

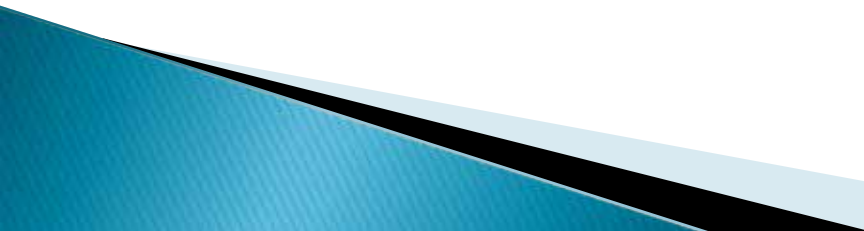
WEED WATCH

LEEANNE MILA
EL DORADO COUNTY DEPARTMENT
OF
AGRICULTURE

YELLOW STAR THISTLE

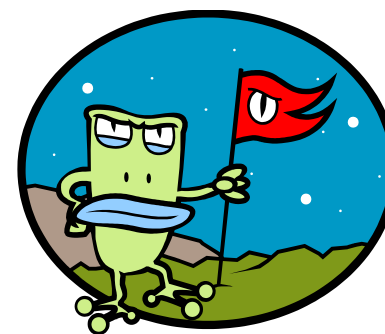


WHY DO WE CARE ABOUT INVASIVE WEEDS?

- } HIGHLY AGGRESSIVE – DISPLACE NATIVES AND DESIRABLE PLANTS
 - } DECREASE WILDLIFE HABITAT – FORMING MONOCULTURES
 - } REDUCE RECREATIONAL VALUES AND USES
 - } DECREASE LAND PRODUCTIVITY AND VALUE
 - } HARD TO CONTROL – TAKES DILIGENCE!
 - } CONTRIBUTE TO SOIL EROSION AND LAKE/STREAM SEDIMENTATION
 - } NOXIOUS WEEDS RATED IN CALIFORNIA
- 

WEED WATCH ALIEN INVADERS

- } Dalmatian toadflax – A rated
- } Knapweeds – A rated
- } Oblong spurge – B rated
- } Canada thistle – B rated
- } Tall White top – B rated
- } Hoary Cress – B rated
- } Purple loosestrife – B rated
- } Scotch thistle – A rated
- } Russian knapweed – A rated
- } Stinkwort – Not rated
- } Tocalote – C rated

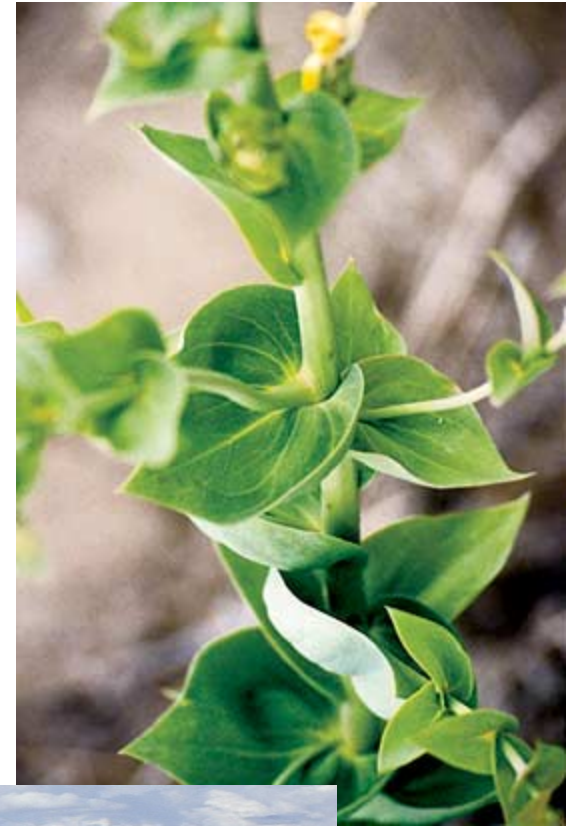


DALMATIAN TOADFLAX

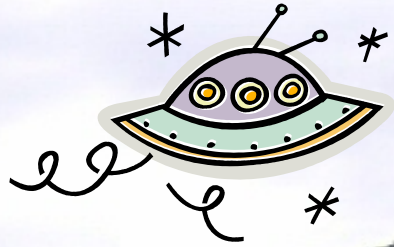
- } Native to the Mediterranean
- } Came to U.S. in 1874
as an ornamental
- } Yellow Toadflax is
Often sold as an
ornamental
"Butter and Eggs"



