



BUTTERFLYWEED *Asclepias tuberosa*



ATTRIBUTES

- BRIGHT ORANGE FLOWERS OF VARIOUS HUES THROUGHOUT THE SUMMER.
- ATTRACTS NUMEROUS BUTTERFLIES

MAINTENANCE REQUIREMENTS

- MINIMAL, VERY DROUGHT TOLERANT.
- KEEPING AREA WEED-FREE MINIMIZES COMPETITION WITH OTHER PLANTS.
- DUE TO TAP ROOT, IT IS DIFFICULT TO TRANSPLANT.
- ALLOW TO SET SEED AND SPREAD VIA ROOTS.
- CUT BACK TO GROUND IN FALL OR WINTER.



LANCLEAF COREOPSIS
Coreopsis lanceolata



ATTRIBUTES

- SHOWY GOLD FLOWERS FROM MID SPRING THROUGH SUMMER
- ATTRACTS BUTTERFLIES

MAINTENANCE REQUIREMENTS

- REMOVING WEEDS WILL ELIMINATE PLANT COMPETITION.
- DROUGHT-TOLERANT
- ALLOW TO SELF-SEED, AS LONG AS SEEDLINGS ARE NOT COMPETING WITH OTHER PLANTINGS.
- CLUMPS CAN BE DIVIDED AND PLANTED ELSEWHERE.
- CUT BACK TO GROUND IN LATE FALL OR WINTER.

PURPLE CONEFLOWER



Echinacea purpurea



ATTRIBUTES

- SHOWY PINK FLOWERS FROM LATE SPRING UNTIL FALL
- ATTRACTS BUTTERFLIES
- SEED PROVIDES FOOD FOR BIRDS IN WINTER

MAINTENANCE REQUIREMENTS

- REMOVING WEEDS WILL ELIMINATE PLANT COMPETITION.
 - DROUGHT-TOLERANT
 - ALLOW TO SELF-SEED, AS LONG AS SEEDLINGS ARE NOT COMPETING WITH OTHER PLANTINGS.
- COLLECT AND DISPERSE SEED IF DESIRED ELSEWHERE.
 - CLUMPS CAN BE DIVIDED AND PLANTED ELSEWHERE.
 - CUT BACK TO GROUND IN LATE WINTER.



SCALY BLAZINGSTAR
Liatris squarrosa



ATTRIBUTES

- SHOWY PURPLE FLOWERS ALONG STEMS FROM MID-SUMMER TO FALL
- ATTRACTS BUTTERFLIES

MAINTENANCE REQUIREMENTS

- REMOVING WEEDS WILL ELIMINATE PLANT COMPETITION.
- DROUGHT-TOLERANT
- ALLOW TO SELF-SEED, AS LONG AS SEEDLINGS ARE NOT COMPETING WITH OTHER PLANTINGS.
- CLUMPS CAN BE DIVIDED AND PLANTED ELSEWHERE.
- CUT BACK TO GROUND IN LATE FALL OR WINTER.



SMOOTH BEARD-TONGUE
Penstemon laevis



ATTRIBUTES

- SHOWY WHITE FLOWERS IN LATE SPRING AND EARLY SUMMER

MAINTENANCE REQUIREMENTS

- REMOVING WEEDS WILL ELIMINATE PLANT COMPETITION.
- DROUGHT-TOLERANT
- ALLOW TO SELF-SEED, AS LONG AS SEEDLINGS ARE NOT COMPETING WITH OTHER PLANTINGS.
- CLUMPS CAN BE DIVIDED AND PLANTED ELSEWHERE.
- CUT BACK TO GROUND IN LATE FALL OR WINTER.

PRAIRIE CONEFLOWER

Ratibida pinnata



ATTRIBUTES

- WHIMSICAL YELLOW AND GRAY FLOWERS IN EARLY SUMMER
- ATTRACTS BUTTERFLIES

MAINTENANCE REQUIREMENTS

- REMOVING WEEDS WILL ELIMINATE PLANT COMPETITION.
- DROUGHT-TOLERANT
- ALLOW TO SELF-SEED, AS LONG AS SEEDLINGS ARE NOT COMPETING WITH OTHER PLANTINGS.
- CLUMPS DO NOT NEED DIVISION
- CUT BACK TO GROUND IN LATE WINTER.



ATTRIBUTES

- NUMEROUS GOLD FLOWERS FROM MIDSUMMER UNTIL FALL
- ATTRACTS BUTTERFLIES
- SEEDS PROVIDE FOOD FOR BIRDS IN WINTER

MAINTENANCE REQUIREMENTS

- REMOVING WEEDS WILL ELIMINATE PLANT COMPETITION.
- DROUGHT-TOLERANT
- ALLOW TO SELF-SEED, AS LONG AS SEEDLINGS ARE NOT COMPETING WITH OTHER PLANTINGS.
- CLUMPS CAN BE DIVIDED AND PLANTED ELSEWHERE.
- CUT BACK TO GROUND IN LATE WINTER.



