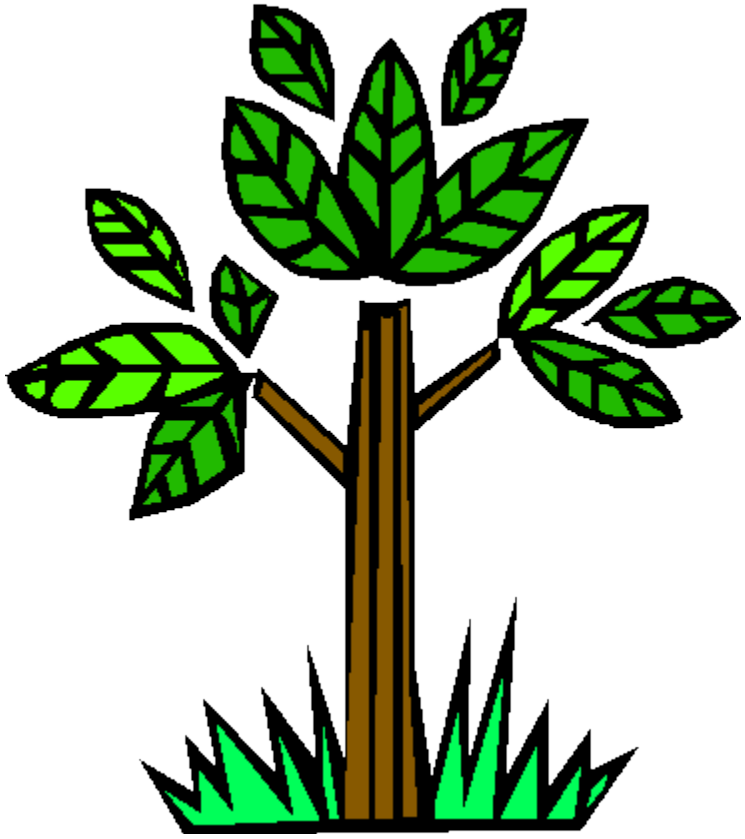
Northeast Community Park Arboretum

and

Cecil Best Birding Trail



Northern Flint Hills Audubon Society

Welcome…

…to the Northeast Community Park Arboretum and Cecil Best Birding Trail. The vision for this section of the park began with a 1992 citizen survey, which included trail walking and hiking, wildlife observation, environment and habitat trails, and nature and a discovery center among the top ten desires for the area.

When work began in 2000, the Blue Earth Citizen's Group, a planning committee for the park, teamed up with the Northern Flint Hills Audubon Society in an agreement

to restore and maintain a natural prairie and woodland. The NFHAS owned the land adjacent to the park, previously dedicated as the Cecil Best Memorial Birding Trail, which conveniently tied into the plans for the restored arboretum.

One of the main goals agreed upon when establishing these areas was to promote nature education: to spread knowledge of the necessity, beauty, and vulnerability of the natural environment.

With this brochure, we hope to help with that goal by providing information about the trees that can be found in the park. This, in turn, will hopefully spark your interest and desire to seek more knowledge on the topic, as well as help you foster an affinity for similar projects.

Thanks to…

The following sources were used in the production of this brochure. Many thanks for their assistance.

"Dutch Elm Disease" produced by Cleora J. D'Arcy of the University of Illinois for the American Phytopathological Society, and located at http://www.apsnet.org/education/LessonsPlantPath/DutchElm/top.htm

"Golden Currant," available at http://www.calflora.net/bloomingplants/goldencurrant.html

"Invasives on Web," found on the Nature Conservancy website at http://tncweeds.ucdavis.edu/esadocs/ulmupumi.html

Kansas Forest Service, 2610 Claflin, Manhattan, KS, 66502-2798; 785-532-3300; http://www.kansasforests.org/

"Ornamental Plants plus Version 3.0" produced by Michigan State University Extension and available at http://www.msue.msu.edu/msue/imp/modzz/masterzz.html

"Siberian Elm," which can be found on the Virginia Tech Forestry Department website at http://www.cnr.vt.edu/dendro/dendrology/syllabus/upumila.htm

"Siberian Elm," which can be found on the Wisconsin Department of Natural Resources website at http://www.dnr.state.wi.us/org/land/er/invasive/factsheets/elm.htm

"What Tree Is It?" produced by the Ohio Public Library Information Network (OPLIN) and available at http://www.oplin.lib.oh.us/products/tree/index.html

For the kids…

Choose two different species of trees and list three differences:

1. _____
2. _____
3. _____

Using those same two trees, list three similarities

1. _____
2. _____
3. _____

Compare those trees to the pictures in this brochure. What kind of trees do you think they are?

1. _____ 2. _____

Have you seen or heard any animals? _____

What do you suppose would happen to those animals if the trees weren't here?

