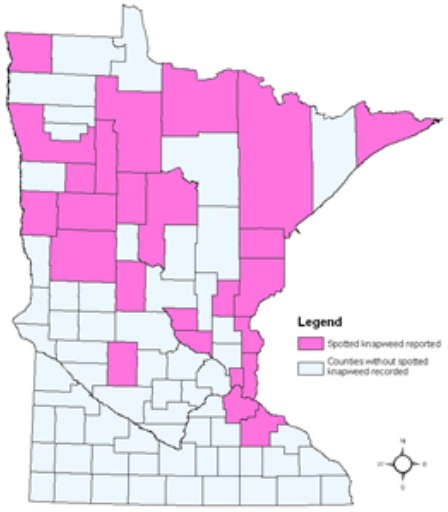
Counties with spotted knapweed recorded in University of Minnesota Herbarium records.

1960-1980



Counties with spotted knapweed recorded in University of Minnesota Herbarium records.

1980-2000



Counties with spotted knapweed recorded in University of Minnesota Herbarium records and Minnesota Department of Agriculture biological control of spotted knapweed release records.

2000- present

Counties with spotted knapweed recorded in University of Minnesota Herbarium records and Minnesota Department of Agriculture biological control of spotted knapweed release and survey records.

The spread of spotted knapweed in Minnesota

From: Cooperative Spotted Knapweed Management web page, Minnesota Dept. of Agriculture

