

NEBRASKA INVASIVE PLANTS FIELD GUIDE



*Helping you
identify harmful
species in
Nebraska.*

*REPORT A SIGHTING!
neinvasives.com*



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**Federal Noxious Weed

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Orange ribbon:
the species is present
in Nebraska.

PRESENT

Blue ribbon: The
presence of the species
in Nebraska is unknown.

UNKNOWN

Throughout this guide, each species will be labeled with an orange or blue ribbon, which indicates the species presence in Nebraska.

WHAT ARE INVASIVE SPECIES?

Invasive species are plants, animals or pathogens that are non-native to an ecosystem. They cause harm to the economy, environment or human health. They negatively affect native species and ecosystems and interfere with outdoor recreation opportunities.

INVASIVE SPECIES REGULATIONS

This guide identifies federal and state-listed noxious weeds. Federal noxious weeds are regulated by the U.S. Department of Agriculture; State noxious weeds are regulated by the Nebraska Department of Agriculture, Animal and Plant Health Protection, Noxious Weed Program. Aquatic invasive species are listed and regulated by Nebraska Game and Parks Commission.



REPORT A SIGHTING

If you think you have found an invasive species in Nebraska whose location is not already noted in this guide, please report it at neinvasives.com. If possible, please take a photo and document the location details (using a GPS or cell phone).

PREVENTION REMAINS OUR BEST DEFENSE

You could be transporting invasive species. They can hitchhike a ride to new areas on your vehicle, boots, hunting or fishing equipment, pets, or your clothing. Clean gear, clothing and brush pets before leaving an area.

WHAT CAN YOU DO?



Follow a general set of procedures every time you leave any natural area. Self-Check. Protect the natural resources that you use from harmful invasive species.

HIKERS, BIRD WATCHERS AND TRAIL RIDERS

Inspect your boots, packs, pets, and trail equipment. Be sure you are weed-free before heading out on the trail. Inspect again after recreating.

HUNTERS

Avoid driving or walking through areas that are infested with invasive species, take a different route. Clean mud, seeds, and vegetation off your vehicle, pets, and even your boots before going to your next favorite spot.

ANGLERS

To prevent the spread of invasive aquatic plant species: Clean. Drain. Dry. Clean plants/animals from boats and equipment; Drain all compartments and allow everything to Dry for a minimum of 5 days.

FIELD MANAGERS

Ensure equipment is mud and weed-free before driving on site. Control invasive plant species on your property.



**STOP INVASIVE SPECIES
IN YOUR TRACKS.**

PlayCleanGo.org

ABSINTH WORMWOOD



*Photo: Mitch Coffin, Nebraska
Dept. of Agriculture*



Photo: K. George Beck & James Sebastian



*Photo: Kristi Paul, Sheridan County
Weed Control Association, Nebraska*



Photo: Mary Ellen Harte, Bugwood

ABSINTH WORMWOOD

SCIENTIFIC NAME: *Artemisia absinthium* L.

DESCRIPTION – Absinth wormwood is a herbaceous perennial forb. It has a taproot and may have 20 or more erect woody stems. It can reach 5 feet tall. Leaves are light to olive green in color and are large and dissected up to 3 inches long. Stems and leaves are covered with fine silky hairs, which give the plant a grayish color. The plant has inconspicuous flowers which are dull yellow and small and each produce a single seed. The plant spreads primarily from seeds and short roots. It is a prolific seed producer and seeds can remain viable for 4 years. Plants form rosettes the first year of growth and resume growth in the second year in April and May and flower in July and August.

HABITAT – Roadsides, pastures and farmsteads where infested hay has been fed, stacked, or stored. It can be found in dry and moist soils.

LOCATION IN NEBRASKA – It has been reported in 22 counties and small infestations have been found statewide, where infested hay or gravel has been hauled, stacked or stored. It is a priority species for control in all counties in Nebraska. It is considered either a local or state noxious weed in South Dakota, North Dakota and Colorado.

PATHWAY OF INTRODUCTION AND SPREAD

It is native to Europe, Northern Asia and Northern Africa. It was intentionally introduced into the U.S. as an herb in gardens for social and medicinal purposes. By the 1840s, the plant had spread west and north across North America.

IMPACTS – Prolific seed production, commonly spread to vast areas by water, wind and wildlife. It can reduce the amount of forage available for grazing. Livestock avoid absinth wormwood, but if forced to eat it, all parts of the plant are toxic to them and is toxic to horses. The plant's pollen can be a source for allergies and asthma in humans.



Photo: Leslie J. Mehrhoff, University of Connecticut



Photo: Warner Park Nature Center Archive



Photo: Leslie J. Mehrhoff, University of Connecticut

AMUR HONEYSUCKLE

COMMON NAME: Amur honeysuckle

SCIENTIFIC NAME: Lonicera maackii

DESCRIPTION – Shrub/tree grows to 18 ft., spread to 15 ft. White, paired flowers from the leaf axil, flowers July to September. Leaves hairy and come to a narrow point. Fruit small, round, red berry-like.

HABITAT – Pastures, roadsides, forest edges, wetland edges, home landscapes. Full to part sun environments.

LOCATION IN NEBRASKA – Found in eastern and northeastern Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Originally from Asia, it is commonly used in landscaping, but has escaped into natural areas. Also spreads by seeds and wildlife dispersal.

IMPACTS – Prolific seed production, commonly spread to vast areas by birds and other wildlife. Tends to green-up sooner in the spring, giving it an advantage to out-compete native vegetation.



Photo: Leslie J. Mehrhoff, University of Connecticut



Photo: Kelly Smith, Ohio State Univ.

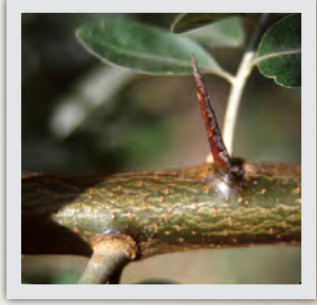


Photo: T. Davis Sydnor, Ohio State Univ.

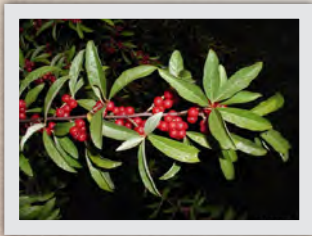


Photo: Leslie J. Mehrhoff



Photo: Chris Evans, Univ. of Illinois

AUTUMN OLIVE

COMMON NAME: *Autumn olive*

SCIENTIFIC NAME: *Elaeagnus umbellata*

DESCRIPTION – Deciduous shrub or small tree that can grow up to 20 feet in height and 30 feet in width. It has cream to pale yellow flowers which bloom in early spring. It has pink to red berries which are dotted with scales. The shrub is speckled in red berries in September and October. It has alternate and oval bright green leaves, with finely pointed tips with a slightly wavy margin. Leaves range from 2 to 4 inches in length. They leaf out in mid-March. It is distinguished from other similar shrubs by the silvery scales found on the lower leaf surface.

HABITAT – Autumn olive is moderately shade tolerant and occurs on a variety of soil types. It spreads rapidly in old fields and is also found in open woods, along forest edges, roadsides and other disturbed areas

LOCATION IN NEBRASKA – Found statewide.

PATHWAY OF INTRODUCTION AND SPREAD

Autumn olive is native to China, Japan and Korea and was introduced into the United States in 1830. In the 1950s it was widely promoted as a great way to provide wildlife habitat and erosion control in environmentally disturbed areas. Although it did make available habitat and food for wildlife, it became highly invasive.

IMPACTS – Prolific berry producer, each plant can produce 200,000 each year, which are spread to vast areas by birds and wildlife. It leafs out early and retains its leaves late in fall, shading out desirable native species and reducing species diversity. It has nitrogen-fixing root nodules allowing the plant to grow in even the most unfavorable soils.



Photo: Leslie J. Mehrhoff, University of Connecticut



Photo: Graves Lovell, Alabama Department of Conservation and Natural Resources

BRITTLE NAIAD

SCIENTIFIC NAME: *Najas minor*

DESCRIPTION – Submersed annual aquatic plant; stems of brittle naiad are highly branched and may grow to 4 ft. or more. Stems fragment very easily hence the name “brittle” naiad. Leaves are opposite or whorled, often recurved, with noticeable teeth on edges; a bushy appearance to the plant. There is a native naiad species in Nebraska which serves as an important fish spawning habitat.

HABITAT – Found in freshwater lakes, streams, rivers, ponds.

LOCATION IN NEBRASKA – A few waterbodies in the Blair and Elkhorn, Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Introduced through the dumping of aquarium contents. It can spread between waters via plant fragments that attach to boats, trailers, and other equipment, which can give rise to new plants.

IMPACTS – Thick infestations of brittle naiad can inhibit the growth of native aquatic vegetation and make fishing and recreational boating difficult. Brittle naiad plants are extremely brittle and have an increased risk of breaking apart, increasing the likelihood for it to spread via boats, waterfowl, and water movement.



Photo: Dan Tenaglia, MissouriPlants.com



Photo: Dan Tenaglia, Bugwood



Photo: Chuck Barger, Univ. of GA



Photo: James H. Miller, USDA Forest Service

CALLERY PEAR

SELECT CULTIVARS: Bradford pear, Chanticleer pear, Aristocrat pear, Cleveland select pear
SCIENTIFIC NAME: Pyrus calleryana

DESCRIPTION – Callery pear is a medium-sized ornamental deciduous tree in the rose family that can grow to be 50 feet in height and 2 feet in diameter. Bradford pear is a cultivar of *Pyrus calleryana*. Callery pear leaves are alternate, simple, 2-3 inches long, petiolate, and shiny with wavy, slightly toothed margins. Flowering occurs April to May, before the leaves emerge. The flowers are 1 inch wide, showy and white. Fruits are round, 1/2 inch in diameter and green to brown in color. Callery pear is fast-growing, short lived 30-50 years tree. Its branches are prone to ice and storm damage. It is widely cultivated as an ornamental landscape plant and about 20 cultivars are available.

