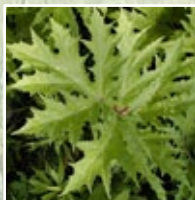


A Guide for Identifying & Controlling

Common Noxious & Invasive Weeds



in Southwestern Pennsylvania

Purpose

The purpose of this manual is to provide information about Pennsylvania's noxious and invasive species identification and control measures, focusing on those weeds located in the southwest region of the state. The Pennsylvania Noxious Plant Control Law of August 18, 1997, "requires control measures for the noxious weed to be implemented by the landowners."

All Conservation Reserve Enhancement Program (CREP) contract holders are required to maintain and provide upkeep for the land where their CREP projects are located, which includes controlling noxious weeds. CREP contract holders may control weeds by their own means or hire a certified herbicide contractor.

For more information about controlling noxious or invasive weeds, please contact your local Penn State Extension Office at the number listed below:

Allegheny	(412) 263-1000	Greene	(724) 627-3745
Armstrong	(724) 548-3447	Indiana	(724) 465-3880
Beaver	(724) 774-3003	Washington	(724) 228-6881
Butler	(724) 287-4761	Westmoreland	(724) 837-1402
Fayette	(724) 438-0111		

This manual is sponsored by the Penn's Corner Resource Conservation and Development Council.



Financial and other support for the CREP Outreach Program Office Mini-grant Program is provided by the Pennsylvania Association of Conservation Districts, Inc. through a Growing Greener Watershed Protection grant from the Pennsylvania Department of Environmental Protection and with additional support from USDA-NRCS.

What is a "Noxious Weed"?

Pennsylvania Department of Agriculture has defined a noxious weed as a plant that is determined to be injurious to public health, crops, livestock, agricultural land, and other properties.

What is an "Invasive Species" (Weed)?

The Department of Conservation and Natural Resources has defined invasive species as an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.

Table of Contents

Noxious Weeds

Canada Thistle	pp 2-3
Multiflora Rose.....	pp 4-5
Johnson Grass.....	pp 6-7
Mile-a-Minute.....	pp 8-9
Kudzu-vine	pp 10-11
Bull or Spear Thistle ...	pp 12-13
Shattercane	pp 14-15
Musk or Nodding Thistle	pp 16-17
Jimsonweed.....	pp 18-19
Purple Loosestrife.....	pp 20-21
Giant Hogweed	pp 22-23
Goatsrue	pp 24-25
1 Marijuana	pp 26-27

Invasive Species

*(Five most common in
Southwestern Pennsylvania)*

Tree of Heaven	pp 28-29
Japanese Knotweed ...	pp 30-31
Reed Canary Grass....	pp 32-33
Honeysuckle	pp 34-35
Common Reed (Phragmites)	pp 36-37
Contact Information...	pp 38-39
Acknowledgements	pp 40-41
Photo Credits.....	pp 42-43
Map of Penn's Corner Resource Conservation & Development Area (RC&D).....	p 44

NOXIOUS WEED

Canada Thistle

Cirsium arvense

Plant Family: Asteraceae

CHARACTERISTICS

- Perennial plant
- Erect branching stems topped by flowers
- Mature plants stand 1.5 to 5 feet tall.
- Forms a rosette of lance-shaped, spine-tipped leaves
- Second year plant develops a stem by mid-summer.
- Leaves are alternate, spiny, oblong to lance-shaped with toothed edges.
- Flowers are disk shaped, 1 inch in diameter.
- Flower head surrounded by spineless bracts
- Pink to purple colored flowers
- The seed is flat and brown.
- Reproduces through abundant seeds and spreads by creeping rhizomes.



CONTROL

- Cut before seed sets.
 - Repeated cutting will eventually weaken and kill the root system.
 - Targeted applications of systemic herbicides, such as glyphosate, may be effective.
- 3** • Herbicide applications are most effective when applied before flowering.