Spotted knapweed in Alaska

There are 72 lines of data in AKEPIC

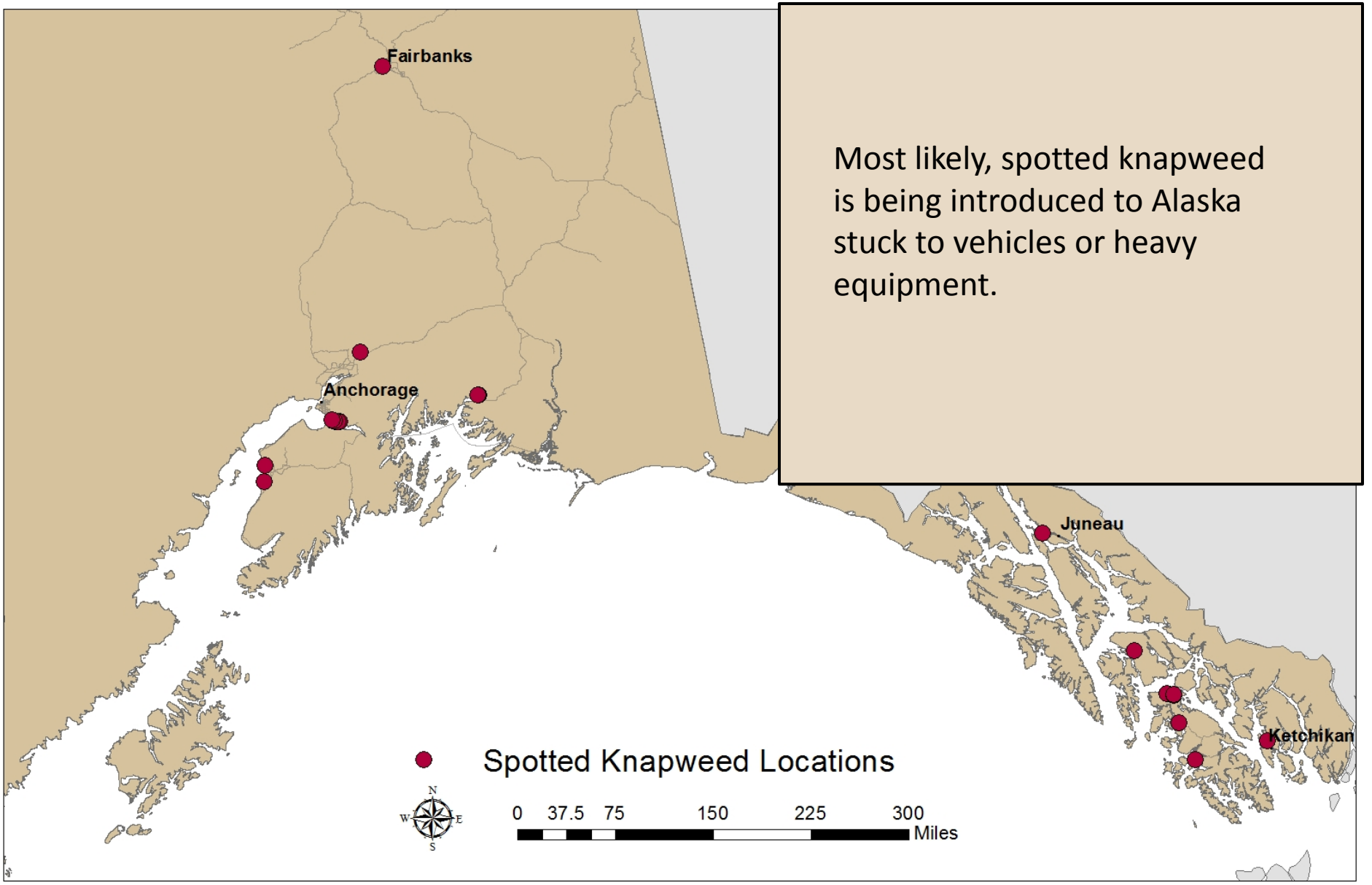
Roughly 25 distinct sites

Some lines of data represent initial detections, some return visits, some visits to pull plants

Detections made by

Alaska Division of Forestry, Alaska Division of Mining, Land and Water, Tongass National Forest, Forest Service Forest Health Protection, Cooperative Extension Service, BLM, Takshanuk Watershed Council, members of the public!