HABITAT – Commonly planted as a street tree, disturbed habitats, open woodlands, woodland borders, fence rows, and fallow fields.

LOCATION IN NEBRASKA – Found throughout the state. Planted as an ornamental across Nebraska. Once thought to be seedless, it is being spread by birds to natural areas in eastern Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Callery pear is native to China and Vietnam and has been widely planted throughout the US since the early 1900s as an ornamental. New cultivars of *Pyrus calleryana* were bred to reduce the tree's tendency to split in snow or high winds.

IMPACTS – While some cultivars are self-sterile, cross-pollination across cultivars can produce trees with fertile fruit. Birds spread the seeds to disturbed habitats where new trees can become established and crowd out native and desired species.

Sources- http://www.illinoiswildflowers.info/trees/plants/callery_pear.htm & <https://www.invasiveplantatlas.org/subject.html?sub=10957>.



Photo: Steve Dewey, Utah State University



Photo: Dan Tenaglia, Missouriplants.com



Photo: Leslie J. Mehrhoff, University of Connecticut



Photo: L.L. Berry, Bugwood.com

STATE
NOXIOUS
WEED

CANADA THISTLE*

SCIENTIFIC NAME: *Cirsium arvense*

PRESENT

DESCRIPTION – State noxious weed. Can reach 4 feet in height, foliage is irregularly and sharply lobed, margins with short spines. Compound pink to purple flowers in clusters, smaller than other thistles, flowers from June to August.

HABITAT – Found in a wide variety of habitats; rangeland, cropland, roadsides, and edges of waterways.

LOCATION IN NEBRASKA – Widely dispersed across Nebraska especially in northeastern and panhandle counties.

PATHWAY OF INTRODUCTION AND SPREAD

Originally from Eurasia and North Africa. Spreads up to a half a mile by wind, water, and wildlife; introduction and spread as a seed contaminant. Has been introduced into areas through nursery stock.

IMPACTS – Multi-million dollar losses in crop production due to competition. Releases toxic substances into the soil which inhibits growth of some plants. Competes with native vegetation.

CUTLEAF & COMMON TEASEL



CUTLEAF TEASEL



CUTLEAF TEASEL IN WINTER

Photo: Brent Meyer, Nebraska Weed Control Association



COMMON TEASEL



COMMON TEASEL

All other Photos: Chris Evans, Illinois Wildlife Action Plan

CUTLEAF & COMMON TEASEL

SCIENTIFIC NAME: *Dipsacus laciniatus*, *Dipsacus fullonum*

DESCRIPTION – Noxious weeds in Lancaster County. Cutleaf teasel: perennial, grows as a basal rosette with flowering stalk that can reach 6 feet tall. Opposite leaves joined at the base and form cups that surround the prickly stem. Small, white flowers densely cover oval flower heads and bloom from July to September. Spiny bracts on ends of flower stems. Common teasel: biennial, basal rosette until flower stems develop up to 6 feet tall. Rosette leaves lanceolate, stem leaves are opposite, lanceolate and fused at the base. All leaves have short prickles on the midvein. Spiny flower heads covered with small, lavender to white flowers from April to September. Both plants can stay in the rosette stage for multiple years.

HABITAT – Open, sunny habitats preferring roadsides and other disturbed areas, although it can sometimes be found in high quality areas such as prairies, savannas, and sedge meadows.

LOCATION IN NEBRASKA – Both species are noxious weeds in Lancaster county. Found in several counties, primarily in southeastern Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Introduced from Europe and spreads by producing abundant seeds dispersed after the seed-head has dried.

IMPACTS – These teasels form large dense stands that choke out desirable plant species. This can reduce forage, wildlife habitat, and species diversity.



Photo: Utah State University Archive, Utah State University



Photo: Linda Wilson, University of Idaho

DALMATIAN TOADFLAX

SCIENTIFIC NAME: *Linaria dalmatica*

DESCRIPTION – Dalmatian toadflax looks like a large, yellow snapdragon. It is a short-lived perennial that grows up to 4 feet tall. Both leaves and stems are a waxy, bluish-green. Leaves are heart-shaped, 1 to 3 inches long and clasp the stem. Multiple flowers are arranged in spikes on the stems. There is a biological control available to control this plant.

HABITAT – Sunny areas with well-drained often coarse-textured soils. These areas can include roadsides, pastures, residential areas, cemeteries, gravel pits, and waste areas.

LOCATION IN NEBRASKA – Northwestern Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Originally introduced as an ornamental to the west coast of the U.S. in the late 1800s. It escaped cultivation and has overtaken grasslands in pastures, rangelands, and natural areas in the west. As a result, western infestations have reduced livestock production, land values, biodiversity, and wildlife habitat.

IMPACTS – Dalmatian toadflax can quickly colonize an area because it spreads by sprouts from the lateral roots and by seed. Over its lifetime, a single plant can produce up to 500,000 seeds that can persist in the seed bank for up to 10 years. It can reduce biodiversity and wildlife habitat.

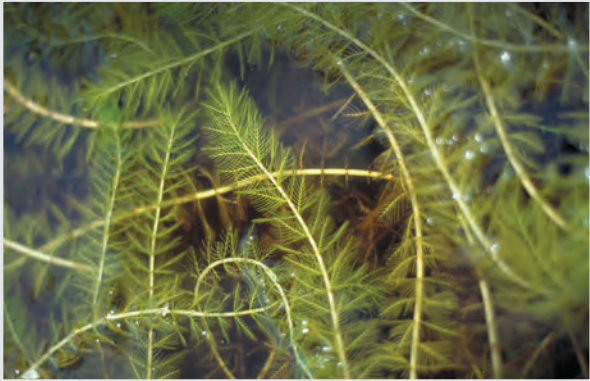


Photo: Alison Fox, University of Florida



Photo: Graves Lovell, Alabama Department of Conservation and Natural Resources

EURASIAN WATERMILFOIL

SCIENTIFIC NAME: *Myriophyllum spicatum fullonum*

DESCRIPTION – Submerged, perennial, aquatic plant with green feather-like leaves and brownish-red to light green stem. Flowers between late July and August with pink petals. Native milfoil also present in Nebraska and has fewer than 12 leaf segments on each side (Eurasian milfoil leaves have 14+ leaf segments). Native milfoil has toothed leaves and the plant feels rough. Native milfoil leaves stay stiff when removed from the water, while Eurasian watermilfoil leaves will collapse.

HABITAT – Freshwater lakes, ponds, and slow moving areas of rivers and streams. Can tolerate brackish waters.

LOCATION IN NEBRASKA – Found in waterbodies across the state.

PATHWAY OF INTRODUCTION AND SPREAD

Introduced through the dumping of aquarium contents. Motorboat traffic contributes to natural fragmentation and the distribution of fragments throughout lakes. Can also spread attached to boats, trailers and other aquatic equipment. Clean, drain and dry watercrafts and equipment before launching into another waterbody to prevent its spread.

IMPACTS – Competes aggressively to displace and reduce the diversity of native aquatic plants. Spring growth begins earlier than other plants and quickly grows to the surface, forming dense canopies that over top and shade the surrounding plants. Dense beds restrict swimming, fishing, boating and clog water intake pipes of municipal water systems and irrigation systems.



Photo: John Ruter, University of Georgia



*Photo: James H. Miller,
USDA Forest Service*



*Photo: James H. Miller,
USDA Forest Service*



Photo: John Ruter, University of Georgia

EUONYMUS FORTUNEI

COMMON NAMES: *Wintercreeper & Purple leaf wintercreeper*
SCIENTIFIC NAMES: *Euonymus fortunei & E. fortunei 'Colorata'*

DESCRIPTION – *Euonymus fortunei* is an evergreen perennial vine. Leaves are opposite, glossy, dark green, oval, slightly toothed, with light-colored veins, 1-2.5 inches long. The vines can reach a height of 0.75 inches and spread 3 feet. Flowers are small and greenish white with five petals on long branched stalks and bloom in April. Fruits are small round pink-red capsules that split open to expose seeds with red-orange arils.

HABITAT – It can tolerate a broad range of environmental conditions ranging from full sun to deep shade, and acidic to basic and low nutrient soils, but it does not grow well in heavy wet soils.

LOCATION IN NEBRASKA – Has been used as an ornamental plant throughout the state.

PATHWAY OF INTRODUCTION AND SPREAD

Introduced as an ornamental ground cover. It is native to China, Japan, and Korea. Seeds are spread by birds and wildlife.

IMPACTS – This vine invades open forested areas. It grows across the ground, displacing herbaceous plants and seedlings and climbs trees high into the tree canopy by clinging to the bark.

SOURCES – <https://www.invasiveplantatlas.org/subject.html?sub=3024> & <http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=a420>.



*Photo: Jan Samanek, State
Phytosanitary Administration*



All Other Photos: Robert Videki, Doronicum Kft.

EUROPEAN BUCKTHORN

COMMON NAME: European buckthorn, Common buckthorn

SCIENTIFIC NAME: Rhamnus cathartica fullonum

DESCRIPTION – European buckthorn can reach a height of 25 feet and spread to 20 feet in width. It has small, 4-petaled, yellow to brown flowers in leaf axils and flowers from May to July. Leaves are oblong, margins are wavy with small teeth. Fruits are black, round, and persistent. Bark has obvious, white lenticels.