- } Aggressive, highly competitive
- } Produces 500,000 seeds a season
- } Deep tap root can go 1 meter in soil
- } Lateral roots "Bud"

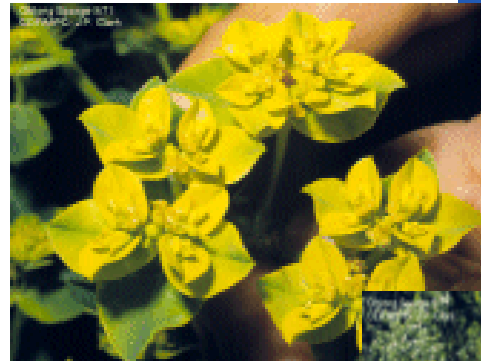


NO BOUNDARIES



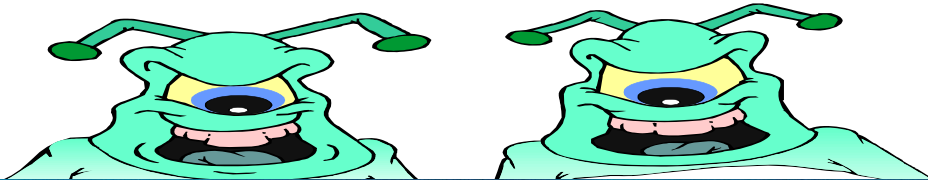
SPURGE

- } Oblong spurge – B rated
Euphorbia oblongata
- } Leafy Spurge – A rated
Euphorbia esula
Infests more than
5 million acres in
35 States



EXTREMELY AGGRESSIVE

} Extensive creeping roots



Latex Sap is toxic to many animals and humans

Oblong spurge in Camino





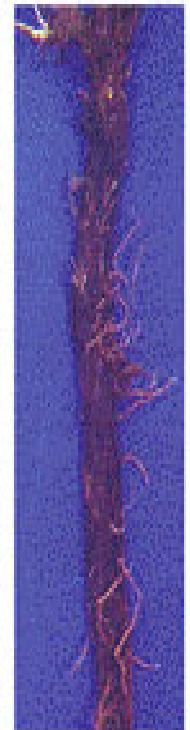
KNAPWEEDS

- } Spotted knapweed – A rated
Centaurea maculosa
- } Diffuse knapweed – A rated
Centaurea diffusa
- } Squarrose knapweed – A rated
Centaurea squarrosa



AGGRESSIVE REPRODUCTION

- } Spotted Knapweed
 - 400,000 seeds per plant
 - Lateral roots reproduce
- } Diffuse knapweed
 - Stems break off and plants tumble dispersing seeds
- } Squarrose knapweed
 - Seed heads



Spotted Knapweed
CDFA Seed Laboratory

- } Spotted and Diffuse are biennials.
- } Squarrose is a Perennial.









- } Spotted knapweed arrived on the west coast in 1893.
- } By 1920, had established itself in 24 counties, in 3 states
- } Now, Spotted knapweed has established itself in almost every county in the western U.S.
- } In Montana alone 5 million acres have been invaded

PURPLE LOOSESTRIFE

- } *Lythrum salicaria*
- } Introduced mid 1800
- } Used ornamentally
- } Established in 40 States.
- } Costs approximately \$45 million/year in control