_____

How do these trees help provide a home and food for the animals who live here?

_____

Look for (but don't disturb) places where the animals might have homes.

Try to identify things that the animals might eat.

Trees You'll Find Here

NE Community Park Arboretum:

Cecil Best Birding Trail:

American Plum

Prunus americana

The American Plum (a.k.a.: Wild Plum) is naturally occurring throughout most of Kansas, though also is a common candidate for planting.

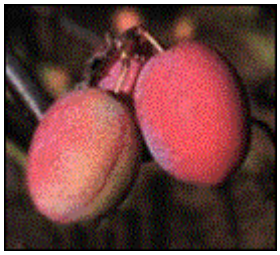
Mature Size: 6 – 12 ft. tall; thickets up to 35 ft. wide

Growth Rate: 12 – 18 in./year

Characteristics:

Leaves	Alternate; 2.5 – 4 inches long; oval or elliptic; tapered tips and sharp teeth along edges
Fruit	White flowers (early April); Red/orange fruit (August); whitish film; .75 – 1 in. long
Stem	Dark brown, scaly bark; twigs rigid/spine-tipped

Common uses:



Ideal for windbreaks due to dense growth
Great wildlife habitat due to thorny thicket tendencies and edible fruit
Water erosion control: can tolerate several days of flooding
Used for wines, jams and jellies

Other traits:

Grows best in deep, moist soils
Space 4 – 6 ft. apart
Plantings: 1-yr-old, bare root seedlings 18 – 24 in. tall

Glossary

Asymmetrical- not symmetrical; irregular shape or outline

Leaflet- one of the segments of a compound leaf; a small leaf or leaf-like part

Ornamental- a tree used for the purpose of decoration

Palmately- having three or more veins, leaflets or lobes radiating from one point

Petiole- the stalk that attaches a leaf to the stem, twig or branch

Pinnately- having leaflets arranging on opposite sides of a common axis or vein

Root suckers- secondary root produced from that base or roots of a woody plant

Rust- a variety of minute mold or fungus, using multiple plant species during different stages of life

Serrate- having an edge with small, sharp, tooth-like projections

Shade intolerant- species that does not prosper when in shady conditions

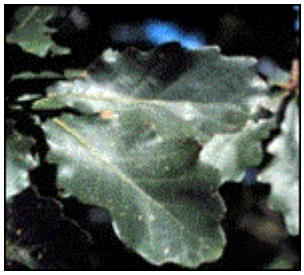
Shade tolerant- species that continues to prosper despite shady conditions

Symmetrical- having parts on one side corresponding to parts on the other side

Windbreak- a row of trees used to soften or break the force of the wind

Swamp White Oak

Quercus bicolor



The leaves of the Swamp white oak give the tree its name. They have a dark green upper surface, but underneath are whitish (unlike other oaks). Also, when the dark brown bark is peeled away, a lighter surface is exposed.

Mature Size: 50 – 80 ft. tall

Growth Rate: 12 – 18 in./year

Characteristics:

Leaves	Broad; flat; rounded teeth; under surface is downy
Fruit	Acorn without fringe; on 1.5 – 3 in. stalk
Stem	Dark brown bark; peels away in ragged curls; lighter colored bark underneath

Common uses:

Hardwood flooring
Native American used acorns to make flour
Native Americans and settlers both boiled acorns to use as food
Food for wildlife

Other traits:

Close-grained, strong wood
Similar to, though more knotty than, White Oak
As name implies, prefers moist environments

Boxelder

Acer negundo

The Boxelder (a.k.a.: Ash-leafed Maple) prefers moist bottomlands along streams, ponds and swamps. It has a relatively short life span, especially considering its susceptibility to insects.

Mature Size: 50 – 75 ft. tall

Growth Rate: more than 18 in./year

Characteristics:

Leaves	Broad; flat; pinnately compound; toothed edges; non-uniform leaflets
Fruit	Paired wings less than 45° apart; 1.5 – 2 in. long
Stem	Relatively light/weak

Common uses:
Pulp for paper products
Cheap furniture/woodenware
Shade
(Due to weak wood and insect susceptibility, limited uses)

Other traits:
Weak wood
Susceptible to insects (especially Boxelder bug)
Use is illegal in some locations

Bur Oak

Quercus macrocarpa

The Bur Oak is native to eastern Kansas and tends to become quite massive during its long life. Its many uses make it a popular tree, widely distributed around the state.