HABITAT – Found in woodlands, prairies, and fields; well-drained soils.

LOCATION IN NEBRASKA – Found statewide but most abundant in eastern Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Native to Europe. Has been spread by extensive landscape plantings and as fences, however has escaped into natural areas. It spreads by rhizomes and wildlife.

IMPACTS – It is an alternate host for oat rust. It forms thickets, sometimes monocultures, with thorns which can be hazardous and out competes native vegetation. It is overwintering site for soybean aphid eggs, an invasive insect.

GARLIC MUSTARD



Photo: Tom Heutte, USDA Forest Service



All Other Photos: Chris Evans, Illinois Wildlife Action Plan

GARLIC MUSTARD

SCIENTIFIC NAME: *Alliaria petiolata fullonum*

DESCRIPTION – Garlic mustard grows to 4 feet tall and has small, 4-petaled, clustered, white flowers which bloom from April to June. It has arrowhead shaped leaves with irregularly toothed margins, leaves and stems smell like garlic when crushed. Fruit is long pod, tan outside, with black seeds inside. It has a horizontal section or “s” shape at the top of the root just below the base of the stem (underground section of the plant). A biological control for this species is being developed.

HABITAT – Mostly shady roadsides, fields, and forestry areas.

LOCATION IN NEBRASKA – Found in every county in the eastern half of Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Originally from Europe, is used by wildlife for food and nectar for butterflies, spreads by seeds and the aid of wildlife and/or water.

IMPACTS – Competes with native vegetation with early growth, inhibits the growth of mycorrhizal fungi, and can be lethal to butterfly larvae.

'GARRISON' CREEPING FOXTAIL



All Photos: Matt Lavin, Montana State University, Copyright: BY-SA 2.0

'GARRISON' CREEPING FOXTAIL

COMMON NAME: *Creeping meadow foxtail*

SCIENTIFIC NAME: *Alopecurus arundinaceus* Poir.

DESCRIPTION – 'Garrison' creeping meadow foxtail is a cool season grass which is large, long-lived, rhizomatous, sod-forming, perennial grass (similar to canary reed grass). Its stems grow 3-6 feet tall in groups of one to several from nodes of a fairly vigorous rhizome (up to 120 cm crown diameter/year). Leaf blades are 0.18-0.22 inches wide. The inflorescence is a cylindrical, compact spike-like panicle 1.6 to 3.9 inches long, 0.4 inches in diameter. Spikelets are about 0.2 inches long with glumes silky, mostly along marginal and midrib veins and lemmas short-awned from the base. The seeds are black when mature. It flowers from May through August. Seed maturation begins at the top of the inflorescence and proceeds downward.

HABITAT – Pasture and hayland as well as wet areas.

LOCATION IN NEBRASKA – It has been found throughout the state.

PATHWAY OF INTRODUCTION AND SPREAD

It is native to Eurasia. It was introduced in the 1930's and used in grazing areas as well as for bank stabilization and for erosion control. It spreads by rhizomes and wind-borne and waterborne seeds.

IMPACTS –This species produces numerous aggressive underground rhizomes. These contribute to long lived stands and an ability to recover quickly from grazing and out compete native and desired species.

SOURCES –https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/mtpmcrb11688.pdf & https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmcpg5595.pdf.



Photo: Chuck Bargeron, University of Georgia



Photo: James H. Miller, USDA Forest Service



Photo: Chris Evans, University of Illinois



Photo: James H. Miller, USDA Forest Service

GIANT REED

SCIENTIFIC NAME: Arundo donax

DESCRIPTION – Tall, perennial grass that can grow to over 20 ft. in height. Its fleshy, creeping root stocks form compact masses from which tough, fibrous roots emerge that penetrate deeply into the soil. Leaves are elongate, 1-2 inches wide and a foot long. The flowers are borne in 2 feet long, dense, plume-like panicles during August and September.

HABITAT – Becomes established in moist places such as ditches, streams, and riverbanks, growing best in well drained soils where abundant moisture is available. It tolerates a wide variety of conditions, including high salinity, and can flourish in many soil types from heavy clays to loose sands.

LOCATION IN NEBRASKA – Found in Lancaster county in ornamental settings.

PATHWAY OF INTRODUCTION AND SPREAD

Native to India and was introduced into the U.S. as an ornamental in the 1800s. It is a regulated species by the Nebraska Game and Parks Commission. Reproduction of giant reed is primarily vegetative, through rhizomes which root and sprout readily. Can float miles downstream where root and stem fragments may take root and initiate new infestations. Can also be spread when attached to boats and other aquatic equipment.

IMPACTS – Chokes rivers and streams, crowds out native plants, interferes with flood control, increases fire potential, and reduces habitat for wildlife. Root mats form dams behind bridges, culverts, and other structures.



Photo: Mary Ellen (Mel) Harte



Photo: Richard Old, XID Services, Inc.



Photo: Idaho Weed Awareness Campaign

HOUNDSTONGUE

SCIENTIFIC NAME: Cynoglossum officinale

DESCRIPTION – Houndstongue is 3 feet tall with pinkish-purple 5-petaled clustered flowers, which bloom May to July. It has pointy pubescent leaves which are smaller at the top. Its fruit is a prickly nut, which is flat on top, and holds one small seed.

HABITAT – Roadsides, pastures, and meadows; prefers disturbed areas.

LOCATION IN NEBRASKA – Found in several counties throughout Nebraska. Especially prevalent in the panhandle and in northwestern Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Native to Europe, used as a medicinal herb. Spreads by seed with the aid of pets, wildlife and wind.

IMPACTS – Can cause skin irritation, gets caught in animal fur, reducing the value of the pelt. Can be poisonous to animals. Has a very long taproot to collect deep water. Competes with native vegetation.



Photo: Chris Evans, Illinois Wildlife Action Plan



Photo: Robert Vid, Doronicum Kft.



Photo: Wilfredo Robles, Mississippi State University

FEDERAL
NOXIOUS
WEED

HYDRILLA**

SCIENTIFIC NAME: *Hydrilla verticillata*

UNKNOWN

DESCRIPTION – Hydrilla is a federal noxious weed. It is a submerged, perennial, rooted aquatic plant with green leaves that have serrated edges that grow in a circular pattern. Its flowers are either whitish to reddish or light green with red streaks which bloom during the summer and fall. It resembles 2 native species: *Elodea canadensis* and *E. nuttallii*, which are important species for waterfowl food and fish spawning habitat.

HABITAT – Rivers, lakes, ponds, streams, and wet ditches in shallow waters, but also at depths greater than 23 feet found in freshwater but can tolerate mild salinity.

LOCATION IN NEBRASKA – Not known to exist in Nebraska. It has been identified in Iowa.

PATHWAY OF INTRODUCTION AND SPREAD

It is native to Asia and possibly Australia. It was Introduced into the U.S. as an aquatic ornamental plant and through aquarium dumping. It can spread between waters via plant material such as plant fragments or buds that are transported with boats, trailers and other aquatic equipment. Clean, drain and dry watercrafts and equipment before launching into another waterbody to prevent its spread.

IMPACTS – Forms tall and dense stands in the water column, blocking sunlight penetration potentially displacing other aquatic organisms and impeding water flow. Heavy growth commonly obstructs boating, swimming, fishing and other activities and blocks withdrawal of water used for power generation and irrigations.



Photo: Chris Evans, University of Illinois



*All Other Photos: Leslie J. Mehrhoff,
University of Connecticut*



Fruit



Flower

JAPANESE HOPS

SCIENTIFIC NAME: *Humulus japonicus*

DESCRIPTION – Japanese hops is a dioecious herbaceous annual vines that can grow up to 35 feet in a single growing season. Vines begin to grow in May and they climb adjacent vegetation and structures and sprawl across open ground to form dense mats several feet deep. Its leaves are simple, opposite, heart-shaped and palmately divided, usually into 5 lobes. Stems and leaves have hooked hairs. Male and female plants have flowers with five petals which bloom in late summer. Male flowers are arranged in airy cone-shaped clusters. Female flowers are arranged in short spikes. Japanese hops are not used in the production of beer.

HABITAT – Full or partially sunny areas in riparian areas, grasslands, prairies, forest areas, and roadsides.

LOCATION IN NEBRASKA – Found in forested and riparian areas in southeastern Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

It is native to eastern Asia and were introduced to North America as an ornamental in the 1880's. Japanese hops reproduce by seed that can be dispersed by wind, water, wildlife, vehicles and equipment.

IMPACTS – Japanese grows so rapidly that it can smother other plants. Form dense patches which displace native and desired species.

SOURCES – https://www.mda.state.mn.us/plants_pestmanagement/weedcontrol/noxiouslist/japanesehops & https://www.in.gov/dnr/files/Japanese_Hops.pdf.



GIANT KNOTWEED

Photo: Jan Samanek, State Phytosanitary Admin.



JAPANESE KNOTWEED

*Photo: Leslie J. Mehrhoff,
University of Connecticut*



JAPANESE KNOTWEED

Photo: Britt Slattery, US Fish and Wildlife Service

STATE
NOXIOUS
WEED

JAPANESE & GIANT KNOTWEED^{*}

PRESENT

COMMON NAME: Japanese knotweed; hybrids

*SCIENTIFIC NAME: Fallopia japonica,
Fallopia sachalinensis and hybrids*

DESCRIPTION – State noxious weed. Japanese and giant knotweeds can reach over 10 feet tall. They have stems that are stout, cane-like, hollow between the nodes, reddish-brown, and profusely branched. Leaves are spade or heart-shaped, about 6 inches long by 3 to 4 inches wide attached alternately to a zigzag branch.