RIVER OATS *Chasmanthium latifolium*



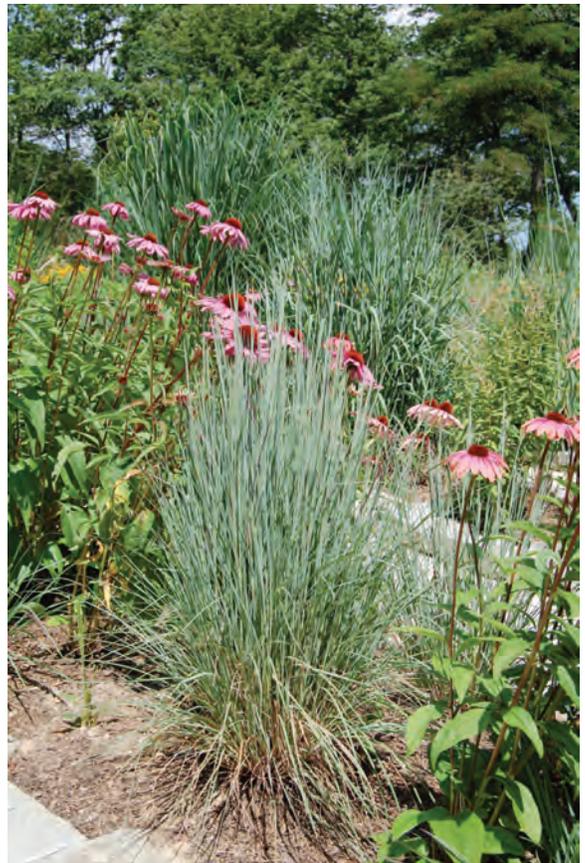
ATTRIBUTES

- VERTICAL GROWTH HABIT PROVIDES VISUAL CONTRAST
- SPRING FLOWERS GIVE WAY TO OAT-LIKE SEED HEADS, THAT MATURE INTO AUTUMN, TAKING ON AN ATTRACTIVE PURPLE HUE
- EXPANSIVE FIBROUS ROOT SYSTEM HOLDS SOIL, PREVENTS EROSION.
- GOOD FOOD SOURCE FOR BIRDS AND MAMMALS ALIKE.

MAINTENANCE REQUIREMENTS

- CUT BACK TO 1' IN MAY, BEFORE FLOWERING, TO PREVENT STEMS FROM LEANING.
- HARVEST SEED AT FROST AND DISPERSE WHERE DESIRED.
- CUT BACK TO GROUND IN LATE WINTER.
- CLUMPS CAN BE DIVIDED AND PLANTED ELSEWHERE.

LITTLE BLUESTEM
Schyzachyrium
scoparium



ATTRIBUTES

- VERTICAL GROWTH HABIT PROVIDES VISUAL CONTRAST
- SUMMER FOLIAGE IS AN ATTRACTIVE BLUE-SILVER
- STEMS TURN PURPLE, THEN COPPER, IN THE FALL
- EXPANSIVE FIBROUS ROOT SYSTEM HOLDS SOIL, PREVENTS EROSION
- GOOD COVER FOR BIRDS AND MAMMALS ALIKE

MAINTENANCE REQUIREMENTS

- CUT BACK TO GROUND IN WINTER.
- HARVEST SEED AT FROST AND DISPERSE WHERE DESIRED.
- BURNING INDIVIDUAL CLUMPS INVIGORATES GROWTH.
- CLUMPS CAN BE DIVIDED AND PLANTED ELSEWHERE.

PRAIRIE DROPSEED

Sporobolus heterolepis



ATTRIBUTES

- FINE LEAVES PROVIDE TEXTURAL INTEREST
- FRAGRANT FLOWER SPIKES
- STEMS TURN ORANGE, THEN BRONZE, IN THE FALL
- EXPANSIVE FIBROUS ROOT SYSTEM HOLDS SOIL, PREVENTS EROSION
- GOOD COVER FOR SMALL MAMMALS

MAINTENANCE REQUIREMENTS

- CUT BACK TO GROUND IN WINTER.
- HARVEST SEED AT FROST AND PROPAGATE, IF DESIRED.
- CLUMPS CAN BE DIVIDED AND PLANTED ELSEWHERE.



TAG ALDER

Alnus serrulata



ATTRIBUTES

- FIXES NITROGEN IN THE SOIL
- HOLDS ALLUVIAL SILT IN PLACE, PREVENTS EROSION
- PROVIDES IDEAL HABITAT FOR NESTING BIRDS

MAINTENANCE REQUIREMENTS

- NOT PLANTED, OCCURRING NATURALLY ALONG FIRST CREEK
- SHOULD BE ALLOWED TO GROW FREELY, BUT CUT BACK IF BEGINNING TO INTERFERE WITH PLANTINGS.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.

INDIGOBUSH

Amorpha fruticosa

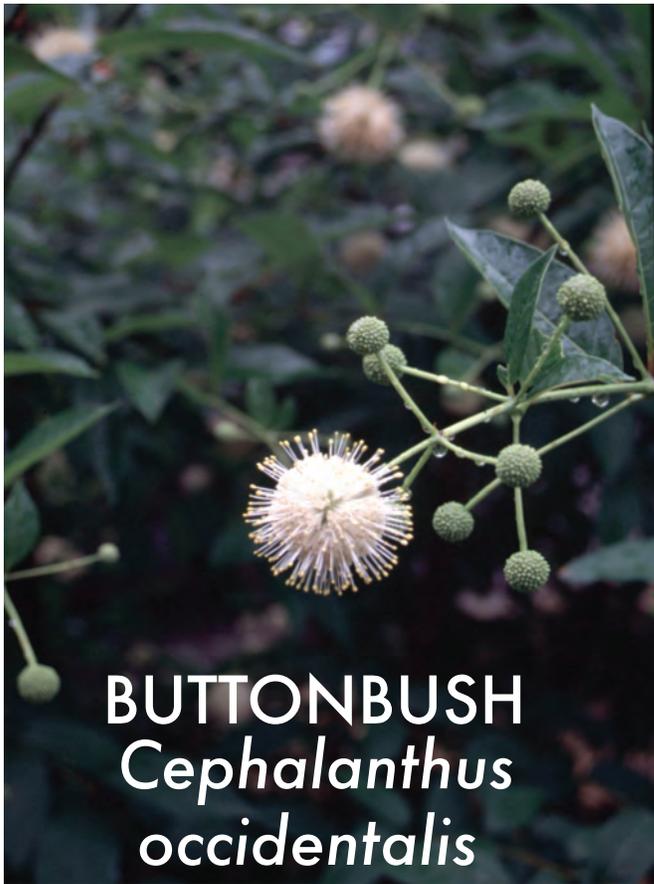


ATTRIBUTES

- FIXES NITROGEN IN THE SOIL
- HOLDS ALLUVIAL SILT IN PLACE, PREVENTS EROSION
- PURPLE AND GOLD FLOWER SPIKES IN LATE SPRING
- PODS PROVIDE FOOD FOR WILDLIFE