Mature Size: 50 – 80 ft.; crown spread: 40 – 60 ft.
Growth Rate: initially slow, though potentially 2 – 3 ft./year after well-established
Characteristics:

Leaves	Broad; flat; 6 – 10 in. long; 4 – 5 in. wide; pinnately lobed; smooth without bristle tips; main vein ends in lobe; large end lobe
Fruit	Acorn; cup w/ fringe
Stem	Young twigs light brown: smooth; corky ridges after second year; bark of older trees dark w/ deep vertical furrows

Common uses:
Multi-row windbreaks (w/ adequate spacing)
Multiple lumber products
Acorns are common food for wildlife

Other traits:
Shade intolerant, so spacing is important
Hearty and disease resistant

Silver Maple

Acer saccharinum

The Silver Maple is named for its leaves, which show their silvery undersides when blown by the wind. It also has characteristic scaly bark, giving it a "shaggy" appearance.

Mature Size: 70 – 80 ft. tall; 50 – 60 ft. diameter
Growth Rate: 2 – 4 ft./year
Characteristics:

Leaves	Broad; flat; 4 – 7 inches long; palmately lobed; V-shaped notches; light green above, silvery below
Fruit	Flowers in early spring; winged seeds produced in pairs
Stem	Scaly; flakes off with age

Common uses:
Good for interior windbreak rows
Firewood: moderate heat, fast growth
Cheap furniture, paneling, pallets

Other traits:
Iron chlorosis, resulting from a lack of available iron in the soil, limits the use of silver maple in western Kansas.

No know serious insect/disease infestation problems
Sprouts vigorously from the cut stump for future wood production

Red Mulberry

Morus rubra

The Red Mulberry is popular due to its edible fruit, though it has many other uses, too. It can be found from Kansas south through Mexico and East to the Atlantic.

Mature Size: 50 – 70 ft. tall
Growth Rate: Fast
Characteristics:

Leaves	Broad; flat; fine, double teeth; symmetrical, heart-shaped base
Fruit	Tightly-packed seeds
Stem	Dark brown; furrowed into thin plates; peels off in long flakes

Common uses:
Furniture, tools
Fence posts
Berries eaten by humans and wildlife

Other traits:
Wood is soft but tough – very durable when in contact with ground
Found in hardwood forests of bottomlands and foothills

Chokecherry

Prunus virginiana

The Common Chokecherry tends to remain small, sometimes even shrub-like. Though the wood lacks commercial value due to its small size, the live tree is valuable habitat for wildlife.

Mature Size: 6 – 20 ft. tall; 2 – 6 ft. diameter

Growth Rate: 12 – 18 in./year

Characteristics:

Leaves	Broad; flat; less than 5 in. long; fine, double teeth; oval; smooth; pointed tip; usually 2 prominent glands on petiole near blade
Fruit	Dense clusters of white flowers (May); 4 – 6 in. clusters black or red round fruits; fruit has pit
Stem	Prominent horizontal lenticels

Common uses:

Very popular wildlife habitat due to food and cover qualities
Dense growth good for outer rows of windbreaks
Attractive white flowers
Root suckers stabilize stream banks
Fruit used in jams and jellies

Eastern Cottonwood

Populus deltoids

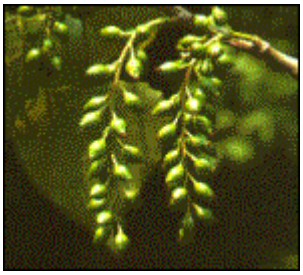
The Eastern Cottonwood, occurring throughout the Kansas, is the state's official tree. It is North America's largest variety of poplar tree, capable of reaching heights well over 100 ft.

Mature Size: 70 – 100 ft. tall; 50 – 70 ft. diameter

Growth Rate: 8 ft./year (w/ adequate moisture)
Characteristics:

Leaves	Broad; flat; triangular; pointed tips; broad base; 2.5 – 5 in. long/wide
Fruit	Flowers appear before leaves (April); male/female on separate trees; "cotton" produced by female trees released in May/June
Stem	Bark yellow-green and smooth when young; gray w/ deep furrows and flat ridges when old

Common uses:
Pulp and low-grade construction
Fast growth aids firewood production
Cover for large and small wildlife
Can be used for windbreaks, but should be well-spaced



Other traits:
Can survive long periods of partial flooding
Soft, light and weak wood
Several insect and disease pests

Eastern Redbud

Cercis canadensis

The Eastern Redbud is native in the eastern third of Kansas, and is commonly used as an ornamental. It is valued for its bright pink flowers in the Spring.

Mature Size: 10 – 20 ft. tall; 15 – 20 ft. diameter
Growth Rate: Moderate
Characteristics:

Leaves	Broad; flat; dark green; heart-shaped; simple; alternate on stem; 2.5 – 5 in. long
Fruit	2.5 in. long bean-like pod
Stem	Reddish when young; turns darker and forms loose thin scales with age

Common uses:
Good for exterior leeward side of windbreak
Spring color

Honey Locust

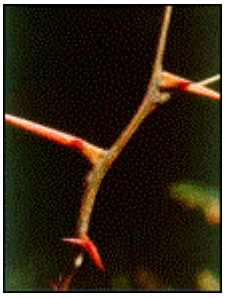
Gleditsia triacanthos

The thorns that grow on some – though not all – Honey Locusts can be quite distinctive in their unabashed branching style. This plant, too, is valuable for many reasons.