HABITAT – They are often found in disturbed areas, neglected gardens, along roadsides, riverbanks and stream-banks and other moist areas in fields.

LOCATION IN NEBRASKA – Found in a few counties in southeast Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

These species are native to Japan and were introduced for use as an ornamental, for forage and for erosion control in the 1800's. Small segments of the plant are able to regenerate into new plants and are commonly transported by water and regenerate new plants on the banks of streams. These plant segments may be transported to new sites by foot traffic, equipment, mowing and improper disposal of vegetation. Also produces viable seed. Has escaped landscapes.

IMPACTS – Threatens open and riparian areas where it spreads rapidly and forms dense, near monoculture stands by reducing species diversity, altering habitat for wildlife, increasing the risk of flooding and river bank erosion.



Photo: Chuck Bargeron, University of Georgia



Photos: Leslie J. Mehrhoff, University of Connecticut



Photo: Chris Evans, University of Illinois

JAPANESE STILTGRASS

COMMON NAME: Japanese stiltgrass & Nepalese bowntop

SCIENTIFIC NAME: Microstegium vimineum

DESCRIPTION – Japanese stiltgrass is a sprawling summer annual grass which can grow to 3.5 feet in height. Their stems can root at the nodes. The leaves are pale green, alternate, lance shaped, 1-3 inches long, asymmetrical with a shiny, off-center midrib. Upper and lower leaf surface is slightly pubescent. A silvery line runs down the center of the blade. Stems usually droop. This plant flowers and fruits in September-October.

HABITAT – Full shade to full sun, invades forested areas.

LOCATION IN NEBRASKA – Found in forest areas in southeastern Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

It is native to Asia and was accidentally introduced into the US around 1920. It has previously been used as packing material for porcelain, possibly explaining its accidental introduction.

IMPACTS – It invades ditches, forest edges, fields, and trails. It is very shade tolerant and can completely displace native vegetation.

SOURCES – https://wiki.bugwood.org/Microstegium_vimineum
& <https://www.invasive.org/browse/subinfo.cfm?sub=3051>.



Photo: Mark Atwater, Weed Control Unlimited, Inc.



Photo: James H. Miller & Ted Bodner, Southern Weed Science Society



Photo: Forest & Kim Starr, Starr Environmental

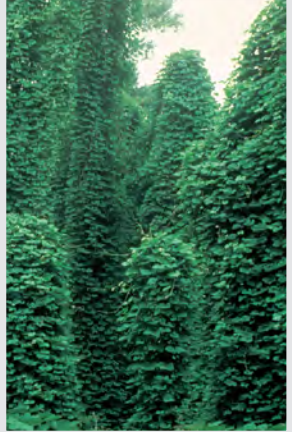


Photo: James H. Miller, USDA Forest Service

KUDZU

SCIENTIFIC NAME: *Pueraria montana*

DESCRIPTION – Vine that can reach 100 feet in length with red-purple pea like flowers in spikes from the leaf axils that bloom from August to early September. It has compound leaves have 3 large oval leaflets. Fruit is in a flat, brown dehiscent pod containing many seeds.

HABITAT – It prefers mild winters and hot, humid summers. It occurs in forests, grasslands, abandoned fields and homesteads.

LOCATION IN NEBRASKA – A single kudzu population is known to exist in Nebraska and it is in Otoe county (southeastern Nebraska). It has been there for several years and does not appear to be winter hardy. The kudzu in Otoe county has spread by suckers and doesn't seem to produce seeds.

PATHWAY OF INTRODUCTION AND SPREAD –

Introduced from China for erosion control and shade. Spreads by stolons and seed production.

IMPACTS – Called “the vine that ate the South” because of its rampant growth over buildings, trees and objects. Has a deep root system that is difficult to destroy. Can cause fires when it covers power transformers. Competes with native vegetation.

Photo: Steve Dewey, Utah State University



Photo: Rob Routledge, Sault College



Photo: Norman E. Rees, USDA Agricultural Research Service

STATE
NOXIOUS
WEED

LEAFY SPURGE*

SCIENTIFIC NAME: *Euphorbia esula*

PRESENT

DESCRIPTION – State noxious weed. It usually is 1-2 feet tall, with green to yellow bracts surround non-showy umbel flowers which bloom May to September. Stems contain a white, milky substance. Leaves are oblong with one noteworthy vein, 3 lobed capsule fruits.

HABITAT – Cropland, woodlands, shelter belts, and rangeland; roadsides and disturbed sites.

LOCATION IN NEBRASKA – Widespread. Found in most counties in Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Originally from Eurasia, and was introduced into the U.S. in the early 1820s in contaminated seed. It spreads by seeds and adventitious shoots from crown and roots.

IMPACTS – Costs millions of dollars annually due to lost production. Considered toxic to cattle. Establishes quickly and easily and out-competes native vegetation.

Biological Control – There are four insect species used to control leafy spurge all of the species *Apthona*. Adults leafy spurge beetles feed on the leaves and lay their eggs at the base of spurge plants. The eggs hatch and larvae feed on the roots over the winter until they pupate and emerge as adults the following summer. Root damage is largely the cause of plant death.



Photos: Cindy Roche, Bugwood.com

MEADOW KNAPWEED

COMMON NAME: Black knapweed

SCIENTIFIC NAME: Centaurea moncktonii

Fertile hybrid of black (C. nigra) and brown (C. jacea) knapweed

DESCRIPTION – It grows from a woody crown and can reach up to 3.5 feet. Lower leaves are long-stalked, upper leaves have no stalk. Stems are many-branched and tipped by a solitary flower head up to 1 inch wide. The leaves are coarse and tough. Flower heads are pink to reddish purple, oval or globe-shaped. Key identifying feature is the fringed bracts on the flower head.

HABITAT – Favors moist roadsides, sand/gravel bars, river banks, pastures, moist meadows, and forest openings.

LOCATION IN NEBRASKA – Reported in only a few counties in east and central Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

May have been introduced from Europe for forage, but it is not palatable and has low nutritional value. Escaped cultivation and is proliferating rapidly in the Pacific Northwest. Seed is the predominant means of reproduction although can also be propagated by root crown fragments.

IMPACTS – Out-competes other plants in pastures, hayfields, meadows, riparian areas, forest margins, and right-of-ways. This can result in reduced forage, wildlife habitat, and species diversity. A similar weed species, spotted knapweed, is abundant and can hybridize with meadow knapweed, if the species co-exist.



Photo: Karie Decker, Nebraska Invasive Species Program



*Photo: Karie Decker,
Nebraska Invasive
Species Program*



*Photo: Nebraska
Department of Agriculture*

STATE
NOXIOUS
WEED

MUSK THISTLE*

SCIENTIFIC NAME: *Carduus nutans*

PRESENT

DESCRIPTION – It is a state noxious weed. It is also called nodding thistle. It reaches a height of 10 feet and has a rosette the first year. It has a nodding terminal with compound pink-purple flowers that bloom May to August. It has lobed, serrate leaves with serration shallower than plumeless thistle. It has spines at the end of each lobe, the tip spine is white. It produces yellow to brown achene fruits with one edge curved.

HABITAT – Will invade a wide range of habitats, primarily rangelands and open woodlands.

LOCATION IN NEBRASKA – Widespread. Found in most counties in Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Originally from Eurasia and North Africa it was introduced in the 1800s into the U.S. as an ornamental plant. Seeds are spread by wind, water, and wildlife.

IMPACTS – It is a prolific seed production. Forms dense colonies which reduces yield in forage crops. Competes with native vegetation.



Photo: Anthony D. White, The Ohio State University



Photo: David Cappaert, Bugwood.org

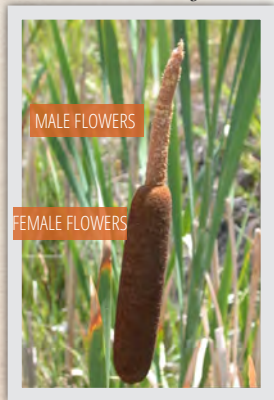


Photo: Mary Ellen (Mel) Harte, Bugwood.org

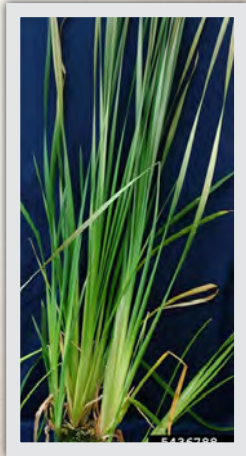


Photo: Bruce Ackley, The Ohio State University

NARROWLEAF CATTAIL

COMMON NAMES: *Narrow-leaved cattail & Hybrid cattail*

SCIENTIFIC NAME: *Typha angustifolia L.*

DESCRIPTION – Narrowleaf cattail is an emergent aquatic perennial plant. It is typically 3-12 feet tall. Stems are 3 to 6 feet tall. Leaves are stiff and flat; dark green in color, 3 feet long, 1/4 to 1/2 inches wide. Flowers form a dense cylindrical “spike” at the top of the stem. Male flowers are typically 3/4 to 4 inches above the female flowers on the spike. Narrowleaf cattail looks similar to the native common cattail *Typha latifolia*, but common cattail has wider leaves, 1/2 to 1 inch wide, and no gap exists on the spike between male and female flowers. A hybrid cattail *Typha x glauca* is a cross of the narrowleaf and common cattail and is found throughout Nebraska. The hybrid species can be difficult to identify, as it can exhibit characteristics of both cattail species.

HABITAT – Prefers wet meadows, shores, marshes and river banks. It can colonize roadsides and moist upland sites.

LOCATION IN NEBRASKA – Found statewide.