AGGRESSIVE REPRODUCTION



} Reproduces from
Seeds
Shoots
Roots



Up to 300,000 seeds

per plant per year

NOTHING IS SAFE



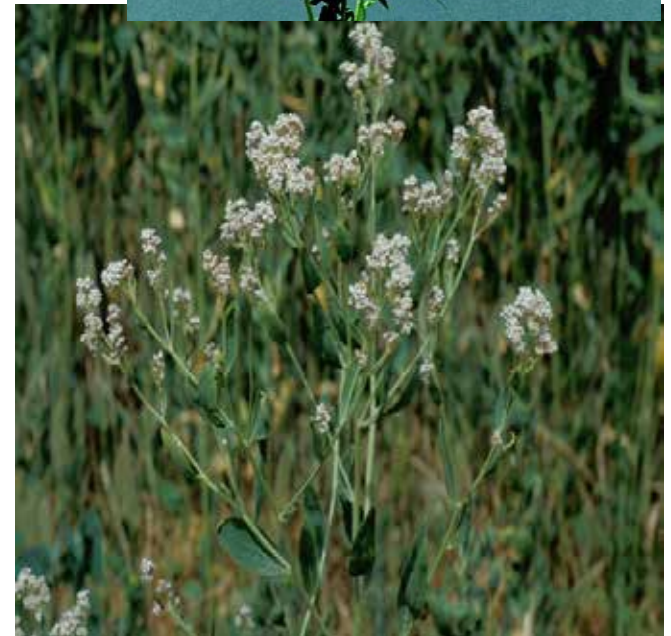


Purple Loosestrife 9/90
CDFA/JPC-R.M. Breckenridge



TALL WHITE TOP

- } *Lepidium latifolium*
- } Introduced 1936
- } Perennial pepperweed
peppercress, iron weed
- } Typically in seasonally
wet or moist sites
- } Brings up salts from deep
underground and
deposits them on the
surface.



AGGRESSIVE ROOT SYSTEM

- } Creates an extensive root system. 10 Foot depths
- } Spreads 10 feet/year
- } Habitat variations - sea level to 9000 feet.
- } Invaded all 48 of the contiguous states, except Arizona



TALL WHITE TOP







EROSION



FALLEN LEAF LAKE

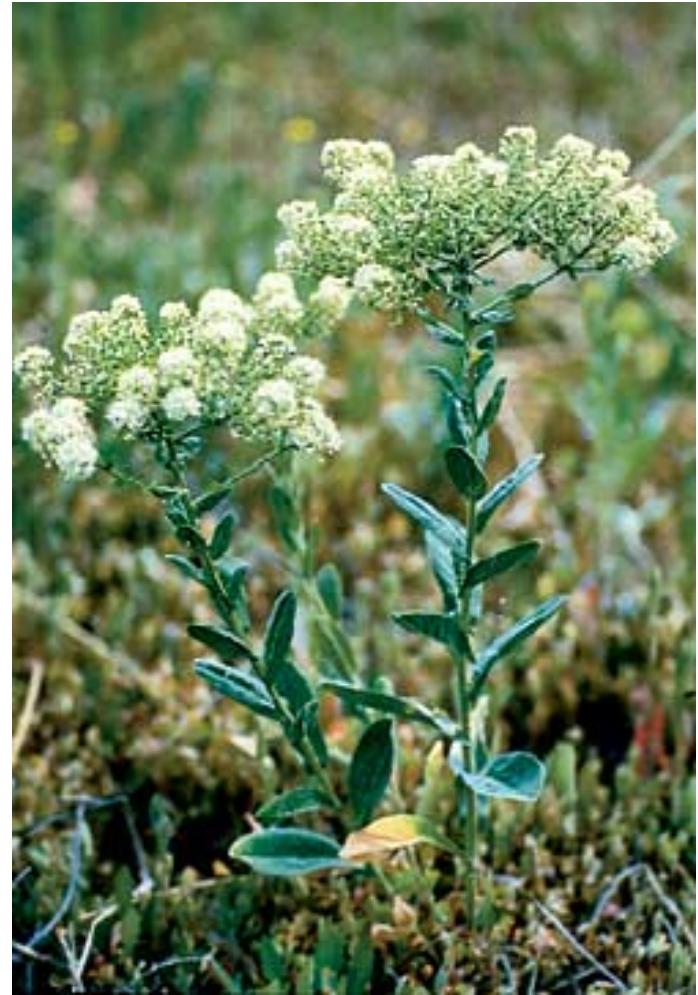


AFTER...HOPE!!