NOXIOUS WEED

Multiflora Rose

Rosa Multiflora

Plant Family: Rosaceae

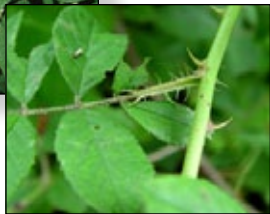
CHARACTERISTICS

- Thorny, perennial shrub with arching stems
- Fringed brackets located at the base of each leaf stalk
- Grows to approximately 13 feet tall
- Can form large, dense hedges as it spreads
- Compound leaf divided into five to eleven leaflets with sharply toothed edges
- Fringed or hairy structure at leaf stipules
- Flowers grow in clusters.
- Small, white to pinkish-white, fragrant, five-petal flowers
- Flowers appear May-June.
- Fruit is reddish, fleshy, known as rose hips.
- 4 • Fruit develops during the summer and remains on the plant through the winter.

- Fruit provides food for birds and wildlife.
- Reproduces through seeds spread by birds on the tips of its stems.

CONTROL

- Hand pull young plants.
- Mow or cut large plants repeatedly (3 to 6 times during growing season) to weaken and kill.
- Cut stumps or resprouted stumps may be treated with systemic herbicides, such as glyphosate, to kill roots.
- Herbicide is most effective late in growing season.



NOXIOUS WEED

Johnsongrass or Johnson Grass

Sorghum halepense

Plant Family: Poaceae

CHARACTERISTICS

- Perennial plant that grows 1 ½ to 10 feet tall
- Usually forms dense stands
- Leaves are alternate, simple, smooth, 6 to 20 inches long, and ½ to 1 ½ inches wide. Leaf blades are flat with a prominent, white midvein.
- Stems are solid with prominent, swollen nodes.
- Flowers, or spikelets, are in pairs at the lower end of the flowering stalk and in threes at the upper end.
- Johnsongrass has fibrous roots and extensive, thick, creeping rhizomes.
- Reproduces by the large, creeping rhizomes and seeds.
- 6 • Seed head with broad, open panicle. Seed turns reddish-brown or darker when mature.



CONTROL

- Hand pull or mow young plants.
- Plow or disk larger areas of infestation and follow with a targeted application of systemic herbicides, such as glyphosate, to kill rhizomes. Foliar herbicides work best when plants are 12 to 16 inches tall and actively growing. Possible use of other herbicides will depend on the presence of other vegetation/crops. Cut stumps or resprouted stumps may be treated with systemic herbicides, such as glyphosate, to kill roots. Herbicide is most effective late in the growing season.

NOXIOUS WEED

Mile-a-Minute

Polygonum perfoliatum

Plant Family: Polygonaceae

CHARACTERISTICS

- Trailing annual vine
- Delicate stem contains sharp, downward pointing barbs
- Grows rapidly, forming dense mats, blanketing other vegetation.
- Distinctive, small, round, funnel-shaped structure (ocreae) encircles stem at intervals.
- Leaf is alternate, light green (occasionally reddish), triangular to heart-shaped, smooth edged with barbs on underside.
- Measures 1¼ to 3 inches at base
- The flower is small, white, and inconspicuous.
- Flower emerges from the ocreae late June until fall.
- The fruit is a small, segmented berry.
- Color varies: metallic blue, white, green

- Contains small, round, black, shiny seed
- Reproduces through numerous seeds disbursed by birds and water

CONTROL

- Remove by hand, wearing protective clothing to avoid barbs.
- Repeated removal of new growth throughout the summer is necessary. Mowing throughout growing season will also restrict flowering.
- Herbicidal soaps can be used throughout the summer. Repeated application is required.



NOXIOUS WEED

Kudzu-vine

Pueraria lobata

Plant Family: Fabaceae

CHARACTERISTICS

- High, climbing vine often completely covers trees, shrubs, and man-made structures forming “kudzu sculptures”
- Leaves are alternate, six to eight inches long and have fuzzy leaflets three to four inches long, oval, lobed or nearly heart shaped.
- Flowers are pea-like, large, hanging clusters, appearing in midsummer, with a grape-like smell and a purple to red color.
- Fruit are dark brown, flattened pods in clusters, very hairy and ripen in the fall.
- Stems are velvety with hairs turning brown.
- Trunk or vines may reach up to four inches in diameter. Older stems and vines turn brown and smooth and eventually form a fine, scaly bark
- Vines may extend thirty to one hundred feet in length with stems one half to four inches in diameter

- As many as thirty vines may grow from a single root crown.
- Roots are fleshy, massive. Taproot is seven inches or more in diameter, six feet or more in length and weighs as much as four hundred pounds.