MAINTENANCE REQUIREMENTS

- SHOULD BE ALLOWED TO SUCKER AND SPREAD WHERE THERE IS ROOM TO DO SO.
- IF TOO LEGGY AND OBTRUSIVE, CAN BE CUT BACK SIGNIFICANTLY IN THE WINTER.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.



BUTTONBUSH
Cephalanthus
occidentalis



ATTRIBUTES

- ATTRACTS NUMEROUS BIRDS AND BUTTERFLIES
- HOLDS ALLUVIAL SILT IN PLACE, PREVENTS EROSION
- WHITE GLOBULAR FLOWER HEADS IN SUMMER
- PROVIDES IDEAL NESTING COVER FOR BIRDS

MAINTENANCE REQUIREMENTS

- SHOULD BE ALLOWED TO SUCKER AND SPREAD WHERE THERE IS ROOM TO DO SO.
- IF TOO LEGGY AND OBTRUSIVE, CAN BE CUT BACK SIGNIFICANTLY IN THE WINTER.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.



HEARTS-A-BUSTIN'
Euonymus americanus



ATTRIBUTES

- PROVIDES TEXTURAL AND ARCHITECTURAL INTEREST WITH LOOSE GREEN STEMS
- BRIGHT MAGENTA SEED CAPSULES WITH EXPOSED SCARLET SEEDS IN THE FALL

MAINTENANCE REQUIREMENTS

- USE INSECTICIDAL SOAP ON SCALE, IF INFESTED.
- ALLOW TO SUCKER AND SEED ITSELF, WHERE SPACE IS AVAILABLE.
- IF TOO GANGLY OR UNEVEN, SHRUB CAN BE CUT BACK SIGNIFICANTLY, ONCE FRUIT HAS EXPIRED.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.

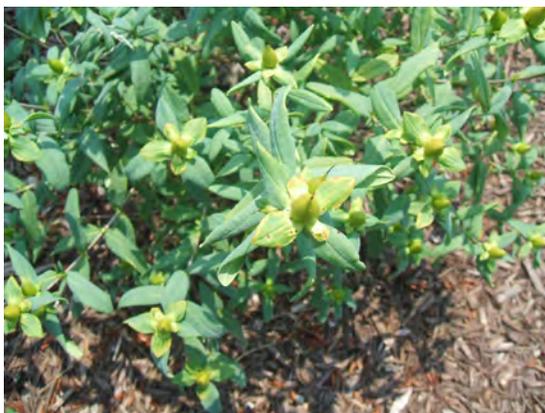
GOLDEN ST. JOHNSWORT

Hypericum frondosum



ATTRIBUTES

- BRIGHT YELLOW FLOWERS IN THE LATE SPRING AND EARLY SUMMER.
- ATTRACTIVE BLuish FOLIAGE
- CINNAMON-COLORED EXFOLIATING BARK PROVIDES WINTER INTEREST



MAINTENANCE REQUIREMENTS

- FEW MAINTENANCE CONCERNS, VERY DROUGHT-TOLERANT AND PEST-FREE.
- MAY NEED OCCASIONAL SHAPING, IF TOO LEGGY OR UNEVEN.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.

FRAGRANT SUMAC *Rhus aromatica*



ATTRIBUTES

- YELLOW BLOOM IN SPRING
- FALL-RIPENING BERRY IS BOTH ORNAMENTAL AND BENEFICIAL TO WILDLIFE
- ATTRACTIVE AUTUMN COLOR FOR THE GROUND PLANE

MAINTENANCE REQUIREMENTS

- 'GRO-LOW' IS THE CULTIVAR USED. PROSTRATE GROWTH HABIT, SHOULD BE ALLOWED TO SPREAD, THOUGH KEPT FROM GROWING INTO OTHER SPECIES.
- TRIM ANY TALL, VERTICAL BRANCHES TO MAINTAIN FOREGROUND EFFECT.
- CAN PRUNE YEAR-ROUND.
- REMOVE DEAD AND DISEASED MATERIAL ANYTIME.



ATTRIBUTES

- YELLOW FLOWER CLUSTERS IN THE SUMMER
- ATTRACTIVE RED BERRIES ARE AN IMPORTANT FOOD SOURCE FOR WILDLIFE
- BRIGHT RED FALL COLOR
- PICTURESQUE ARCHITECTURAL FORM PROVIDES WINTER INTEREST

MAINTENANCE REQUIREMENTS

- SUCKERS FREELY, ALLOW IT TO SPREAD WHERE SPACE IS AVAILABLE.
- CAN BE CUT BACK IF HEIGHT INTERFERES WITH OTHER PLANTINGS.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.



ELDERBERRY

Sambucus canadensis



ATTRIBUTES

- LARGE WHITE FLOWER CLUSTERS IN THE SUMMER, ATTRACTS BUTTERFLIES
- NUMEROUS PURPLE BERRIES ARE BOTH ATTRACTIVE AND BENEFICIAL FOR BIRDS AND HUMANS ALIKE
- HOLDS SOIL, PREVENTS EROSION

MAINTENANCE REQUIREMENTS

- SUCKERS FREELY, ALLOW IT TO SPREAD WHERE SPACE IS AVAILABLE.
- CAN BE CUT BACK IF HEIGHT INTERFERES WITH OTHER PLANTINGS.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.