Pink flowers late in the summer

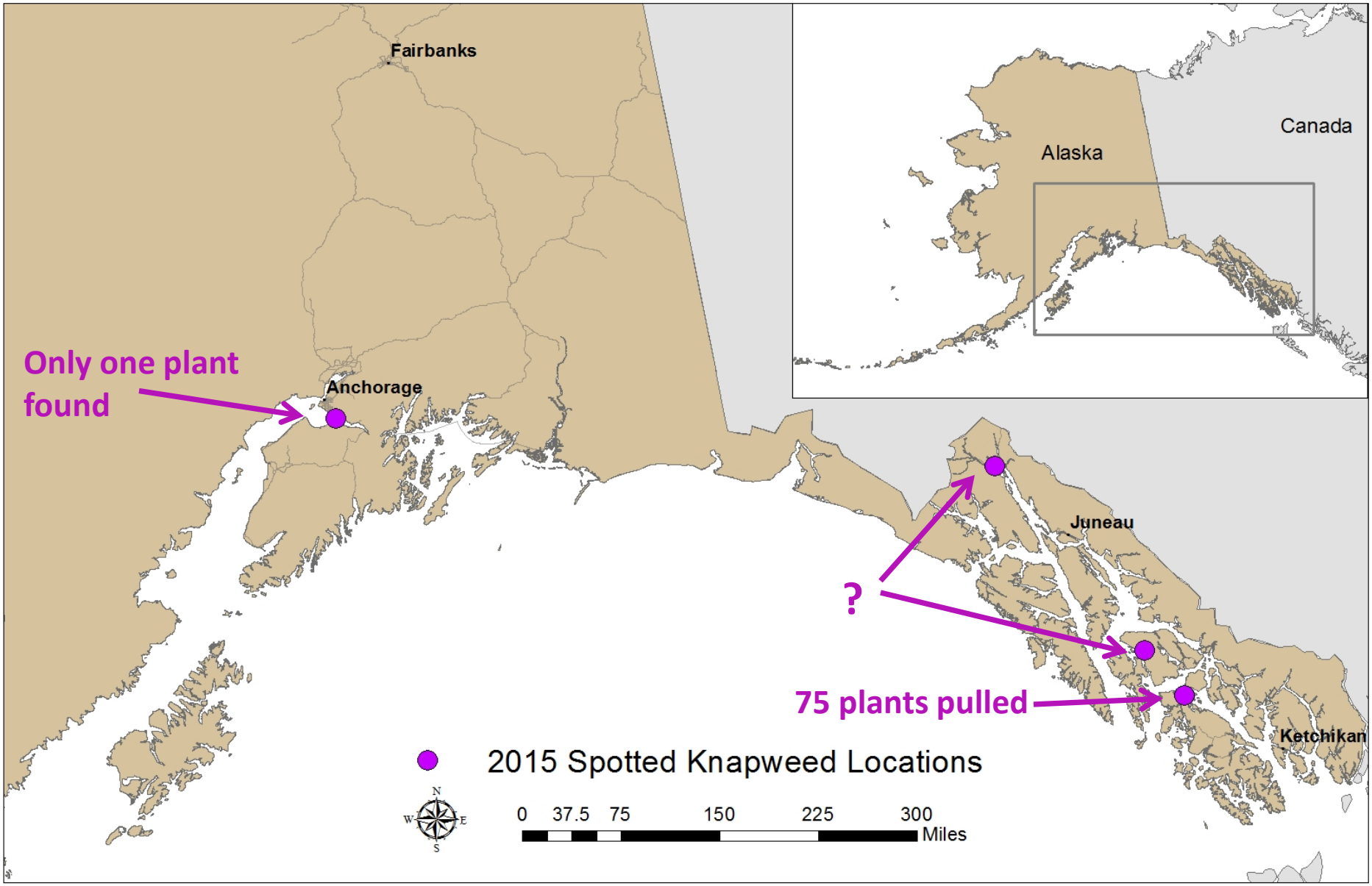


Most likely, spotted knapweed is being introduced to Alaska stuck to vehicles or heavy equipment.

2012
Jonesville Mine infestation found

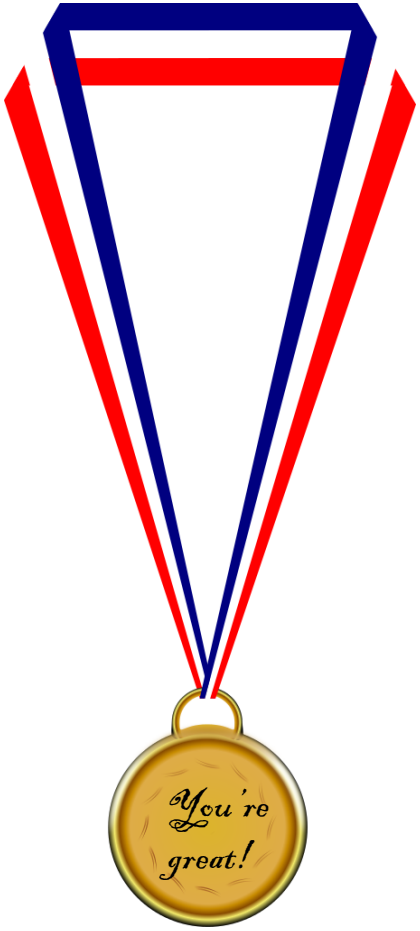
Jeff Smeenk, Palmer SWCD
Brianne Blackburn, Heather Stewart,
Alaska Division of Agriculture