CONTROL

- Remove by hand, wearing protective clothing to avoid barbs.
- Repeated removal of new growth throughout the summer is necessary. Mowing throughout growing season will also restrict flowering.
- Herbicidal soaps can be used throughout the summer. Repeated application is required.



NOXIOUS WEED

Bull or Spear Thistle

Cirsium vulgare

Plant Family: Asteraceae

CHARACTERISTICS

- Biennial - first year plant
- Erect, branching stems topped by flowers
- Mature plants stand 1.5 to 5 feet tall.
- Grows taller than Canada thistle
- Forms a rosette of lance shaped, spine-tipped leaves
- Second year plant develops a stem by mid-summer.
- Alternate, spiny, oblong to lance-shaped leaves with toothed edges
- Course hairs on the upper surface and softer whitish hairs below
- Disk shaped flowers, 1 inch in diameter
- Flower head surrounded by spiny bracts
- Reddish pink to purple colored flowers

- Appears from June to early fall
- The seed is flat and brown.
- Reproduces through abundant seeds

CONTROL

- Cut before seed sets.
- Use repeated cutting to eventually weaken and kill the root system.
- Targeted applications of systemic herbicides, such as glyphosate, can be effective. Herbicide applications are most effective when applied before flowering.



NOXIOUS WEED

Shattercane

Sorghum bicolor

Plant Family: Poaceae

CHARACTERISTICS

- Warm-season annual
- Reproduces by seed
- Fibrous root system
- Stems erect, smooth, 4 to 8 feet tall with tillers readily produced from crown
- Leaves resemble those of forage sorghum with a pronounced whitish-green mid-vein.
- Seed heads resemble forage sorghum, but seeds appear dark red to black when mature.
- Seeds “shatter,” or drop easily at maturity.



CONTROL

- Hand pull or mow young plants during the first 7 to 10 days of August, before flowering.
- Targeted applications of systemic herbicides, such as glyphosate, work best when plants are 12 to 18 inches high and actively growing. Herbicide applications are most effective when applied before flowering. Possible use of other herbicides will depend on the presence of other vegetation/crops.

NOXIOUS WEED

Musk or Nodding Thistle

Carduus nutans

Plant Family: Asteraceae

CHARACTERISTICS

- Biennial herb with showy, red-purple flowers and painful, spiny stems and leaves
- Mature plants range in height from 1 ½ to 6 feet tall and have multi-branched stems.
- Leaves are dark green, coarsely lobed, with a smooth waxy surface and a yellowish to white spine at the tip.
- Large disk-shaped flower heads, containing hundreds of tiny individual flowers, are 1½ to 3½ inches in length, occur at the tips of the stem, and will droop when mature.



CONTROL

- Hand pull or cut prior to development of seeds.
- Flowers and seed heads should be bagged and disposed of in a landfill to prevent or minimize seed dispersal.
- Repeated cutting will eventually weaken and kill root system.
- If native grasses are present, targeted applications of glyphosate or triclopyr are effective.
- Treatments should be applied during the rosette stage or prior to flowering.

NOXIOUS WEED

Jimsonweed

Datura stramonium

Plant Family: Solanaceae

CHARACTERISTICS

- Herbaceous annual that grows from 1 to 5 feet tall
- A single-stemmed plant can grow to cover an area up to 10 feet in diameter.
- Green to purplish stems are stout and hollow.
- Ovate to sub ovate leaves have long, stout leafstalks, coarsely serrate margins, measure 2 to 8 inches long, and taper at their tips.
- Leaves have an unpleasant scent when crushed or bruised.
- Axillary, trumpet-shaped flowers have white to light purple corollas and five teeth along their margins.
- Seed capsules of this plant are located at the forks between branches, ovoid in shape, 1 to 2 inches long, and covered in prickles.

- When mature, the capsules split open into four segments and contain dark, wrinkled seeds, which are poisonous.

CONTROL

- Hand pull young plants.
- Targeted applications of glyphosate are effective.