CORALBERRY
Symphoricarpos orbiculatus



ATTRIBUTES

- FINE TEXTURE AND ARCHING HABIT PROVIDE VISUAL INTEREST
- NUMEROUS CORAL-COLORED BERRIES IN THE FALL THAT PERSIST INTO WINTER
- HOLDS SOIL, PREVENTS EROSION



MAINTENANCE REQUIREMENTS

- SUCKERS FREELY, ALLOW IT TO SPREAD WHERE SPACE IS AVAILABLE.
- CAN BE CUT BACK IF LEGGY, OR IF HEIGHT INTERFERES WITH OTHER PLANTINGS.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.



FREEMAN MAPLE *Acer x freemanii*



ATTRIBUTES

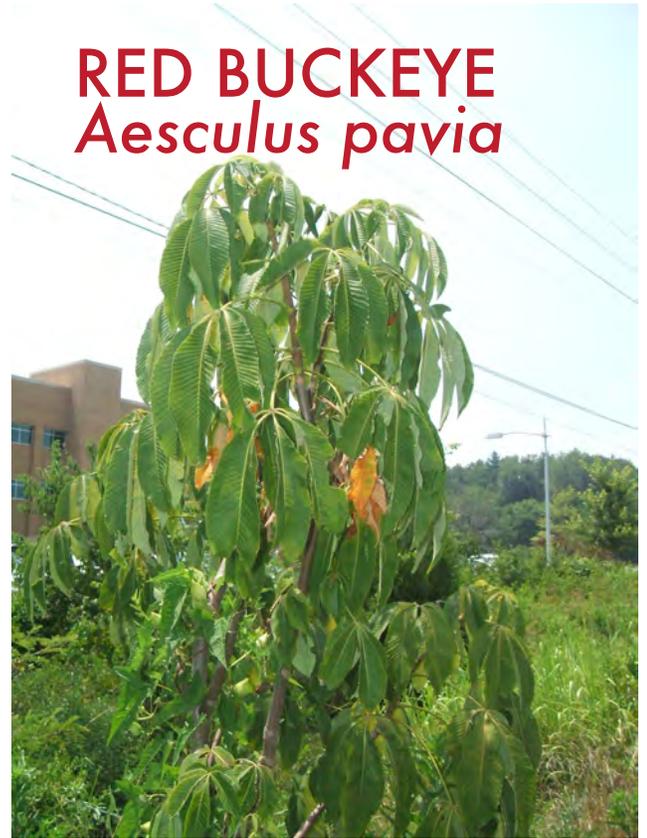
- HYBRID OF RED AND SILVER MAPLE
- PROVIDES SHADE WHEN MATURE
- ATTRACTIVE FALL COLOR
- PROVIDES NESTING HABITAT FOR BIRDS

MAINTENANCE REQUIREMENTS

- REMOVE ANY CROSSING, INWARD-GROWING, OR OBTRUSIVE BRANCHES.
- REMOVE ANY SUCKERS THAT MAY APPEAR FROM THE BASE OF THE TRUNK.
- PRUNE IN THE WINTER.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.



RED BUCKEYE
Aesculus pavia



ATTRIBUTES

- BRIGHT RED FLOWER PANICLES IN SPRING
- ATTRACTS HUMMINGBIRDS

MAINTENANCE REQUIREMENTS

- MAY REQUIRE SUPPLEMENTAL WATER IN THE SUMMER, LEAVES WILL WILT WHEN "THIRSTY".
- REMOVE ANY CROSSING, INWARD-GROWING, OR OBTRUSIVE BRANCHES.
- REMOVE ANY SUCKERS THAT MAY APPEAR FROM THE BASE OF THE TRUNK.
- PRUNE IN THE WINTER.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.

EASTERN REDBUD *Cercis canadensis*



ATTRIBUTES

- BRIGHT PINK FLOWERS IN EARLY SPRING
- PROVIDES SOME SHADE WHEN MATURE
- ATTRACTIVE FALL COLOR

MAINTENANCE REQUIREMENTS

- REMOVE ANY CROSSING, INWARD-GROWING, OR OBTRUSIVE BRANCHES.
- REMOVE ANY SUCKERS THAT MAY APPEAR FROM THE BASE OF THE TRUNK.
- PRUNE IN THE WINTER.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.



FLOWERING DOGWOOD
Cornus florida



ATTRIBUTES

- SHOWY WHITE BRACTS ACCOMPANY INSIGNIFICANT FLOWERS IN SPRING
- BRIGHT RED FRUITS IN FALL FEED NUMEROUS BIRD SPECIES
- ATTRACTIVE PURPLE-RED FALL COLOR
- HANDSOME FORM PROVIDES WINTER INTEREST

MAINTENANCE REQUIREMENTS

- REMOVE ANY CROSSING, INWARD-GROWING, OR OBTRUSIVE BRANCHES.
- REMOVE ANY SUCKERS THAT MAY APPEAR FROM THE BASE OF THE TRUNK.
- PRUNE IN THE LATE FALL OR EARLY WINTER.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.



EASTERN REDCEDAR *Juniperus virginiana*



ATTRIBUTES

- EVERGREEN FOLIAGE PROVIDES WINTER INTEREST
- BLUE FRUITS (CONES) IN FALL FEED NUMEROUS BIRD SPECIES
- PROVIDES EXCELLENT COVER FOR WILDLIFE
- GOOD VERTICAL ACCENT, AND GREEN FOLIAGE CONTRASTS WELL WITH FALL COLOR OF DECIDUOUS TREES AND SHRUBS

MAINTENANCE REQUIREMENTS

- TOUGH AS NAILS: DROUGHT-TOLERANT, RETAINS TIGHT FORM, ALMOST PEST FREE, AND CAN BE 'LEFT ALONE'.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.

