

BIG-HEAD KNAPWEED

(Centaurea macrocephala)

Description: Big-head knapweed is a member of the Asteraceae or sunflower family. Big-head knapweed is a perennial herb that can range in height from 2 to 5 feet. Basal rosette leaves are stalked, 15 inches in length and 2 inches wide. Stems of the plant are erect, unbranched, swollen below the flower head, and covered with cobwebbed hairs. Leaves are rough, light-green in color, broadly lance shaped with toothed edges, and pointed tips. These leaves and leaf stalks tend to become smaller as they progress up the stem, with the top leaves being stalkless. Terminal, solitary flower heads are globe shaped, 1 to 3 inches in diameter, and yellow in color. Thin, papery, fringed margined bracts are located beneath the flower head. Low bracts contain spines. Seeds are medium brown, ridged, 1/4 inch in length, and contain a ring of light-colored bristles.

Plant Images:



Big-headed knapweed



Infestation



Flower head

Distribution and Habitat: Big-head knapweed is native to Armenia, Turkey, and the Caucasus Mountains. In recent decades, the plant has escaped cultivation in the United States. In Armenia, the plant is typically found in high elevation grassy fields and sub-alpine meadows. In the United States, big-head knapweed generally occurs in grassy meadows that consist of loam and silt loam soils. The plant prefers elevations that range from 2,500 to 2,680 feet with an average precipitation of 20 inches or more.

Life History/Ecology: Big-head knapweed is a taprooted perennial that reproduces through seed production and can be propagated by root division. A rosette is produced the first growing season and bolts the following spring. Big-head knapweed can overwinter as a seed, seedling, or mature plant. Flowering occurs from mid-July to August and seeds are dispersed as the plant matures. Each flower head is capable of producing up to 200 seeds. Seed viability in the soil is unknown at this time.

History of Introduction: Big-head knapweed is native to Armenia, Turkey, and the Caucasus Mountains. The plant has been sold in the United States in flower seed catalogs as “lemon fluff.” By the early 1980s, the plant had escaped cultivation and was found outside abandoned gardens in two counties in the state of Washington. Big-head knapweed has now spread into other counties within Washington and may continue to escape ornamental plantings throughout the United States. In North Dakota, big-head knapweed is still being sold through horticultural trade as a garden ornamental. Invasive populations are not being tracked throughout the state at this time.

Effects of Invasion: Big-head knapweed is an ornamental that has escaped cultivation. The plant continues to be sold as a garden ornamental, and can be found in seed packets and dried flower arrangements. Big-head knapweed is sold under the names Lemon Fluff and Globe Centaury. Escaped ornamental plantings can invade nearby fields, sod, and disturbed areas.

Control:

Management objectives for big-head knapweed control should involve prevention and early detection. Due to the ability of the plant to reproduce through seed production, infestations of big-head knapweed should be monitored for several consecutive growing seasons to prevent germination of new plants.

Mechanical - Small patches of big-head knapweed can be removed by digging or hand pulling. The entire root of the plant should be removed to ensure that a new stem does not reproduce from the woody crown. Mowing can reduce seed production and diminish root reserves if repeated. Mechanical control methods should be conducted prior to seed production.

Chemical - A few herbicides are recommended for bighead knapweed control. Clopyralid plus triclopyr, clopyralid alone, and picloram have all been successful in controlling the plant.

Contact your local county extension agent for recommended use rates, locations, and timing.

Biological - No biological control agents are available for big-head knapweed control.

References:

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Washington State Noxious Weed Control Board. Bighead knapweed (*Centaurea macropcephala*)
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Big-head knapweed and flower head photograph courtesy of Washington State Noxious Weed Control Board.

Infestation photograph courtesy of King County Noxious Weed Control Board, Washington.