NOXIOUS WEED

Purple Loosestrife

Lythrum salicaria

Plant Family: Lythraceae

CHARACTERISTICS

- Erect perennial herb, growing to a height of 3 to 10 feet
- Mature plants can have 1 to 50 4-sided stems that are green to purple and often branching, making the plant bushy and woody in appearance.
- Opposite or whorled leaves are lance-shaped, stalkless, and heart-shaped or rounded at the base.
- Plants are usually covered by a downy pubescence.
- Flowers are magenta-colored with 5 to 7 petals and bloom from June to September.
- Seeds are borne in capsules that burst at maturity in late July or August.
- Single stems can produce an estimated 2 to 3 million seeds per year from a single rootstock.



CONTROL

- Hand pull small infestations before seeds set.
- Targeted applications of glyphosate (formulated for water or upland areas) are the most effective in controlling older plants.
- Apply herbicide late in the growing season.
- Biological control for large infestations has also been approved by USDA.
- For information, contact PA Department of Ag: 717-772-5209.

NOXIOUS WEED

Giant Hogweed

Heracleum mantegazzianum

Plant Family: Apiaceae

CHARACTERISTICS

- Herbaceous, biennial plant that can grow up to 8 to 15 feet in height
- Large stem is hollow and usually blotched with purple.
- Leaves are compound, deeply lobed, sharply pointed, and 3 to 5 feet wide.
- Hairs on the underside of leaves are stiff, dense and stubby.
- White flowers are on a large umbrella-shaped, flat-topped head that can be up to 2 ½ feet in diameter.

CONTROL

• ***Do not hand pull or cut this plant.***

- 22 • Plants exude a clear watery sap, which sensitizes the skin to ultraviolet radiation.

- This can result in severe burns, blistering and painful dermatitis.
- Blisters can develop into purplish or brownish scars.
- Repeated, targeted treatments of glyphosate are the most effective.
- Always wear protective clothing and avoid getting the sap on your skin.
- **Report all sightings to the Giant Hogweed Hotline: 1-877-464-9333.**



NOXIOUS WEED

Goatsrue

Galega officinalis

Plant Family: Fabaceae

CHARACTERISTICS

- Herbaceous perennial that tends to form a crown and ranges 2 to 6 feet tall
- One plant may have 20 stems and a deep taproot.
- First seedling leaves are large, oval, and dark green, and mature leaves are alternate, odd-pinnate, with 6 to 10 pairs of leaflets, in which each leaflet has a small hair-like projection on its tip.
- Stems are hollow, cylindrical, and tubular.
- Flowering begins in June and continues until frost in the fall.
- White and bluish to purplish pea-like blossoms. Each blossom produces a straight, narrow, smooth pod, which points outward, is angled slightly upward from the stem, and contains 1 to 9 seeds per pod.

- Seeds are bean-shaped, dull yellow in color, drop to the ground when mature, typically remain dormant until split, and may remain viable for ten years.

CONTROL

- Mowing, clipping and cultivation are poor controls because seed is produced even when the plants are small.
- Application of selective herbicides such as 2,4-D are the most effective.
- Two applications during the growing season for two consecutive years is recommended.



NOXIOUS WEED

Marijuana

Cannabis sativa

Plant Family: Cannabaceae

CHARACTERISTICS

- Herbaceous, annual plant, which can reach a height of 13 feet
- Stem of the mature plant is stiff and fibrous.
- Opposite leaves that are sometimes alternate at the ends of branches
- Leaves are palmately divided, usually with 5 or 7 toothed leaflets.
- Flower parts are not discernable with the naked eye, up to 0.2 inches long and green.
- Blooms first appear in late summer and continue into mid fall.
- A plant can have both male and female flowers but often they are on separate plants.
- Male sacks release pollen to the wind. Female flowers often form dense clusters at the ends of branches.



CONTROL

- Hand pull young plants and destroy.
- Targeted applications of systemic herbicides, such as glyphosate, may also be effective.

INVASIVE WEED

Tree-of-Heaven

Ailanthus altissima

Plant Family: Simaroubaceae

CHARACTERISTICS

- Small to medium-sized tree that can reach 80+ feet in height
- Smooth, grey bark
- Compound leaves, 1 to 4 feet in length, alternate, odd-pinnate, with 11 to 25 lance-shaped leaflets
- Gives off strong, distinct odor when cut, similar to peanut butter
- Yellow-green flowers grow at the ends of branches and appear in June
- Seeds are centered in slightly twisted, papery sheaths, which twirl as they fall to the ground.