SWEETGUM *Liquidambar styraciflua*



ATTRIBUTES

- PROVIDES SHADE WHEN MATURE
- HOLDS RIPARIAN SOILS, PREVENTS EROSION
- ATTRACTIVE SPECTRUM OF FALL COLOR
- LARVAL FOOD FOR LUNA MOTH



MAINTENANCE REQUIREMENTS

- REMOVE ANY CROSSING, INWARD-GROWING, OR OBTRUSIVE BRANCHES.
- REMOVE ANY SUCKERS THAT MAY APPEAR FROM THE BASE OF THE TRUNK.
- PRUNE IN THE WINTER.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.



TULIP POPLAR *Liriodendron tulipifera*



ATTRIBUTES

- PROVIDES SHADE WHEN MATURE
- SHOWY TULIP-LIKE FLOWERS IN THE SPRING
- ATTRACTS BUTTERFLIES AND HUMMINGBIRDS
- BUTTER YELLOW FALL COLOR
- GREAT NESTING COVER FOR CANOPY SPECIES

MAINTENANCE REQUIREMENTS

- REMOVE ANY CROSSING, INWARD-GROWING, OR OBTRUSIVE BRANCHES.
- REMOVE ANY SUCKERS THAT MAY APPEAR FROM THE BASE OF THE TRUNK.
- PRUNE IN THE WINTER.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.



AMERICAN HOPHORNBEAM
Ostrya virginiana



ATTRIBUTES

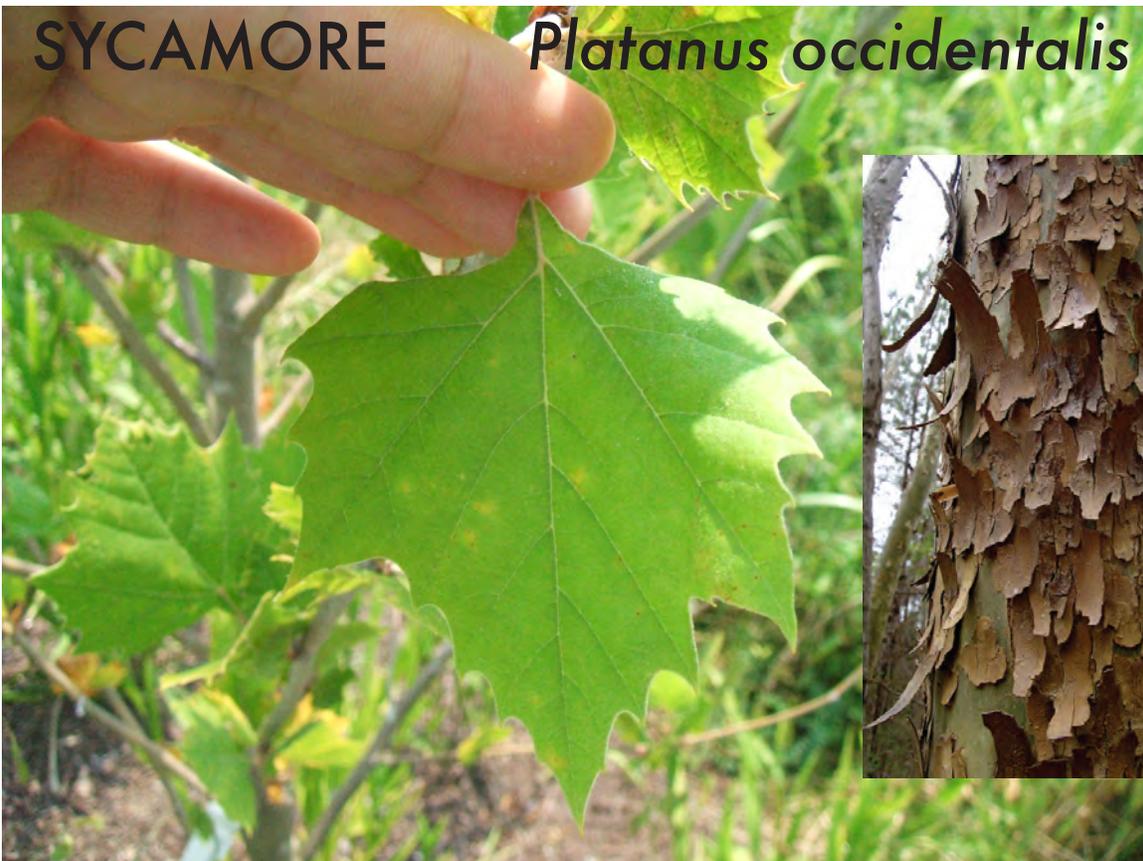
- PROVIDES SOME SHADE WHEN MATURE
- INTERESTING HOPS-LIKE FLOWERS AND FRUIT
- SINUOUS FORM AND EXFOLIATING BARK PROVIDE WINTER INTEREST
- PALE YELLOW FALL COLOR
- GREAT NESTING COVER FOR BIRDS

MAINTENANCE REQUIREMENTS

- REMOVE ANY CROSSING, INWARD-GROWING, OR OBTRUSIVE BRANCHES.
- REMOVE ANY SUCKERS THAT MAY APPEAR FROM THE BASE OF THE TRUNK.
- PRUNE IN THE WINTER.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.