PATHWAY OF INTRODUCTION AND SPREAD

Native to Africa, Asia, and Eurasia. Dispersed via canals, railroads, and highways. Some workers suggested *T. angustifolia* was introduced from Europe into Atlantic Coastal North America and migrated westward.

IMPACTS – Prolific seed production, 1 plant can produce over 200,000 seeds per year. Seeds of this species can remain viable within the soil for 100 years. The species is rhizomatous, forming dense colonies competing with native vegetation and reduces habitat for wildlife.

SOURCES – <https://www.misin.msu.edu/facts/detail/?project=&id=31&cname=Narrowleaf%20cattail>, http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr_010289.pdf & <https://nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=2679>.



Caucasian Bluestem

Photos: Mike Haddock, Kansas State University



Yellow Bluestem

Photos: Karan Rawlins, Univ. of GA

OLD WORLD BLUESTEM

COMMON NAMES: *Caucasian bluestem*, *Yellow bluestem*

SCIENTIFIC NAME: *Bothriochloa bladhii*, *Bothriochloa ischaemum*

DESCRIPTION – Caucasian bluestem is so called Australian bluestem and Australian beardgrass. It grows up to 3 feet tall, it is green to purple, long, thin panicle flowers which bloom June to August. Leaves are flat or bent outward, smooth, with a noticeable midrib. When crushed, the leaves smell like turpentine. Yellow bluestem is a perennial, clump-forming, small, blue-gray grass, with flowering stems up to 4 feet tall. Leaf blades are yellow-green, flat or folded, usually smooth. Leaf sheaths are rounded. The nodes may be smooth or with short hairs. Blooms late June to July, which is earlier than native bluestems. The inflorescence is silvery, reddish purple.

HABITAT – Both species are found in roadsides and pastures. Caucasian bluestem prefers heavy, dry soils. Yellow bluestem can be found in high-quality prairie. Invades disturbed/waste areas, roadsides, and pastures. Both are more abundant on heavy textured soils.

LOCATION IN NEBRASKA – Caucasian bluestem is found in a few counties of eastern Nebraska. Yellow bluestem is found in a few counties of southeastern Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Caucasian bluestem is native to southern Europe and Asia. Yellow bluestem is from Eurasia. Both species were brought to the US in the early 1900s for forage and because of their ease of establishment. Both species are spread by roots and seeds.

IMPACTS – Both species are less palatable to cattle than native warm-season grasses, and once established, are almost impossible to eradicate. They increases risk of wildfire due to standing dry vegetation. They competes with native vegetation.



*Photo: Leslie J. Mehrhoff,
University of Connecticut*



*Photo: James H. Miller,
USDA Forest Service*



A BITTERSWEET VINE STRANGLING A TREE

*Photo: Leslie J. Mehrhoff,
University of Connecticut*

ORIENTAL BITTERSWEET

SCIENTIFIC NAME: *Celastrus orbiculatus*

DESCRIPTION – Woody perennial plant, grows as a climbing vine/trailing shrub. Leaves are alternate, glossy, nearly as wide as they are long (round), with finely toothed margins. Fruits, yellow, globular capsules. Often confused with the native, non-invasive American bittersweet. American bittersweet has fewer, larger clusters of fruits whereas Oriental bittersweet is a prolific fruiter with lots of fruit clusters emerging at many points along the stem. Oriental bittersweet has flowers and fruits at the nodes along the stem, not at the tip of the stem.

HABITAT – Infests forest edges, woodlands, fields, hedgerows, coastal areas and salt marsh edges, particularly those suffering some form of disturbance.

LOCATION IN NEBRASKA – Found in Richardson county. Occurs in adjacent states of Iowa and Missouri.

PATHWAY OF INTRODUCTION AND SPREAD

Native to China, Japan and Korea and was introduced into the U.S. as an ornamental plant in the 1800s. It is often associated with old home sites, from which it has escaped into natural areas. It is still widely planted as an ornamental vine and use in floral arrangements. Reproduces prolifically by seed, dispersed by many species of birds and also expands through root suckering.

IMPACTS – Vigorously growing vine that smothers vegetation. This plant is displacing native American bittersweet through competition and hybridization.

PALMER



WATERHEMP



PALMER AMARANTH HAVE LONG, LINEAR COTYLEDONS. WATERHEMP HAS ARROWHEAD SHAPED COTYLEDONS. PALMER AMARANTH USUALLY HAS A SMALL NOTCH (WITH A HAIR) AT THE LEAF TIP OF THE FIRST TRUE LEAVES WHERE AS WATERHEMP DOES NOT.

Photo: Alfred Stark & Lowell Sandell



LEFT: MALE INFLORESCENCE (SOFT)
RIGHT: FEMALE INFLORESCENCE (BRISTLY)

Photo: Jennifer Rees, University of Nebraska



FOLD THE PETIOLE OF THE LEAF AND IF IT IS LONGER THAN THE LEAF IT IS PALMER

Photo: Ross Recker, Univ. of Wisconsin-Madison



Photo: Ross Recker, Univ. of Wisconsin-Madison

PALMER AMARANTH

SCIENTIFIC NAME: Amaranthus palmeri

DESCRIPTION – Palmer amaranth is an edible flowering plant member of the pigweed family and is an erect summer annual dioecious species. It grows 2-3 inches per day and can grow to 8 feet tall. To identify palmer amaranth from waterhemp which it closely resembles: palmer usually has denser canopy, it has leaves with petioles longer than the leaf blade, female palmer flowers have large, sharp bracts that are painful to the touch when mature. Some palmer plants have a silverish watermark on the leaves.



Photo: Jennifer Rees, University of Nebraska

HABITAT – Disturbed areas and crop fields.

LOCATION IN NEBRASKA – Primarily in the southern half of the state but can be found throughout Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

It is native to the southwestern U.S. and has been introduced via seed mixes, equipment and vehicles containing palmer amaranth seeds.

IMPACTS – Palmer amaranth can be toxic to livestock. It can reduce corn yields by 91% and soybean yields by 79%. Palmer amaranth has shown herbicide resistance to several herbicides including glyphosate which is the most commonly used herbicide in glyphosate-resistant corn and soybean fields. A single female plant can produce 1 million seeds per year and seeds can remain viable for 5 years. It is important to clean equipment before working in a crop field or disturbed area to prevent the spread of palmer amaranth.

SOURCES – <https://cropwatch.unl.edu/2017/glyphosate-resistant-palmer-amaranth-confirmed-south-central-nebraska>, <https://www.ag.ndsu.edu/palmeramaranth> & <https://crops.extension.iastate.edu/files/page/files/crop3105.pdf>.



Photo: Leslie J. Mehrhoff, University of Connecticut



Photo: Joseph M. DiTomaso, University of California Davis



Photo: Steve Dewey, Utah State University

PERENNIAL PEPPERWEED

SCIENTIFIC NAME: *Lepidium latifolium*

DESCRIPTION – Also known as tall whitetop. It reaches a height of 5 feet and has white flowers with 4 petals in flat clusters at the tip of each stem. It blooms from June to September. Its leaves are grayish, small, and oblong.

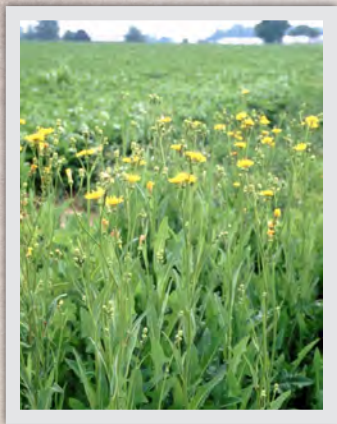
HABITAT – Infests riverbanks, floodplains, and marshes, also meadows, rangelands, and roadsides.

LOCATION IN NEBRASKA – It occurs in the North and South Platte River valleys and is spreading down the Platte River itself.

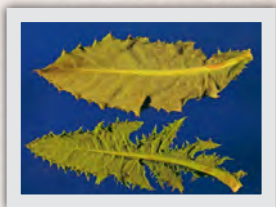
PATHWAY OF INTRODUCTION AND SPREAD

Originally from Eurasia, introduced via seed mixes. Was used as a cut flower in arrangements. Spread by agricultural equipment, wildlife, and humans. Reproduces prolifically by seed, dispersed by many species of birds. It also expands through root suckering.

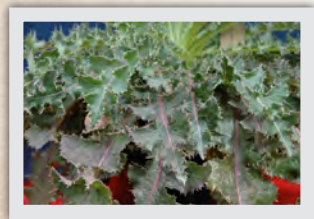
IMPACTS – Brings salt from deep in the soil to the surface. Grows into dense colonies which reduces habitat for wildlife. Competes with native vegetation.



*Photo: Theodore Webster, USDA
Agricultural Research Service*



*Photo: Steve Dewey, Utah State
University*



*Photo: Bruce Ackley, The Ohio
State University*

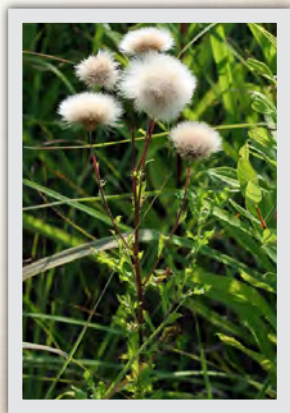


Photo: David Cappaert, Bugwood.org

PERENNIAL SOWTHISTLE

SCIENTIFIC NAME: *Sonchus arvensis*

DESCRIPTION – Perennial sowthistle is a deep-rooted erect perennial forb in the sunflower family *Asteraceae*. Stems branch near the top of the plant. Lower leaves grow up to 1 foot long and are deeply lobed. Upper leaves are small, often unlobed and slightly toothed. The smooth, erect flowering stems can grow up to 6 feet tall. Rosette leaves are crowded, like a dandelion, up to 10 inches long. Leaves are prickly toothed along the margins. Stems are hollow and exude milky latex as do leaves when broken. Flowers are yellow, dandelion-like up to 2 inches wide and bloom from June until frost. New plant shoots can emerge from rhizomes. Flowers, stalks, and bracts are covered with gland-tipped hairs. It spreading by seeds and creeping roots. Seeds are reddish brown and tipped with white plumes. The plant has extensive horizontal roots.

