

Musk Thistle Carduus nutans L.

Growth Habit: Biennial, or winter annual, erect up to 7' tall. Freely branching. Rosette formed first year, flowering stem elongates the second year.

Leaves: Dark green with light midrib, hairless on both sides, long sharp spines.

Steam: Hairless

Flower: Solitary, terminal, nodding heads, 1 1/2" x 3" diameter, deep rose to violet to purple.

Roots: Fleshy taproot, hollow near ground surface.

Seeds: Can be in excess of 20,000 per plant with 90% viable. 90% may germinate in first two years. Seeds may germinate after 10 years in soil.



Other: Reproduce by seed only.

## Leaves: Varies from **light to dark green, oblong or lance shaped,** deeply cut, spiny toothed margins (some may be smooth); slightly hairy below. Tremendous leaf variability.

Growth Habit: Perennial, erect, up to 4 ft. tall.

Canada Thistle Cirsium arvense

Stem: Smooth to slightly hairy, branched at top.

Flower: Small bristly cluster, 3/8 to 5/8 inch in diameter, light lavender to deep rose purple. Plants are male or female.

Roots: Extensive, fleshy, creeping root stocks.

Seeds: Smooth, light to dark brown, tipped by a cupped conical point, approx. 1/8" long.

Other: Reproduced by seed and creeping root-



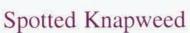
Dalmatian Toadflax

Linaria dalmatica (L.) Mill.

Growth Habit: Perennial, often over 3 ft. tall, erect. Leaves: Light green, alternate, broad, heart shaped, clasping the stem.

Flowers: Snapdragon type, bright yellow, tinged with orange to 11/2" long spur, born in upper leaf axils.

Roots: Vigorous, deep, creeping roots. Other: Spread by seed and creeping roots.



Centaurea maculosa Lam.

Growth Habit: Biennial or short lived perennial, up to 3 ft. tall. Rosette formed first year, flowering stock elongated second year.

Leaves: Long and divided below, short and narrow above. Covered with fine hair.

Stem: Erect with slender wiry branches. Covered with fine hair.

Flower: Seed heads mostly on branch tips, solitary, 1 inch diameter. Pink to purple, rarely white. Seed head bracts are black tipped, with 5 to 7 pairs of short feathery appendages.

Roots: Taproot not well developed.

Seeds: Brownish, 1/8" long, notched on one side of base, short tuft of bristles at tip end.

Other: Very aggressive, can infest large areas quickly, offers very little big game or livestock forage value.

## Russian Knapweed Centaurea repens L.

Growth Habit: Perennial herb, up to 3 ft. tall, erect, may be in dense clumps. Greyish color.

Leaves: Alternate, simple, of several types: Upper leaves - small narrow, unbroken edge; Steam leaves - intermediate in size, slight toothed margins: Basal leaves - deeply notched.

Stems: Numerous branched, each ending with a single flower.

Flower Head: Single, terminal, lavender, thistle like, scaly seed head.

Roots: Dark brown to black and heavily scaled.

Seeds: Flattened, ivory colored, retained in cupshaped seed heads.

Other: Leaves and stems covered with short stiff hairs giving plant an appearance of knap. Spreads by seeds and creeping rootstocks.



Diffuse Knapweed Centaurea diffusa Lam.

Growth Habit: Annual or biennial, bushy, up to 2 ft. tall. Rosette formed first year, flowering stalk elongates second year.

Greyish-green, alternate, basal leaves whorled, upper leaves much reduced. Covered with fine hair.

Stem: Hairy, erect, single main stem from a root-stock, branched near or above the base.

Flower: Solitary, usually white, sometimes pink, rose or lavender; seedhead bracts end as sharp, rigid spine.

Roots: Elongated taproot.

Seeds: Oblong, dark brown or grey with longitudi-

Other: May seriously reduce productive potential of infested rangelands.

## Colorado Extension



Leafy Spurge Euphorbia esula L.

Growth Habit: Perennial, erect, up to 3' tall, spreading by seed or creeping roots.

Leaves: Alternate, long narrow, 1/4" wide and 2" long, usually drooping.

Stems: Branched near top, hairless, entire plant contains milky sap. Which can irritate open cuts or sores on the human body.

Flowers: Inconspicuous, surrounded by large heart shaped leaves which turn yellow-green near maturity.

Roots: Brown, numerous pink buds, deep spreading, very persistent. Some roots extend as deep as 30 feet.

Other: Grows in nearly all soil types and habitats. Seed is thrown to 20' by exploding seed capsules. Extremely difficult to control because of the extensive root system. Is probably the most serious noxious weed threat in Colorado.