CONTROL

- Use herbicides as a foliar, basal bark or cut stump treatment.
- Hack and squirt treatment (also known as frill and girdling treatment) is the most effective method.
- Root system must be seriously damaged or killed to prevent or limit stump sprouting and root suckering.
- Basal bark application does not require cutting and works best during the late winter/early spring and summer. However, the base of the tree stem must be free of snow, ice, or water.
- A solution of 20% oil-soluble triclopyr product to 80% oil works well.

INVASIVE WEED

Japanese Knotweed

Polygonum cuspidatum

Plant Family: Polygonaceae

CHARACTERISTICS

- Herbaceous perennial that forms large colonies of erect stems that can reach 9 feet in height
- Spread by vigorous rhizomes or horizontal stems that grow just below the soil surface
- Similar in appearance to Giant Knotweed, but Japanese Knotweed has a truncate, squared-off, leaf base versus heart-shaped for the Giant Knotweed

CONTROL

- Most common herbicide application is to spray the foliage.
- To control the rhizomes, spray later in the season (July 1 to the first killing frost).
- Can be cut earlier in June, but follow-up herbicide applications should be delayed for at least six weeks.

- Hand pulling can be effective also if entire root system is removed.
- Any control method must be repeated over several years to be effective.



INVASIVE WEED

Reed Canary Grass

Phalaris arundinacea

Plant Family: Poaceae

CHARACTERISTICS

- A vigorous, productive, long-lived, perennial, sod-forming grass
- Numerous broad, moderately harsh, erect leaves are dominantly basal.
- The coarse, erect hairless stems may reach a height of 2 to 8 feet.
- The seed is borne in an open panicle, which ripens from the top down and shatters readily as it matures.
- It has excellent frost tolerance.
- Growth begins early in the spring.
- Seed are shiny brown.



CONTROL

- Fire can help control the spread of Reed Canary Grass. Usually done in late autumn or late spring.
- A formulation of glyphosate, designed for use in wetlands, will kill reed canary grass, especially young plants, when applied to foliage according to label recommendations.
- Hand control for control may be feasible in small stands.
- Hand chopping the culms at flowering time may kill small clones.

INVASIVE WEED

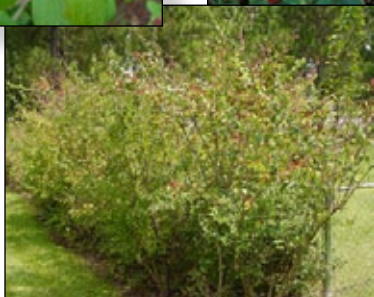
Bush Honeysuckles

**Fragrant Honeysuckle, *Lonicera fragrantissima*,
Amur Honeysuckle, *L. maackii*, Morrow's Honeysuckle,
L. morrowii, Tartarian Honeysuckle, *L. tatarica*,**

Plant Family: Caprifoliaceae

CHARACTERISTICS

- Upright, generally deciduous shrubs that range from 6 to 15 feet in height
- 1 to 2 ½ inch, egg-shaped leaves are opposite along the stem and short-stalked.
- Older stems are often hollow.
- Pairs of fragrant, tubular flowers, less than 1 inch long, are borne along the stem in the leaf axils.
- Flower color varies from creamy white to pink or crimson.
- Flowering generally occurs from early to late spring, but can vary.
- Fruits are red to orange, many-seeded berries.
- Native Bush Honeysuckles have solid stems unlike the exotics.



CONTROL

- Seedlings can be controlled by application of a systemic herbicide, glyphosate, at a 1% solution, sprayed onto the foliage or applied by a sponge.
- Well established plants are best managed by cutting the stems to ground level and painting or spraying the stumps with a 2 to 3% solution of glyphosate.

INVASIVE WEED

Common Reed (Phragmites)

Phragmites australis

Plant Family: Poaceae

CHARACTERISTICS

- Upright perennial that ranges in height from 5 to 13 feet
- Long, narrow leaves alternate on its tall stalks.
- Flower bearing stems have smooth nodes and hollow internodes.
- Leave blades are approximately one inch wide and are flat or rolled.
- Plants grow in dense single species or monocultural stands.
- Plume-like flower spikes are 6 to 12 inches long and form at the top of the plants.
- Flowers are tiny with lots of silky hairs.
- Large purple flower heads turn gray and fluffy in the plant in late summer as they go to seed.