HABITAT – It prefers moist conditions and is found in rangelands, pastures, roadsides, cultivated fields, and disturbed areas.

LOCATION IN NEBRASKA – Found in central Nebraska but is spreading. It is a noxious weed in South Dakota.

PATHWAY OF INTRODUCTION AND SPREAD

It is native to Europe and Asian and was likely introduced into North America as a seed contaminant.

IMPACTS – It has rhizomes that can spread more than 6 feet in one growing season and in established stands, the roots can reach up to 10 feet deep. A single plant can produce 10,000 seeds per year. It can invade rangelands, pastures, roadsides, cultivated fields, and disturbed areas. Economic losses occur in cropland due to reduced crop yields, increased cultivation, and herbicide costs. These economic losses can reduce land value; as a result is a listed noxious weed in many states.

SOURCES –https://www.growsmartgrowsafe.org/Documents/IPM/Perennial%20Sowthistle_2016.pdf & https://wiki.bugwood.org/HPIPM:Perennial_sowthistle & <https://www.fs.fed.us/database/feis/plants/forb/sonarv/all.html>.



Photos: Leslie J. Mehrhoff, University of Connecticut

STATE
NOXIOUS
WEED

PHRAGMITES*

COMMON NAME: *Common reed*

SCIENTIFIC NAME: *Phragmites australis*

PRESENT

DESCRIPTION – State noxious weed. It often forms dense stands and grows up to 20 feet tall. Its bluish-green leaves contrast with the gray-green foliage of many native grasses. It has seed heads which appear July through September. Native (non-invasive) phragmites exists in Nebraska and have loosely attached leaf sheaths while the non-native species has tightly adhered leaf sheaths.

HABITAT – Marshes, floodplains, ditches, ponds, waterways.

LOCATION IN NEBRASKA – Found throughout Nebraska, particularly along the Platte River.

PATHWAY OF INTRODUCTION AND SPREAD

Native to Eurasian and was introduced into the U.S. from Europe for erosion control. Spreads by extensive rhizomes and seed dispersal. Can easily be inadvertently transported by boats and other recreational equipment such as duck blinds and decoys. Also spread by seed and rhizome fragmentation.

IMPACTS – Forms dense stands over very large areas, restricting water movement, trapping sediment and causing changes in water quality. Severe infestations will dominate waters in single monoculture. Adapts to many environments and competes with native vegetation.



Photos: Nebraska Department of Agriculture

STATE
NOXIOUS
WEED

PLUMELESS THISTLE*

SCIENTIFIC NAME: *Cardus acanthoides*

PRESENT

DESCRIPTION – State noxious weed. It reaches a height of 4 feet and has a rosette the first year. It has purple clustered or solitary compound flowers that bloom from June to August. The stem is spiny and winged to the flower, unlike musk thistle which has a spineless stem area. Leaves are elliptical and spiny. Almost square fruit with hairs forming a ring at the tip.

HABITAT – Pastures, rangeland, non-crop areas, and roadsides.

LOCATION IN NEBRASKA – Fairly widespread, particularly in northeast Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Native to Europe and Asia. It was introduced into the U.S. as an ornamental plant in the late 1800s. It is a food source for butterflies and songbirds, seeds are dispersed by wind and birds.

IMPACTS – Thousands of dollars lost in Nebraska agricultural production annually. Competes with native vegetation.

PURPLE LOOSESTRIFE*



Photo: John D. Byrd, Mississippi State Univ.



Photo: Leslie J. Mehrhoff, Univ. of Connecticut



BIOLOGICAL CONTROL RELEASE



Photos: Eric Coombs, Oregon Department of Agriculture

STATE
NOXIOUS
WEED

PURPLE LOOSESTRIFE*

SCIENTIFIC NAME: *Lythrum salicaria*, *L. virgatum*.

PRESENT

DESCRIPTION – State noxious weed with pink to purple flowers that bloom July-September. Leaves are heart-shaped, it has a square stems and it reaches a height of 8 feet tall.

HABITAT – Marshes, river and creek banks, ditches and wet meadows. Can withstand flooding up to 18 inches deep.

LOCATION IN NEBRASKA – Throughout Nebraska, especially in the east, along the Platte and Niobrara Rivers.

PATHWAY OF INTRODUCTION AND SPREAD

Introduced from Europe as an ornamental for landscaping. Can spread by re-sprouting from stem cuttings and from regeneration of pieces of root stock. Seeds are long-lived and can disperse by wind, water, and can be spread by adhering to wildlife, livestock, people, tires, boats, etc. It has been sold at nurseries and online as an ornamental.

IMPACTS – Forms dense stands over very large areas, restricting water movement, trapping sediment and causing changes in water quality. Severe infestations will dominate wetlands in a single monoculture. Adapts to many environments and competes with native vegetation.

Biological Control – *Galerucella californiensis* & *G. pusilla* are European beetles that specifically target this plant. The larvae feed on growing plant tips and adults target leaves causing plant death.



Photo: Steve Dewey, Utah State University



*Photo: Eric Coombs,
Oregon Department of
Agriculture*

RUSSIAN KNAPWEED

SCIENTIFIC NAME: Acroptilon repens,
(also known as: *Centaurea repens, Rhaponticum repens*)

DESCRIPTION – Russian knapweed grows to 3 feet tall with stems branched at base, striate and covered with downy-white hairs. Leaves of new shoots are alternate, broadly lanceolate, toothed and somewhat whitish underneath. Flowers are numerous, tubular, rose to purple or blue, on the ends of leafy branches. Flowers bloom from June to August.

HABITAT –Roadsides, riverbanks, pastures, disturbed areas and croplands.

LOCATION IN NEBRASKA – Found in a few counties of eastern and western Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Introduced from Asia. Reproducing by roots, rhizomes and seeds. Roots from a recently established plant expand rapidly and may cover up to 12 square yards in two growing seasons.

IMPACTS – Forms dense, single species stands over time due to competition and allelopathy (the plant releases chemicals which inhibit the growth of other plants). It is also toxic to horses.



Photos: Nebraska Department of Agriculture

SAINT JOHN'S WORT

SCIENTIFIC NAME: *Hypericum perforatum*

DESCRIPTION – Saint John's wort also called Klamath weed. It grows to 2-5 feet tall. It has five-petaled yellow flowers with black dots which blooms June to August. Leaves are oblong and have translucent dots.

HABITAT – Occurs in fields, forest edges, and pastures; sunny areas that are well-drained, prefers sandy soils.

LOCATION IN NEBRASKA – Fairly widespread throughout Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Native to Eurasia and was introduced into the U.S. as an ornamental. It has been used in landscapes but has escaped into natural areas. Used as a remedy for depression. Seeds spread by wildlife, wind, and water. It colonizes by rhizomes and stolons.

IMPACTS – A single plant can produce 15,000-30,000 seeds. It forms dense colonies and can be toxic to livestock. Competes with native vegetation.



*Photo: Leslie
J. Mehrhoff,
University of
Connecticut*



*Photo: Eric Coombs, Oregon
Department of Agriculture*

STATE
NOXIOUS
WEED

SALT CEDAR*

SCIENTIFIC NAME: *Tamarix ramosissima*

PRESENT

DESCRIPTION – State noxious weed. Small tree that grows up to 20 feet tall with white to pink flowers which bloom from April to September. Leaves are green scales, similar to a juniper.

HABITAT – Salt marches and flood plains, shore lines of lakes, ponds, rivers, and streams.

LOCATION IN NEBRASKA – Found in southern and western Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Native to Eurasia introduced into the U.S. for erosion control. Spreads by rhizomes and by wind and water dispersal.

IMPACTS – Pulls heavy amounts of water from the soil with long taproot. It competes with native vegetation. It pulls salt from the water and deposits it on soil inhibiting the growth of other plants. Standing vegetation can increase risk of fire. Dense roots and rhizomes spread out and slow river flow, which increases deposition.



Photo: Joseph M. DiTomaso, University of California - Davis



*Photo: Bonnie Million,
National Park Service*



*Photo: Clinton Shock, Oregon
State University*

SALTLOVER

SCIENTIFIC NAME: Halogeton glomeratus

DESCRIPTION – Succulent, taproot can penetrate as deep as 20 in., with a radial spread of 18 inches. Many main stems branch from the base of the plant and are low spreading. Leaves are small, fleshy, and spine tipped. Flowers inconspicuous in leaf axils and produce winged black and wingless brown seeds.

HABITAT – Typical in disturbed sites in salt-desert shrub land and semiarid shrub lands. Adapted to alkaline soils. Invades open or disturbed ground such as dry lake beds, overgrazed rangeland, abandoned farms, railroad rights-of-way, along road shoulders, airstrips, and gravel pits.

LOCATION IN NEBRASKA – Found in only a couple of counties, mostly in northwest Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Animals capable of spreading large amounts of seed great distances; rapidly spread along roads by road equipment, local spread is primarily by the wind—will break off at ground level when dry and tumble with the wind, scattering mature seeds.

IMPACTS – High in oxalates and is a serious health threat to grazing animals, especially sheep. May permanently change soil surfaces via salt pumping which impedes moisture infiltration and enhances evaporation.