CATERPILLAR

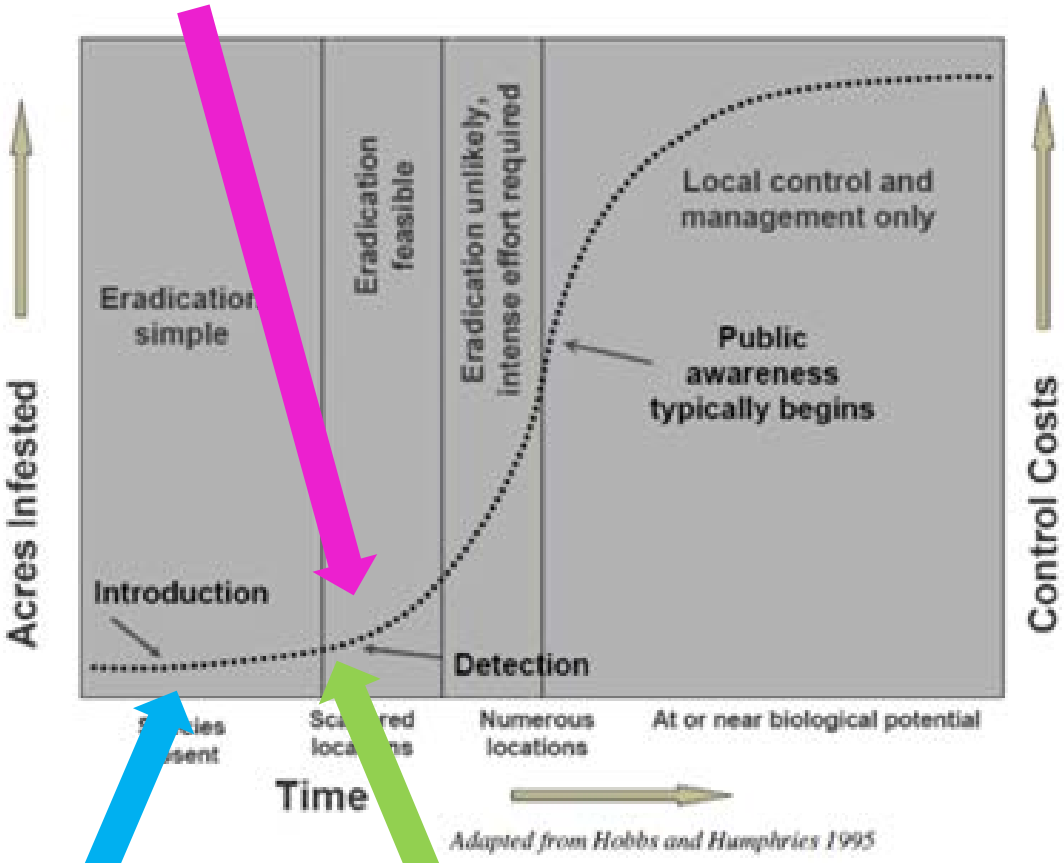

Fairbanks
Alaska
Canada
Only one plant found
Anchorage
Juneau
?
75 plants pulled
Ketchikan
2015 Spotted Knapweed Locations
N
W
E
S
0 37.5 75 150 225 300
Miles

Gino Graziano
Michael Rasy
Janice Chumley
Rob Develice
Betty Charnon
Sue Salmons
Michael Shephard
Andrew Weaver
Lori Zaumseil
Susan Wise-Eagle
Kristen Lease
Brad Krieckhaus
Tom Heutte
Roy Josephson
Greg Palmeri
Melinda Lamb
Sherry Bottoms
Peter Kitin
Jessie Moan
Nick Lisuzzo

Pam Randles
Tyler Stuart
Katie Arhangelsky
T. Martin
Tim Stallard
Sarah Ingram
Mary Clemens
Claudia Rector
Ruth Gronquist
Matt Keltzenberg
Jeff Heys
Cynthia Snyder
Brianne Blackburn
Heather Stewart
Jeff Smeenk
Brian Maupin
Lois Dworshak
Meredith Pochardt
Erick White



Spotted knapweed



Giant Hogweed

Garlic mustard

Thank you!