SYCAMORE

Platanus occidentalis



ATTRIBUTES

- PROVIDES SHADE WHEN MATURE
- HOLDS STREAMBANKS, PREVENTS EROSION
- SPREADING FORM AND EXFOLIATING BARK PROVIDE WINTER INTEREST
- GREAT NESTING COVER FOR BIRDS
- RENOWNED ABILITY TO FILTER POLLUTANTS FROM AIR

MAINTENANCE REQUIREMENTS

- REMOVE ANY CROSSING, INWARD-GROWING, OR OBTRUSIVE BRANCHES.
- REMOVE ANY SUCKERS THAT MAY APPEAR FROM THE BASE OF THE TRUNK.
- PRUNE IN THE WINTER.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.



CAROLINA BUCKTHORN
Rhamnus caroliniana



ATTRIBUTES

- ATTRACTIVE GLOSSY FOLIAGE IN SUMMER
- SHOWY BERRIES TURN FROM RED IN THE SUMMER TO BLACK IN THE FALL
- GREAT NESTING COVER FOR BIRDS

MAINTENANCE REQUIREMENTS

- REMOVE ANY CROSSING, INWARD-GROWING, OR OBTRUSIVE BRANCHES.
- REMOVE ANY SUCKERS THAT MAY APPEAR FROM THE BASE OF THE TRUNK.
- PRUNE IN THE WINTER.
- REMOVE DEAD OR DISEASED MATERIAL ANYTIME.

WEEDS: EXOTIC INVASIVE WOODY SPECIES

IDENTIFICATION AND CONTROL



TREE-OF-HEAVEN *Ailanthus altissima*

- Similar in appearance to Sumac (*Rhus*), but base of leaflets are often sparsely toothed, and both leaves and stems have a strong 'rotten peanut butter' odor when crushed. Photograph shows the ripening seeds.
- Since this species often sprouts from root shoots of a specimen and/or has a difficult taproot, the 'cut and paint' method is advised for eradication. Cut the trunk off as close the ground as possible, and immediately treat the stump with a concentration of herbicide suitable for killing woody species.



RUSSIAN or AUTUMN OLIVE

Elaeagnus spp.

- Usually grows as a dense and arching shrub, although young seedlings and shoots may be sparsely foliated. The leaves have a characteristic silver underside, as shown in the photograph to the right, that is often covered with a velvet "fuzz". Some species are thorny, so care is advised when removing.
- Since this species often sprouts from root shoots of a specimen and/or has a difficult taproot, the 'cut and paint' method is advised for eradication. Cut the trunk off as close the ground as possible, and immediately treat the stump with a concentration of herbicide suitable for killing woody species.



CHINESE PRIVET

Ligustrum sinense

- A dense, quickly-colonizing evergreen shrub. Leaves are arranged oppositely along the stem. White flower clusters develop fruits which ripen to a dark blue-black.
- Since this species often sprouts from root shoots of a specimen and/or has a difficult taproot, the 'cut and paint' method is advised for eradication. Cut the trunk off as close the ground as possible, and immediately treat the stump with a concentration of herbicide suitable for killing woody species.
- Young seedlings can be removed by hand pulling or with a device called a Weed Wrench.



JAPANESE HONEYSUCKLE

Lonicera japonica

- A dense evergreen twining vine with characteristic opposite leaves. Blooms are the classic honeysuckle.
- Since this species roots tenaciously and is difficult to pull, a concentrated foliar spray is recommended.



CALLERY PEAR

Pyrus calleryana

- The “wild” form of the popular Bradford Pear, spread by seed from ornamental plantings, dispersed by birds. Quickly forms dense and thorny thickets, crowds out desirable vegetation.
- Since this species is difficult to remove by the roots, the ‘cut and paint’ method is advised for eradication. Cut the trunk off as close to the ground as possible, and immediately treat the stump with a concentration of herbicide suitable for killing woody species.



WEEDS: INVASIVE HERBACEOUS SPECIES

IDENTIFICATION AND CONTROL



COPPERLEAF *Acalypha* spp.



HORSEWEED *Conyza canadensis*



WOODSORREL *Oxalis* spp.



PLANTAIN *Plantago* spp.

- These species are common weeds within the First Creek plantings, all of which can be removed by pulling.
 - If these species have formed sizeable colonies, then spraying may be necessary.
-



FIELD BINDWEED *Convolvulus arvensis* CROWN VETCH *Coronilla varia*

- These species are common vining or twining weeds within the First Creek plantings, both of which have a habit of taking over trees and shrubs in their quest for sunlight.
- Careful removal from trees and shrubs should be followed by a foliar spray treatment, and their tenacity generally warrants several follow-up treatments.



TALL BLUE LETTUCE *Lactuca biennis*



POKEWEED *Phytolacca americana*



CURLY DOCK *Rumex crispus*

- These species all have taproots, and may be difficult to remove by pulling or digging.
- Although a foliar spray is adequate for extermination, the above ground portion may be unsightly, and should be cut back once killed.
- The cut and paint method may also be effective.

CAUTION



BULLTHISTLE *Cirsium vulgare*



WILD CARROT or QUEEN ANNE'S LACE
Daucus carota

- Bullthistle is covered in sharp spines. Spraying is recommended. Once dead, the above ground portion should be cut back and removed, using heavy work gloves.
- Wild Carrot, in the warmer months, is almost always the habitat of choice for chiggers. Avoid contact, spray the foliage, rake away the dead portion or leave it alone. Due to the large taproot (carrot), repeat applications may be necessary.

WEEDS: INVASIVE GRASS SPECIES

IDENTIFICATION AND CONTROL



WILD GARLIC *Allium vineale*

- Often mistakenly called 'Wild Onion', this member of the Lily family has an unmistakable garlic odor. It is a common invader of lawn areas, being most prevalent in cooler weather.
- Clumps multiply via bulbs in the ground, and flowers form seed heads which in turn produce new bulbs.
- This species can be hand-pulled easily, though care should be taken to not leave any bulbs in the ground. Be cautious if seeds are present, as they are easily dislodged from the stem and can sprout upon soil contact.