Photo: Steve Dewey, Utah State University

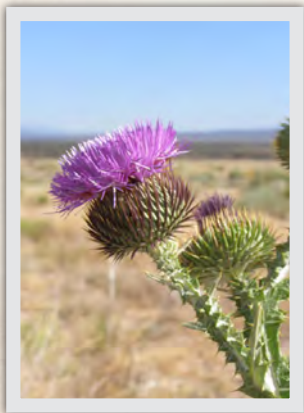


Photo: Bonnie Million, National Park Service

SCOTCH THISTLE

SCIENTIFIC NAME: Onopordum acanthium

DESCRIPTION – Scotch thistle is a branched, biennial or annual with a broadly winged stem that can grow up to 8 feet in height and 6 feet in width. Plants flower in mid-summer. The globe-shaped flower heads are in groups of 2 or 3 on branch tips. Flower heads are up to 2 inches in diameter, with long, stiff, needle-like bracts at the base. Flowers range from dark pink to lavender. Stems have vertical rows of prominent, spiny, ribbon-like leaf material or wings that extend to the base of the flower heads.

HABITAT – Wet meadows and pastures as well as dry pastures and rangelands. It may also be found alongside streams and rivers.

LOCATION IN NEBRASKA – Western Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

It is native to Europe and Asia and was introduced into the U.S. as an ornamental.

IMPACTS – Each plant can produce 8,400 to 40,000 seeds allowing it to out compete native species.



Photos: Nebraska Department of Agriculture



Photo: Chris Evans, River to River CWMA

STATE
NOXIOUS
WEED

SERICEA LESPEDEZA*

PRESENT

COMMON NAME: Serecia lespedeza, Chinese lespedeza, Chinese bush-clover

SCIENTIFIC NAME: Lespedeza cuneata

DESCRIPTION – State noxious weed. It reaches a height of 4 feet, and has white to yellow 5-petaled pea-like flowers. Flowers are on a spike with purple or pink veins, in groups of 2-4 and flowers from July to October. Its 3 leaflets that are round to flat. Fruit is a one-seeded pod with slight pubescence.

HABITAT – Grasslands and roadsides, shore lines, streams and thickets.

LOCATION IN NEBRASKA – Found in southeast and northeast Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Native to Asia was introduced into the U.S. for bank stabilization and forage. Wildlife movement spreads seeds. Can also be moved in contained seed mixes.

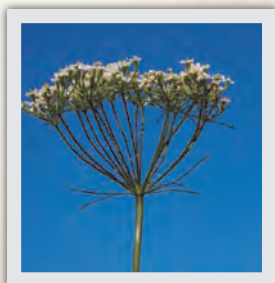
IMPACTS – Seeds remain viable for up to 20 years, contains dyes that reduce forage value and aggressively competes with native vegetation.



Photo: Marinella Miglio - Abruzzo



Photo: Marinella Miglio - Abruzzo



*Photo: Andrea Moro,
Comune di o*

SICKLEWEED

SCIENTIFIC NAME: *Falcaria vulgaris*

DESCRIPTION – Sickleweed is 1 to 2 feet tall, the lower part the stem together with leaves can be velvety. Leaves are almost leathery and leaf segments are linear. Its flower is a compound umbel with white flowers which bloom from June-August. Fruit is yellowish-brown, oblong.

HABITAT – Occurs in riverbanks, forest clearings, dry grasslands, waste places, road, ditches and riverbanks, fallow land, and meadows, also grain and tilled crops.

LOCATION IN NEBRASKA – Found in only a few counties in eastern Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

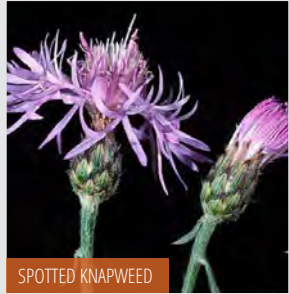
Native to Europe, it produces thousands of viable seeds per square meter, and readily regenerates from root fragments. Dispersed unintentionally by people, both through human activity and trade (along railroad tracks). Plant can break off and be dispersed by wind along with their seeds. Will also produce new stems up to one meter away from parent stems.

IMPACTS – Forms dense populations, alters plant community composition and structure when it invades perennial grasslands.



SPOTTED KNAPWEED

Photo: John Cardina, Ohio State University



SPOTTED KNAPWEED

Photo: Joseph M. DiTomaso, University of California



DIFFUSE KNAPWEED

Photos: Eric Coombs, Oregon Department of Agriculture



DIFFUSE KNAPWEED

SPOTTED & DIFFUSE KNAPWEED*

STATE
NOXIOUS
WEED

SCIENTIFIC NAME: *Centaurea biebersteinii*,
Centaurea diffusa

DESCRIPTION – State noxious weed. It reaches a height of 4 feet and has a rosette the first year. Spotted knapweed—pink to purple finely dissected compound daisy flowers with black fringe that bloom from June to September. Diffuse knapweed- finely dissected compound white flowers; can be pink to purple that bloom from June to September. Leaves are small, elliptical, yellow to brown bracts surround the flowers.

HABITAT – Occurs in rangeland, meadows, roadsides, open and sandy soils.

LOCATION IN NEBRASKA – Found in northern Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Came from Eurasia in contaminated alfalfa and ship ballast; Spreads by seeds through water or animal movement.

IMPACTS – These plants are allelopathic, they release chemicals that inhibit the growth of other plants. Establishes readily on disturbed ground, decreases forage production for livestock.



Photo: Nebraska Department of Agriculture



*Photo: Nebraska
Department of Agriculture*



Photo: Richard Old, XID Services, Inc.

SULPHUR CINQUEFOIL

SCIENTIFIC NAME: *Potentilla recta*

DESCRIPTION – It is 3 feet tall with whitish-yellow 5-petaled flowers with a brighter yellow center that bloom from May to July. Each petal is deeply indented. Small gray-green leaves are toothed and palmately compound, with 5 leaflets. Kidney-shaped seed, reddish-purple, slightly winged.

HABITAT – Pastures, roadsides, open fields and waste areas.

LOCATION IN NEBRASKA – Fairly widespread throughout Nebraska, particularly in the east.

PATHWAY OF INTRODUCTION AND SPREAD

Native to Europe. It was planted in pastures and for herbal teas. Spreads by rhizomes and seeds.

IMPACTS – Vigorous growth rate due to persistent fibrous root system, can self pollinate. Competes with native vegetation.



Photo: Richard Webb



*Photo: Karan A. Rawlins,
University of Georgia*



*Photo: Chris Evans, River to
River CWMA*

SWEET AUTUMN VIRGIN'S BOWER

SCIENTIFIC NAME: *Clematis terniflora*

DESCRIPTION – It is a climbing, semi-evergreen, ornamental vine, grows vigorously up to 30 feet. Leaves are opposite and compound with 3-5 leaflets. Flowers are white, fragrant, four-petaled flowers and bloom in late summer through the fall. Seed heads have long, silvery-gray, feather-like hairs attached. The native species *C. virginiana* is very similar but margins of its leaves tend to be toothed. The native species is not as prone to self-seeding and spreading as the invasive sweet autumn virgin's bower.

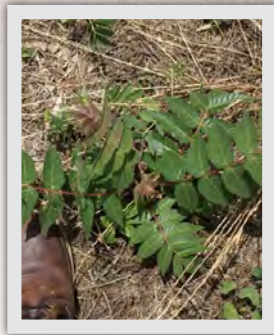
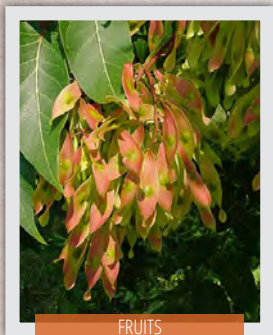
HABITAT – Found invading forest edges, rights of ways and urban green space especially near creeks found in forests, open woodland gardens, and semi-shaded forest edge. It can grow in semi-shade to full sun.

LOCATION IN NEBRASKA – Found in only a few counties in eastern Nebraska. It is often found in landscape plantings.

PATHWAY OF INTRODUCTION AND SPREAD

Native to Japan and China and was introduced into the U.S. as an ornamental plant, but has escaped. Reproduces by seeds and vegetatively.

IMPACTS – Vigorous growth rate, forms a dense tangle that can completely overtake supporting structures, fences and plants. It will run rampant in neglected areas and smother native vegetation. This plant will also compete with native vine species for resources.



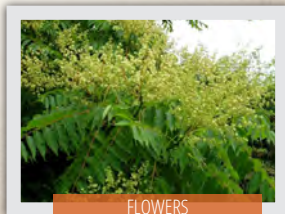
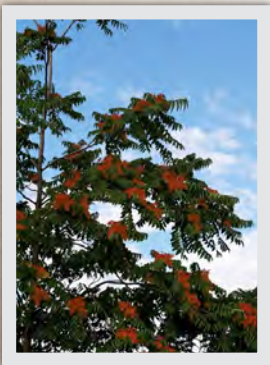
Photos: Chuck Barger, University of Georgia



Photo: Annemarie Smith, ODNR Division of Forestry



Photo: Richard Gardner, Bugwood.org



Photos: Jan Samanek, Phytosanitary Administration

TREE-OF-HEAVEN

COMMON NAMES: *Tree-of-Heaven, Chinese sumac, Stinking sumac & Ailanthus*

SCIENTIFIC NAME: *Ailanthus altissima*

DESCRIPTION – Tree-of-heaven is a dioecious tree. It can reach more than 70 feet high and has a crown of 80 feet wide. It is often misidentified as walnut or sumac in its early stages. The leaves are pinnately compound with 11 to 41 leaflets, with prominent glands on the back of each leaflet and can reach 3 feet long. It has an inflorescence (cluster of small yellow-green flowers) which is 4 to 7 inches long which flower in the spring and a panicle that can appear orange-red in the fall that persists through the winter. Male flowers smell like burnt peanuts or well-used gym socks, while the female flowers are odorless. Female trees produce one-seeded, winged fruit (samaras) that resemble those on maple trees.