HOARY CRESS

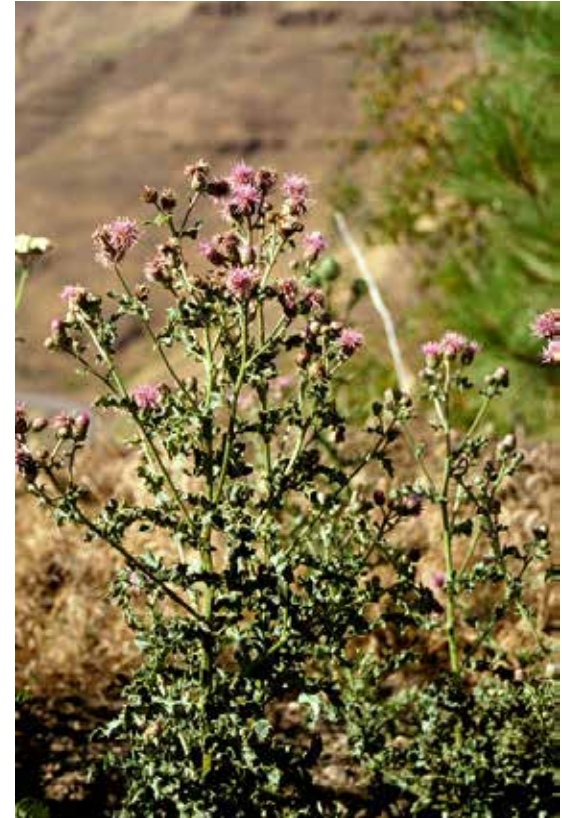
- } *Cardaria* genus
- } Yreka - 1876
- } Deep persistent roots
- } In 1 year a single plant spreads 12 feet
produce 455 shoots
~ 4800 seeds





CANADA THISTLE

- } *Cirsium arvense*
- } Native to Europe
- } Introduced in the
17th Century in Canada
- } Riparian habitats



ROOTS, ROOTS, ROOTS....

- } Extensive root systems
vertical and horizontal
roots extend 2-3 m







Canada thistle infestation along 1-90

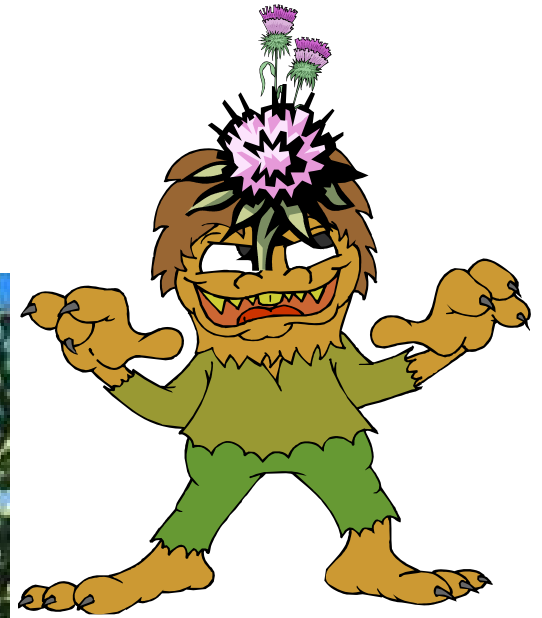
SCOTCH THISTLE

- } *Onopordum acanthium*
- } Biennials
- } Taproot
- } Seed Banks viable
7 – 10 years
- } 20,000 – 40,000 seeds
per plant



J. M. DiTomaso

MONSTERS ?



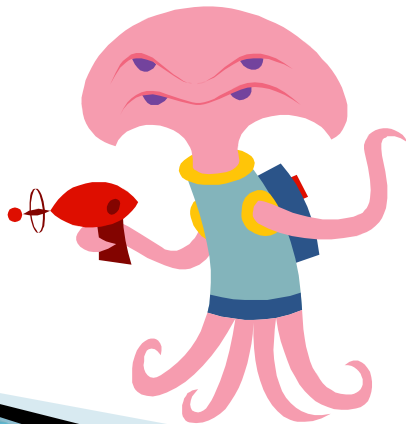
RUSSIAN KNAPWEED

- } *Acroptilon repens*
- } Extensive Creeping
Branching Roots
- } Accumulates zinc-
8x normal zinc levels
in soils



AGGRESSIVE INVADERS

- } Crawl space of recently built house
- } 3ft of soil excavated prior to building