SWEET VERNAL GRASS
Anthoxanthum odoratum

- These species are all common weeds in landscapes and lawns. Fescue being a typical constituent of most turf, but is spread easily when allowed to go to seed.
- All of these species can easily be removed when young by pulling at the base of the clump. However, they may require spraying when mature.



YELLOW NUTSEdge
Cyperus esculentus



DALLISGRASS
Paspalum dilatatum



BARNYARDGRASS
Echinochloa crus-galli

TALL FESCUE
Schedonorus phoenix
(3 images)

- Care should be taken when removing these grasses if they have set seed. Using a bucket to catch seed, when pulling, is recommended.





JOHNSONGRASS *Sorghum halapense*

- This large, voracious European grass spreads by rhizomes and seed to invade disturbed areas rapidly.
- Although young seedlings and single specimens can be pulled from the ground fairly easily, colonies must be treated with a foliar spray and monitored over several years to ensure a complete kill.
- The most problematic species along the First Creek corridor.



BERMUDAGRASS
Cynodon dactylon

CRABGRASS
Digitaria spp.

- Both species spread aggressively via rhizomes and seed prolifically. They have a tendency to quickly invade mulched areas and clamber over lower plantings, essentially suffocating them.
- Pulling is not recommended, as fragmented sections of rhizome easily regenerate. Spraying and regular monitoring are the only ways to eradicate these species.
- The two most problematic species within the First Creek plantings.

A MATTER OF DISCRETION: INVASIVE NATIVES

IDENTIFICATION AND CONTROL



BOXELDER *Acer negundo*

- Growing naturally along First Creek, this species is an important part of any riparian habitat. Unfortunately, the Boxelder is a prolific self-seeder.
- Seedlings develop a tap root quickly, so spraying or the cut and paint method are advised.



HACKBERRY *Celtis occidentalis*

SUGARBERRY *Celtis laevigata*

- Growing naturally along First Creek, the berries of mature specimens are a favorite food of birds, who then disperse the seed in adjacent areas.
- Seedlings develop a tap root quickly, so spraying or the cut and paint method are advised.



GREEN ASH *Fraxinus pennsylvanica*

- Growing naturally along First Creek, this species is an important part of any riparian habitat. Unfortunately, this species is also a prolific self-seeder.
- Seedlings develop a tap root quickly, so spraying or the cut and paint method are advised.



BLACK WALNUT *Juglans nigra*

- Growing naturally along First Creek, this species is an important food source for wildlife. Squirrels often cache the seeds in soil, where they germinate.
- This species is easily recognized by its "bitter" aroma when the leaves are crushed.
- Seedlings develop a tap root quickly, so spraying or the cut and paint method are advised.



POISON IVY *Toxicodendron radicans*

- The problems with this species are apparent in its namesake, and extra caution should be used when handling this species.
- Spraying is advised, as safe handling without transferring the oils is nearly impossible. Rake away dead portions.
- Although it is a nuisance, Poison Ivy is not only aesthetically pleasing (best fall color of any native plant); its berries are one of the most nutritious food sources for birds and mammals alike.



BLACKBERRY, RASPBERRY (BRAMBLES)

Rubus spp.

- A favorite food source for humans and wildlife alike, these voracious thorny plants spread both by runners and widely-dispersed seed.
- Due to their inability to be pulled, foliar spray and cutting back of the dead material are the only management option.



WILD GRAPE *Vitis spp.*

- Much like the Brambles, the Wild Grapes are a favorite food source for humans and wildlife. Similarly, they also spread by underground runners and a thorough dispersal of seed.
- Removing this species from any planted trees is crucial. Only larger trees can tolerate being inhabited by these cumbersome vines.
- Only the youngest seedlings can be pulled. Otherwise, repeated applications of a foliar spray are recommended, though larger vines can be treated with the cut and paint method.





BROOMSEDGE *Andropogon virginicus*

- Similar in appearance to Little Bluestem, this very common native grass is distinguished by its lack of bluish coloration during the growing season.
- This species should be allowed to remain within the unplanted riparian zone, as it provides great cover and nesting material for wildlife.
- Decidedly difficult to pull, Broomsedge must be sprayed, preferably before it produces seed, which is produced in abundance and easily dispersed by wind.



GOLDEN TICKSEED *Coreopsis tinctoria*

- Quite lovely in flower, this plant should be allowed to seed itself into areas where space is available.
- Pull or spray if the seedlings begin to compete with the plantings.



EVENING PRIMROSE *Oenothera biennis*

- Also quite lovely in flower, this plant should be allowed to persist in the riparian area or where space is available between the plantings.
- Weakly branching from the base and having a considerable taproot, Evening Primrose is almost impossible to pull.
- A foliar spray is recommended, followed by the cutting back of the above ground parts. The cut and paint method is also effective.



GOLDENROD *Solidago spp.*

- The bright harbinger of Fall, Goldenrod also provides many a wintertime snack for birds. Unfortunately, it is a prolific seeder and can invade a disturbed area quite quickly.
- Allowing some colonization in the open areas behind the plantings is OK, but pulling it out of the foreground plantings is advised. Spraying may be necessary.

MAINTENANCE CALENDAR

FIRST CREEK PLANTINGS

JANUARY

- PRUNE or CUT BACK TREES AND SHRUBS, CONSULT SPECIES REQUIREMENTS
- CUT BACK LITTLE BLUESTEM AND PRAIRIE DROPSEED TO 1" OFF OF GROUND

FEBRUARY

- CUT BACK DEAD ABOVE GROUND PORTION OF PURPLE CONEFLOWER AND ORANGE CONEFLOWER, DISTRIBUTING ANY REMAINING SEED IN THE ADJACENT AREA.