HABITAT – Urban areas, neglected properties, woodlands and roadsides. It is drought tolerant.

LOCATION IN NEBRASKA – Planted as an ornamental across Nebraska. Invading natural areas in the eastern half of Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

Native to China and Taiwan and naturalized in North America and was commonly planted as a street tree.

IMPACTS – Tree-of-heaven is a prolific seed producer, up to 300,000 seeds per tree in a year. The tree also regrows rapidly from the stump or lateral roots if cut or disturbed. It grows rapidly and is very difficult to eradicate once its established. It is allelopathic, it emits chemicals from its roots killing and limiting growth of surrounding plants, allowing it to compete aggressively with desired and native species. It is also toxic to the touch.

SOURCES – <https://communityenvironment.unl.edu/tree-heaven>, https://en.wikipedia.org/wiki/Ailanthus_altissima & https://www.extension.iastate.edu/forestry/iowa_trees/trees/tree_of_heaven.html.



Photo: Richard Old, XID Services, Inc.



Photo: Richard Old, XID Services, Inc.



Photo: The Regents of the University of California

YELLOW BEDSTRAW

COMMON NAME: *Lady's bedstraw*

SCIENTIFIC NAME: *Galium verum*

DESCRIPTION – Perennial herbaceous vine that can grow to a height of 2 to 4 feet. Leaves are whorled, very narrow, up to 1.5 inches long, covered in short hairs, pointed, and found in groups of 8 to 12 leaves. Flowers are yellow, clustered, 0.3 inches across, pointed, longer than they are wide, with 3 to 5 petals and 4 yellow stamens. Fruit hairy and bristly clinging to clothes and animal hair.

HABITAT – Can be found in sunny areas along roadsides, in fields, and in pastures.

LOCATION IN NEBRASKA – Found in only a few counties across Nebraska.

PATHWAY OF INTRODUCTION AND SPREAD

It is native to Europe and Asia. Commonly spread by seeds clinging to clothes and animals. Has a long history of use as a herbal medicine.

IMPACTS – Can out-compete native species and ease of distribution makes it difficult to control.



Photo: John Ruter, University of Georgia



All Other Photos: Leslie J. Mehrhoff, University of Connecticut

YELLOW FLAG IRIS

SCIENTIFIC NAME: *Iris pseudacorus*

DESCRIPTION – Perennial iris grows from a rhizome. Roots are 4 to 8 inches long. Each plant produces 10 leaves covered with a fine waxy powder which gives the leaves a bluish look. Plants are hairless and form clones when rhizomes are separated. Yellow flag iris flower from late May to early July and fruits from August to October. The sword-shaped leaves have a raised midrib and are about 0.4 to 1.2 inches wide. Leaves range from 20 to 40 inches in length. Flowers form on a leafless stalk that is round in cross-section and is often branched. Beneath each flower is a large solitary bract. Flower pedicels are about 1.5 to 3 inches long, about the length of the ovary. Flowers are 3 to 4 inches in diameter, and vary in color from pale yellow to nearly orange. It has white flowers on plants intermixed with the more common yellow-flowering plants. Source for information on this page: <https://neinvasives.com/species/plants/yellow-flag-iris>.

HABITAT – Forms dense stands in shallow water and wet places along rivers, lakes, ponds and in wetlands.

LOCATION IN NEBRASKA – Found throughout the state and is spreading in northeast Nebraska. Has been used as an ornamental in plantings throughout the state.

PATHWAY OF INTRODUCTION AND SPREAD

Introduced as an ornamental and is native to Europe, western Asia and northern Africa. Has been used in water treatment to remove heavy metals out of water. Grows from both rhizomes and seeds which travel through water systems spreading the infestation.

IMPACTS – Forms dense monoculture stands over very large areas, crowding out other species, restricting water movement. The plant is toxic to animals and fish. Cattle have been shown to be effective to control the plant in early growth stage with no noticeable effects to the cattle.



Photo: UC Statewide IPM Project, University of California



Photo: Steve Dewey, Utah State University



Photo: UC Statewide IPM Project, University of California

YELLOW STARHISTLE

SCIENTIFIC NAME: *Centaurea solstitialis*

DESCRIPTION – Gray-green to blue-green plant with a deep, vigorous taproot. It produces bright, thistle-like yellow flowers with sharp spines surrounding the base. Grows to heights varying from 6 inches to 5 feet, stems of mature plants are rigid, spreading, and typically branching from the base in open areas. Stems and leaves are covered with a loose, cottony wool that gives them a whitish appearance. Leaves are short, 0.5 to 1 inches long and narrow with few lobes.

HABITAT – Often occurs along roadsides, in disturbed sites, grasslands, open areas, rangeland, wild lands, hay fields, pastures.

LOCATION IN NEBRASKA – Found in drier climates in western Nebraska. Often found near bird feeders because it is contained in some seed mixes.

PATHWAY OF INTRODUCTION AND SPREAD

Native to Eurasia. Seeds are often spread by vehicles, in the transport of livestock or in contaminated soil.

IMPACTS – Forms dense infestations and rapidly depletes soil moisture, thus preventing the establishment of other species. It is also poisonous to horses, causing a nervous disorder called “chewing disease.”



*Photo: William
M. Ciesla, Forest
Health Management
International*

*Photo: Michael
Shephard, USDA
Forest Service*



YELLOW TOADFLAX

COMMON NAMES: Yellow toadflax & Butter-and-Eggs

SCIENTIFIC NAME: *Linaria vulgaris*

DESCRIPTION – Yellow toadflax, also known as butter-and-eggs, has yellow and orange snapdragon-like flowers, lance-shaped, slender, soft, and pale green leaves. Flowers are arranged in a groups at the ends of branches. Plants grow up to 3 feet tall. Tap roots are horizontal and can be up to 3 feet long.

HABITAT – Can survive in a variety of conditions but are often found in dry areas, along roadways and in disturbed and cultivated areas.

LOCATION IN NEBRASKA – Wide spread statewide.

PATHWAY OF INTRODUCTION AND SPREAD

It is native to Europe and was introduced in the U.S. as an ornamental.

IMPACTS – Yellow toadflax can quickly colonize an area and reduce biodiversity and wildlife habitat.



Photo: Robert Vidéki, Doronicum Kft., Bugwood.org

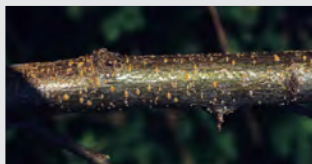


Photo: John Cardina, Ohio State Univ.



Photo: Rebekah D. Wallace, University of Georgia



Photo: Chuck Barger, University of Georgia

WHITE MULBERRY

SCIENTIFIC NAME: *Morus alba* L.

DESCRIPTION – White mulberry is a small deciduous tree 30 to 50 feet tall. It has glossy surfaced alternate leaves which vary in shape and are 2 to 8 inches long with blunt teeth and heart-shaped bases. The tree's young bark and bark along the trunk are bright orange. Older bark is narrow with irregular fissures. The tree flowers in spring, males flowers are green and 1-2 inch long catkins. Female flowers are crowned in short spikes and inconspicuous. The tree has fruits that look like a blackberry only longer. Unripened fruits are white to pink, ripe fruits are red to purple.



HABITAT – Urban lots, roadsides, forest edges, and other disturbed areas. It has been planted as an ornamental.

LOCATION IN NEBRASKA – Wide spread statewide. The native red mulberry has been completely replaced by the invasive white mulberry everywhere in Nebraska except in native woodlands along the Missouri river.

PATHWAY OF INTRODUCTION AND SPREAD

Native to Asia and was introduced into the U.S. in colonial times as a food source for silkworms. It has been planted as an ornamental throughout Nebraska and has been spread by birds and wildlife.

IMPACTS – It displaces native and desired plant species in forest settings. It can decrease habitat availability for wildlife. It has displaced the native red mulberry tree.

SOURCES – <https://articles.extension.org/pages/67320/morus-alba-white-mulberry>.

REFERENCES

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REFERENCES

The information in this guide was obtained from a number of sources, including:

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AND ECOSYSTEM HEALTH
invasive.org

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eddmaps.org

GLOBAL INVASIVE SPECIES
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issg.org

NATIONAL INSTITUTE OF
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niiss.org

NATIONAL INVASIVE SPECIES
COUNCIL
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100TH MERIDIAN INITIATIVE
100thmeridian.org

PROTECT YOUR WATERS
protectyourwaters.net

UNIVERSITY OF FLORIDA/IFAS
CENTER FOR AQUATIC AND
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plants.ifas.ufl.edu

USDA PLANTS DATABASE
plants.usda.gov

USGS NONINDIGENOUS
AQUATIC SPECIES
nas.er.usgs.gov

For a complete list of Nebraska invasive species, visit

NEINVASIVES.COM



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GIVE INVASIVE SPECIES THE BOOT



*Help prevent the spread of
invasive plants and animals.*

- Arrive at your recreation site with clean gear
- Burn local or certified firewood
- Use local or weed-free hay
- Stay on the trails
- Before leaving, remove mud and seeds

**REPORT A
SIGHTING!**

neinvasives.com

Contact the Nebraska
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402.472.3133

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