- It spreads by a network of rhizomes.
- The plant's roots can withstand fires, mowing, and other forces that damage stalks and leaves.

CONTROL

- They are susceptible to periods of flooding, wave action, and changes in salinity.
- Combined cutting, burning, herbicide application, and water management plans can help control the plant by removing old canes and allowing other vegetation to grow.
- Glyphosate, formulated for use in wetlands, should be applied after the plants form their fluffy flower clusters when the plants are sending carbohydrates to the rhizome.

Contacts

Penn's Corner RC&D

33 Terminal Way, Suite 325 B
Pittsburgh, PA 15219
412-241-7645

Farm Service Agency

Allegheny, Beaver & Butler FSA
625 Evans City Road
Suite 103
Butler, PA 16001
724-482-4800 ext. 2

Armstrong FSA
11931 State Route 85, Suite B-2
Kittanning, PA 16201
724-545-1022

Fayette & Westmoreland FSA
214 Donohoe Road, Suite F
Greensburg, PA 15601
724-853-5555

Greene & Washington FSA
2800 N. Main Street, Suite 1
Washington, PA 15301
724-222-3060 ext. 2

Indiana FSA
1432 Route 286 Hwy E
Indiana, PA 15701
724-463-8547

Fayette County Satellite Office
1359 Connellsville Rd., Suite 10
Lemont Furnace, PA 15456
724-437-2264

Natural Resources Conservation Service

Allegheny, Beaver & Butler
NRCS
625 Evans City Road, Suite 102
Butler, PA 16001
724-482-4800 ext. 3
CREP: 724-482-4800 ext. 108

Armstrong NRCS
11931 State Route 85, Suite B-1
Kittanning, PA 16201
724-545-1022 ext. 3
CREP: 724-545-1022 ext. 101

Fayette & Greene NRCS
1359 Connellsville Rd, Suite 10
Lemont Furnace, PA 15456
724-437- 7971 ext. 3
CREP: 724-437-7971 ext. 101

Indiana NRCS
1432 Route 286 Hwy E
Indiana, PA 15701
724-463-8547 ext 3
CREP: 724-463-8547 ext. 104

Westmoreland NRCS
214 Donohoe Road Suite C
Greensburg, PA 15601
724-834-3970
CREP: 724-834-3970 ext. 3

Washington NRCS
2800 N. Main Street, Suite 1
Washington, PA 15301
724-222-3060 ext. 3
CREP: 724-222-3060 ext. 107

Conservation Districts

Allegheny County
Conservation District
River Walk Corporate Center
33 Terminal Way, Suite 325 B
Pittsburgh, PA 15219
412-421-7645

Armstrong Conservation
District
Armsdale Administration Bldg.
124 Armsdale Road
Kittanning, PA 16201-3738
724-548-3425

Beaver County
Conservation District
156 Cowpath Road
Aliquippa, PA 15001-5842
724-378-1701

Butler County
Conservation District
122 McCune Drive
Butler, PA 16001
724-284-5270

Fayette County
Conservation District
10 Nickman Plaza
Lemont Furnace, PA 15456
724-438-4497

Greene County
Conservation District
Fort Jackson Building Mezzanine
22 West High Street, Suite 204
Waynesburg, PA 15370
724-852-5278

Indiana County
Conservation District
625 Kolter Drive, Suite 8
Indiana, PA 15701-3571
724-471-4751

Washington County
Conservation District
2800 North Main Street
Suite 105
Washington, PA 15301
724-705-7098

Westmoreland
Conservation District
J. Roy Houston
Conservation Center
218 Donohoe Road
Greensburg, PA 15601
724-837-5271

Sources of Information

Ailanthus altissima, Tree-of-Heaven:

<http://www.issg.org/database/species/ecology.asp?fr=1&si=319>

www.nps.gov/plants/alien/fact/aial1.htm

Cannabis sativa, Marijuana:

