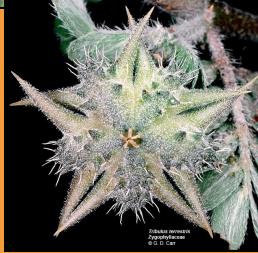
#### Puncture Vine

Tribulus terrestris



F.& K. Starr, USGS, forestryimages.org



G.D. Carr

#### Puncture Vine

- Native to north Africa and Europe (area surrounding the Mediterranean Sea )
- Also known as "goathead"
- Fruit consists of 5 capsules, each with up to 4 seeds and 2 sharp spines
- A single plant may produce up to 400 fruits
- Seeds can remain dormant in the soil for many years
- Plant can flower within two weeks of sprouting and will produce seeds within 4 weeks
- Spiny seeds are easily spread by animals, humans, and vehicles
- Plant is toxic to livestock

## Himalayan Blackberry

Rubus discolor



R. Old, XID Services, Inc., forestryimages.org



Joseph O'brien, USDA, Forest service, bugwood.org



R. Old, XID Services, Inc., forestryimages.org

# Himalayan Blackberry

- Native to Western Europe (no evidence of growth in Himalayan region)
- Reproduces by seeds. Also sprouts from root crown. Stems can form roots when they contact the ground
- Can produce up to 4,500 seeds per square foot
- Thicket can widen by 10 feet or more each year
- Seeds spread by birds, humans, and other animals
- Dense thickets may prevent animals from getting to water
- •Thickets pose a serious fire hazard when growing around barns or other buildings

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# Purple Loosestrife

Lythrum salicaria



## Purple Loosestrife

- Native to Eurasia. Brought here in the ballasts of ships in 1800's and later by gardeners and beekeepers
- Can produce up to 2.5 million seeds per plant
- Has a greater than 90% germination rate
- Produces new shoots each spring from buds on the roots
- Stem pieces produce new plants when they float downstream and become lodged against the bank
- Tiny seeds are spread by wind, water, or animals
- Replaces native plants that wetland species require for food and habitat
- Clogs waterways used for boating and other recreational activities

#### Yellow Starthistle

Centaurea solstitialis





J.K. Clark

#### @ 2006 OSU

#### Yellow Starthistle

- Native to Eurasia, brought to California in the mid-1800's in alfalfa seed from Chile
- •One plant can produce as many as 100,000 seeds that can survive in the soil for up to 10 years
- Produces 2 types of seeds: one carried by wind and one that drops to the ground
- Humans are the main cause of spread; birds and animals also contribute
- Causes "chewing disease" in horses that can be fatal
- Threatens Cook's desert parsley (Lomatium cookii), a rare plant, found in the Agate Desert, also threatens other native plant, wildlife, and livestock habitat

#### Scotch Broom

Cytisus scoparius



©2005 Penn Martin II

#### Scotch Broom

- Native to the British Isles and parts of Europe, it was introduced as an ornamental
- A mature plant can produce up to 3,500 seed pods per year, with each pod containing up to 9 seeds
- When pods burst open, they shoot seeds up to 12 feet in the air
- Seeds can also be carried by water, birds, humans, and other animals
- Thick stands pose a serious fire hazard
- Competes with tree seedlings and native plants in costal areas, forest clearings, and other disturbed areas
- Invasion threatens endangered ecosystems, such as the Oregon white oak woodlands

#### Canada Thistle

Cirsium arvense



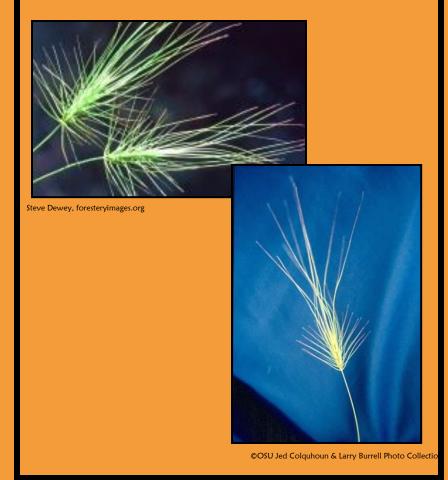
Steve Dewey, Utah State University, foresteryimages.org