MARCH

- BEGIN MONITORING FOR WEEDS. LATE WINTER/EARLY SPRING IS CONSIDERED "COOL SEASON", AND SPECIES SUCH AS WILD GARLIC OR TALL FESCUE MAY BE EMERGING. PULL AS NECESSARY.
- APPLY MULCH IF NEEDED.

APRIL

- PULL OR SPRAY EMERGING SEEDLINGS OF WEED SPECIES.
- SURVEY TREES FOR EMERGING VINES AT BASE, SPRAY WHEN WEATHER ALLOWS.
- FLAGGING OF EMERGING PLANTINGS MAY BE NECESSARY, SO AS TO AVOID CONFUSION IF HERBICIDE IS BEING APPLIED.
- EXCELLENT TIME TO REMOVE WOODY EXOTIC INVASIVES, AS IDENTIFICATION IS EASIER AND EMERGING LEAVES ARE MORE RESPONSIVE TO HERBICIDE.

MAINTENANCE CALENDAR

FIRST CREEK PLANTINGS

MAY

- CUT BACK RIVER OATS TO 1' ABOVE GROUND TO PROMOTE COMPACT GROWTH.
- CONTINUE MONITORING WEEDS, AS "WARM SEASON" SPECIES WILL BE EMERGING AT THIS TIME.
- BEGIN MONITORING FOR INSECT PESTS, USING INSECTICIDAL SOAP AS NECESSARY.
- HERBACEOUS PERENNIALS CAN BE DUG UP, DIVIDED, AND PLANTED ELSEWHERE, IF NEEDED.

JUNE

- CONTINUE MONITORING FOR WEEDS.
- CONTINUE MONITORING FOR VINES.
- CONTINUE MONITORING FOR INSECTS.

JULY

- CONTINUE MONITORING FOR WEEDS.
- CONTINUE MONITORING FOR VINES.
- CONTINUE MONITORING FOR INSECTS.
- SUPPLEMENTAL WATERING MAY BE NECESSARY, ESPECIALLY IF EXCESSIVELY HOT AND DRY. IF SO, BE SURE TO SOAK PLANTS AND ADJACENT MULCH AREAS, AS THE MULCH CAN WICK AWAY MOISTURE. DO NOT WATER THE "TOPS" OF THE PLANTS, WATER NEAR THE BASE, AS WATER DROPLETS ON LEAVES CAN MAGNIFY SUNLIGHT AND BURN THE FOLIAGE.

AUGUST

- CONTINUE MONITORING FOR WEEDS.
- CONTINUE MONITORING FOR VINES.
- CONTINUE MONITORING FOR INSECTS.
- SUPPLEMENTAL WATERING, IF NEEDED.

MAINTENANCE CALENDAR

FIRST CREEK PLANTINGS

SEPTEMBER

- "COOL SEASON" WEEDS BECOME PREVALENT AGAIN, MONITOR AND TREAT AS NEEDED.
- CONTINUE MONITORING FOR WARM SEASON WEEDS AND VINES.
- CONTINUE MONITORING FOR INSECTS.
- SUPPLEMENTAL WATERING, IF NEEDED.

OCTOBER

- DIG, DIVIDE, AND PLANT HERBACEOUS PERENNIALS AND GRASSES, IF NEEDED.
- LAST CHANCE TO KILL EXOTIC INVASIVES WHILE IDENTIFICATION IS EASY.
- CONTINUE MONITORING FOR INSECTS AND WEEDS.

NOVEMBER

- CAN BEGIN CUTTING BACK OR PRUNING TREES AND SHRUBS ONCE LEAVES HAVE DROPPED.
- ADD MULCH, IF NEEDED.
- CUT BACK HERBACEOUS PERENNIALS, EXCEPT FOR PURPLE CONEFLOWER AND ORANGE CONEFLOWER, ONCE FROST HAS KILLED ABOVE GROUND PORTIONS.

DECEMBER

- PRUNE OR CUT BACK TREES AND SHRUBS.
- CUT BACK RIVER OATS TO 1" OFF OF GROUND, DISTRIBUTE CUT PORTIONS AMONGST PLANTINGS OF THE SAME SPECIES, AS SOME SEED WILL STILL BE PRESENT.

WEEDS: REMOVAL METHODS & FLAGGING SYSTEM

S

SPRAY

- Apply the appropriate concentration of herbicide to the foliage when there is no wind or rain. Herbaceous species generally require less concentrated mixture than woody species. Consult the label on the herbicide container for mixing ratios. Adding a dye tracer to the mixture can help one keep track of what has been sprayed and what hasn't.

P

PULL

- Perfect for small herbaceous weeds and clump grasses. Make sure to grab firmly at the base of the plant, pulling steadily. Digging with a hand trowel around the root system greatly aids this process. If it takes more than three tries to pull something, dig it out or use another method.

C/P

CUT/PAINT

- Cut the trunk or stem off at ground level with loppers or a saw. Immediately "paint" the stump with a strong concentration of herbicide. Waiting until later to treat a cut stump can prove ineffectual, as many plants quickly create a seal over the exposed portion. Consult the label on the herbicide container for mixing ratios. Adding a dye tracer to the mixture can help one keep track of where the treatment has already been applied.

!

PAY ATTENTION

- Areas marked by this symbol are where a clear understanding of identification features are important. There may be a weed that looks similar to an adjacent planted species, or weeds have completely engulfed a planted species. If consulting the maintenance information is not helpful, ask a specialist for assistance.