<http://2bnthewild.com/plants/H253.htm>

Utah State University Archives, Utah State University,

www.forestryimages.org

Visual Guide to Pennsylvania's Noxious Weeds, USDA-NRCS,
Lebanon Field Office, 2005

<http://www.cannabis-sativa.co.uk/cannabis-sativa.jpg>

Carduus nutans, Musk or Nodding Thistle:

<http://www.nps.gov/plants/alien/fact/canu1.htm>

Galega officinalis, Goatsrue:

http://www.na.fs.fed.us/fhp/invasive_plants/weeds/goats-rue.pdf

Heracleum mantegazzianum, Giant Hogweed:

http://www.invasive.org/eastern/other/poster_phhogweed.pdf

Lonicera sp., Bush Honeysuckles:

<http://www.nps.gov/plants/alien/fact/loni1.htm>

Polygonum cuspidatum, Japanese Knotweed:

[www.dcnr.state.pa.us/cs/groups/public/documents/document/
dcnr_010254.pdf](http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_010254.pdf)

[plantscience.psu.edu/research/projects/vegetative-management/
publications](http://plantscience.psu.edu/research/projects/vegetative-management/publications)

http://vm.cas.psu.edu/Publications/FS_5_POLCU.pdf

Sources of Information

Cirsium arvense, Canada Thistle; Rosa Multiflora, Multiflora Rose; Sorghum halepense, Johnsongrass; Polygonum perfoliatum, Mile-a-Minute; Pueraria lobata, Kudzu-vine; Cirsium vulgare, Bull or Spear Thistle; and Sorghum bicolor, Shattercane:

Maryland Noxious Weed I.D. brochure,

Maryland Department of Agriculture:

http://www.mdinvasivesp.org/list_terrestrial_plants.html

California Department of Food and Agriculture:

<http://www.cdfa.ca.gov/phpps/ipc/weedinfo/sorghum-bicolor.htm>

Pharlaris arundinacea, Reed Canary Grass; Phragmites australis, Common Reed (Phragmites):

Maine Invasive Plants Bulletin #2532

umaine.edu/publications/2532e/

Weed Science Society of America

wssa.net/weed/weed-identification/

USDA Natural Resources Conservation Service

<http://www.plants.usda.gov>

Photos Credits

NOXIOUS WEEDS

CANADIAN THISTLE

UGA0024019 Norman E. Rees, USDA Agricultural Research Service, Bugwood.org

MULTIFLORA ROSE

UGA0001076 James R. Allison, Georgia Department of Natural Resources, Bugwood.org

UGA1330051 Chris Evans, River to River CWMA, Bugwood.org

JOHNSON GRASS

UGA0581065 Jil M. Swearingen, USDI National Park Service, Bugwood.org

UGA1624081 Bonnie Harper-Lore, Federal Highway Administration, Bugwood.org

MILE-A-MINUTE

UGA1237070 Britt Slattery, U.S. Fish and Wildlife Service, Bugwood.org

UGA1149040 USDA APHIS PPQ Archives, USDA APHIS PPQ, Bugwood.org

KUDZU-VINE

UGA2307160 Ted Bodner, Southern Weed Science Society, Bugwood.org

UGA2307164 Ted Bodner, Southern Weed Science Society, Bugwood.org

BULL OR SPEAR THISTLE

UGA0580002 Loke T. Kok, Virginia Polytechnic Institute and State University, Bugwood.org

UGA0580001 Loke T. Kok, Virginia Polytechnic Institute and State University, Bugwood.org

SHATTERCANE

USDA APHIS PPQ Archives, USDA APHIS PPQ, Bugwood.org
University of Illinois

MUSK OR NODDING THISTLE

UGA0024050 Norman E. Rees, USDA Agricultural Research Service, Bugwood.org

UGA1358314 Mary Ellen (Mel) Harte, Bugwood.org

JIMSONWEED

UGA5139015 Lynn Sosnoskie, University of Georgia, Bugwood.org

UGA5174018 Jan Samanek, State Phytosanitary Administration, Bugwood.org

Photos Credits

PURPLE LOOSESTRIFE

UGA1291004 Linda Wilson, University of Idaho, Bugwood.org

UGA1624026 Randy Westbrooks, U.S. Geological Survey, Bugwood.org

GIANT HOGWEED

UGA1460060 Donna R. Ellis, University of Connecticut, Bugwood.org

UGA1151080 Terry English, USDA APHIS PPQ, Bugwood.org

GOATSRUE

UGA1459191 Steve Dewey, Utah State University, Bugwood.org

UGA1459193 Steve Dewey, Utah State University, Bugwood.org

MARIJUANA

Art Gover, Penn State University

INVASIVE WEEDS

TREE OF HEAVEN

UGA1344132 Great Smoky Mountains National Park Resource Management Archives, USDI National Park Service, Bugwood.org