ALPINE COUNTY



STINKWORT

- Annual
- Grows to about 3 feet
- Rapidly invading



- Aromatic
- Sticky hairy foliage
- Skin irritant



■ *Dittrichia graveolens*





- Can taint milk and meat of livestock
- Seedheads can get imbedded in the intestinal wall of livestock



TOCOLATE

- } *Centaurea melitensis*
- } 1 to 60 seeds per head.
- } 1 to 100 heads per plant
- } Annual or biennial
- } Reproduces by seed

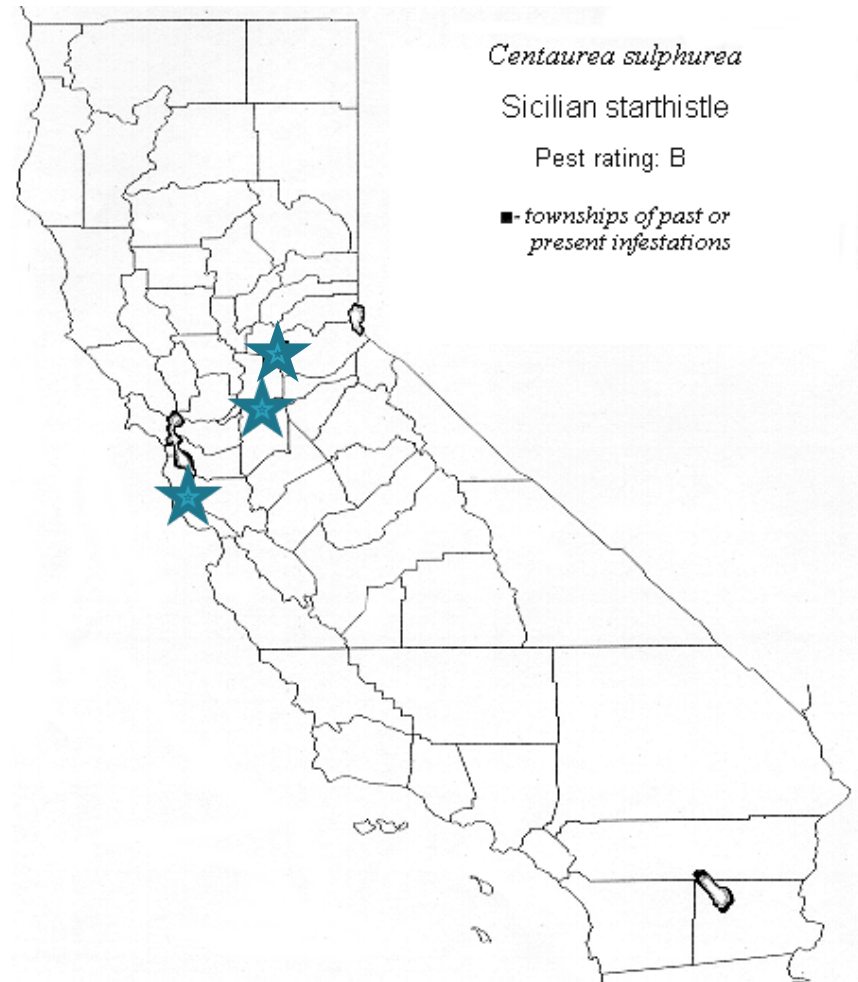


SICILLIAN STARTHISTLE

- } *Centaurea sulphurea*
- } 1923 Folsom
- } Can outcompete YST
- } Biology largely unknown



CENTAUREA SULPHUREA



COMPARISONS





DYER'S WOAD

- *Isatis tinctoria*
- Flowers are yellow with 4 petals
- Up to 10,000 seeds per plant.
- Can spread annually 100 acres
- Annual, biennial, or perennial
- Reproduces by seed
- Indigo dye



DYER'S WOAD





GORSE

- *Ulex europaeus*
- Reproduces by seed
- Seeds can last 30 years
- Fire Fuel



WEB SITES

} California Invasive Plant Council

<http://www.cal-ipc.org/>

} CDFA – Encycloweedia

http://www.cdfa.ca.gov/phpps/ipc/encycloweedia/encycloweedia_hp.htm