#### Canada Thistle

- Introduced to the U.S. from Europe in the early 1600's
- Seeds dispersed by wind and can remain viable in soil for up to 20 years
- Seeds can also be spread by water, humans, animals, and in contaminated seed crops
- Replaces native plants (including native thistles) in prairies, fields and disturbed areas
- New plants can regenerate from a root piece as small as 1/4 inch long
- Root is capable of sending out lateral roots as deep as 3 feet below ground from which shoots sprout out frequently

## Medusahead Rye

Taeniatherum caputmedusae

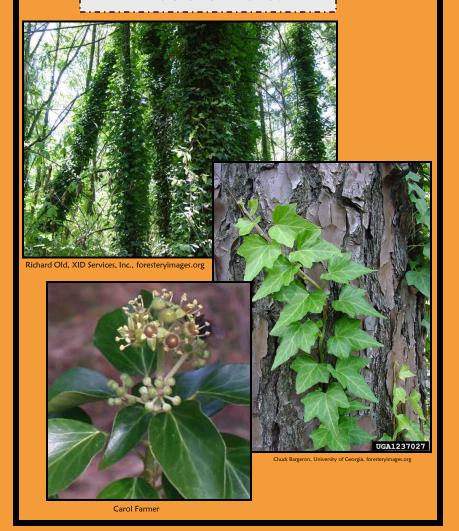


## Medusahead Rye

- Native to Spain, Portugal, South France, Morocco, and Algeria
- Introduced to the U.S. in the late 1800's
- Reproduces by seeds that are spread by wind, water, humans, and other animals
- Dead plants create a dense mat that prevents native plants from growing and increases fire danger
- Medusahead seeds are adapted to germinate in this dense mat
- Plant is high in the mineral silica which is unpalatable to livestock and wildlife
- Invades rare plant communities such as the oak savannah, oak woodland, grasslands, and chaparral

# English Ivy

Hedera helix



### English Ivy

- Native to central Eurasia
- Toxic to pets
- Introduced as a popular garden ornamental or ground cover
- Spread by birds who eat seeds when other berries are not available
- New plants form when stems contact soil and from cuttings
- Forms dense cover along ground and prevents sunlight from reaching other plants
- Infests woodlands, forest edges, fields, coastal areas, salt marsh edges, and other upland areas
- Causes death of infested trees by blocking sunlight, breaking limbs or trunk by adding weight, and by housing the plant disease bacterial leaf scorch

## Leafy Spurge

Euphorbia esula



R. Old, XID Services, Inc., foresteryimages.org



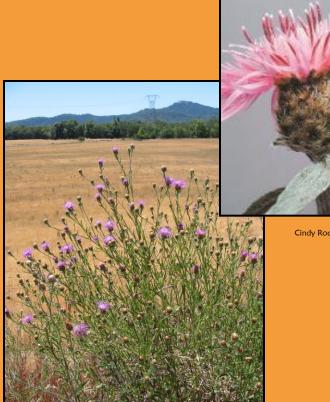
Elizabeth J. Czarapata

## Leafy Spurge

- Introduced from Europe
- Can produce up to 200 seeds per plant. Up to 80% will germinate
- When seed capsules ripen, they burst and shoot seeds up to 15 feet away from parent plant
- Can spread up to 4 feet per year through underground roots that produce shoots every few inches
- Out-competes native plants by consuming available nutrients and water and by secreting toxins that inhibit the growth of other plants nearby
- Forms dense stands in spring that shade out native plants
- Milky sap can cause skin irritations or blindness in humans and digestive problems or death in grazing livestock

## Meadow Knapweed

Centaurea pratensis



Cindy Roche, foresteryimages.org

#### Meadow Knapweed

- Native to Europe. Introduced as a potential forage species but is now considered a weed because it is disliked by most grazing animals
- Reproduces by seeds that are carried in water, in hay, or by vehicles along roadsides.
- Can resprout from root and crown fragments after a disturbance
- Invades native prairie and oak savannah, as well as industrial sites, tree farms, and grasslands.
- Out-competes grasses and other pasture species
- Grows along roadsides, sand or gravel bars, river banks, irrigated pastures, moist meadows, and forest openings.