UGA1299009 David J. Moorhead, University of Georgia, Bugwood.org

JAPANESE KNOTWEED

UGA0002108 Leslie Seiger, San Diego Mesa College, Bugwood.org

UGA1237055 Jack Ranney, University of Tennessee, Bugwood.org

REED CANARY GRASS

UGA1196238 Jamie Nielsen, University of Alaska Fairbanks, Cooperative Extension Service, Bugwood.org

UGA1334151 Chris Evans, River to River CWMA, Bugwood.org

HONEYSUCKLE

UGA0016073 Warner Park Nature Center Archives, Warner Park Nature Center, Bugwood.org

UGA1237032 Chuck Barger, University of Georgia, Bugwood.org

UGA1237034 Chuck Barger, University of Georgia, Bugwood.org

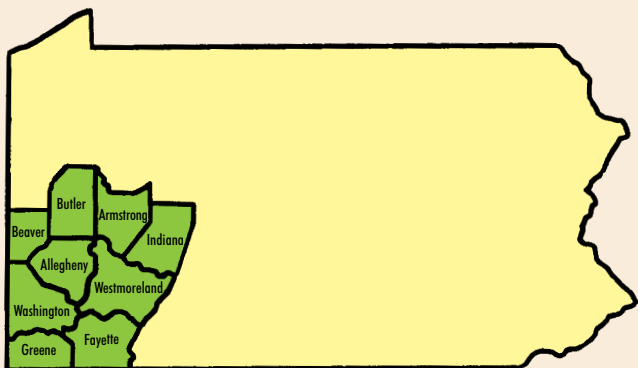
COMMON REED (PHRAGMITES)

UGA1237064 Joseph McCauley, U.S. Fish and Wildlife Service, Bugwood.org

Index

- Bull/Spear Thistle (*Cirsium vulgare*) pp 12-13
- Bush Honeysuckles (*Lonicera salicaria*) pp 34-35
- Canada Thistle (*Cirsium arvense*)..... pp 2-3
- Common Reed (*Phragmites australis*) pp 36-37
- Giant Hogweed (*Heracleum mantegazzianum*) pp 22-23
- Goatsrue (*Galega officinalis*)..... pp 24-25
- Japanese Knotweed (*Polygonum cuspidatum*) pp 30-31
- Jimsonweed (*Datura stramonium*)..... pp 18-19
- Johnsongrass (*Sorghum halepense*) pp 6-7
- Kudzu-vine (*Pueraria lobata*) pp 10-11
- Marijuana (*Cannabis sativa*) pp 26-27
- Mile-a-Minute (*Polygonum perfoliatum*) pp 8-9
- Multiflora Rose (*Rosa multiflora*) pp 4-5
- Musk/Nodding Thistle (*Carduus nutans*)..... pp 16-17
- Purple Loosestrife (*Lythrum salicaria*)..... pp 20-21
- Reed Canary Grass (*Phalaris arundinacea*) pp 32-33
- Shattercane (*Sorghum bicolor*) pp 14-15
- 44** Tree-of-Heaven (*Ailanthus altissima*) pp 28-29

The Penn's Corner Resource Conservation & Development (RC&D) Area includes Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Washington, and Westmoreland Counties in Southwestern Pennsylvania.



The vision of Penn's Corner RC&D is the complete restoration and ongoing conservation of our natural resources in harmony with strong, productive communities.



Penn's Corner Resource Conservation & Development Area (RC&D)

Our mission: To enhance the area's natural resources and build strong communities by fostering regional partnerships, securing resources, and delivering needed services and programs.

www.pennscorner-rcd.org



10-16 #1,3M