Mature Size: 75 – 80 ft. tall
Growth Rate: fast
Characteristics:

Leaves	Broad; flat; pinnately compound; smooth margins; some double compound
Fruit	In capsule or flat pod with wavy edges
Stem	Large trunk; thorny clumps

Common uses:
Posts, rails, railroad ties
Honeybees feed on nectar
Cattle feed on seed pods
Seeds are food for wildlife



American Elm

Ulmus americana

The American Elm (a.k.a.: White Elm, Water Elm) is the largest and most widespread elm in the United States. The Dutch Elm Disease wreaked havoc among this species earlier through the 1900's and remains a very destructive disease.

Mature Size: 75 – 100 ft. tall

Growth Rate: 12 – 18 in./year

Characteristics:

Leaves	Broad; flat; fine, double teeth; small teeth between larger teeth; asymmetrical base
Fruit	Single winged; oval to circular; hairy edges
Stem	Divided trunks: vase-like appearance;

Common uses:

Shade and ornamental uses
Food for wildlife
Furniture, sturdy containers, railroad ties

Other traits:

Strong, hard wood
Dutch Elm Disease destroyed more than 40 million in U.S.
Prefers moist bottomlands and ravines

Siberian Elm

Ulmus pumila

The Siberian Elm differs from the American Elm with its smaller leaves, which also tend to be more symmetrical and only once serrate.

Mature Size: 50 – 75 ft. tall
Growth Rate: more than 18 in./year
Characteristics:

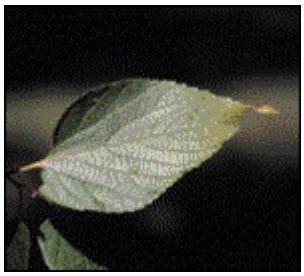
Leaves	Broad; flat; single teeth; small teeth between larger teeth; asymmetrical base
Fruit	One circular or ovate seed; smooth surface
Stem	Gray or brown bark with shallow furrows

Common uses:
Fast growth for "instant shade"
Windbreaks
Nesting and habitat

Other traits:
Drought tolerant
Brittle wood
Extremely susceptible to insect, disease, and herbicide damage
Often confused with Chinese Elm (Ulmus parvifolia)

Hackberry

Celtis occidentalis



Hackberry is a versatile tree, though susceptible to insects and disease. Its growth is slow at first, but speeds up substantially after a few years.

Mature Size: 60 – 70 ft. (on favorable soils)
Growth Rate: 12 – 24 in./year after a few years
Characteristics:

Leaves	Broad; flat; alternately arranged on twig; 2.5 – 4 in. long; 1.5 in. wide; small teeth on edge
Fruit	Has pit; dark purple
Stem	Grayish and rough; wart-like projections

Common uses:

Versatile in windbreaks: interior, exterior, single-row
Furniture, boxes, crates, pallets
Food for wildlife

Other traits:

Can tolerate drought conditions, though grows best in deep, moist, fertile soils
Susceptible to a variety of insect attacks, which can cause disfiguration of leaves and branches (called a "witch's broom")

Green Ash

Fraxinus pennsylvanica

The Green Ash (a.k.a.: Red Ash) is a versatile plant in growth and as timber. It can be found naturally in Kansas along streams and bottomlands.

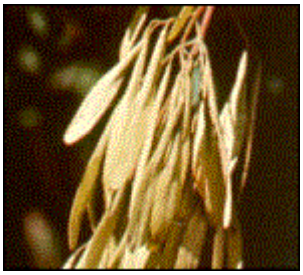
Mature Size: 35 – 45 ft. tall; broad, irregular crown

Growth Rate: 12 – 18 in./year (with good management)

Characteristics:

Leaves	Broad; flat; pinnately compound; pointed leaflets w/ small teeth along edges
Fruit	Male and female on separate trees; flat-winged seed 1 – 2 in. long
Stem	Ashy gray; furrowed into closed diamond shaped patterns separated by narrow interlacing ridges

Common uses:
Versatile in windbreaks: interior, exterior, single-row
Paneling, furniture, tool handles
Firewood: medium growth rate and heat yield



Other traits:
Once established, will withstand seasonal droughts/upland soils
Broad, irregular crown

Golden Currant

Ribes odoratum

The Golden Currant is a large shrub from the gooseberry family, differentiated in the end by the absence of prickles on the stems of its' fruits.

Mature Size: 3 – 5 ft. tall
Growth Rate: 12 – 18 in./year
Characteristics:

Leaves	Rounded or triangular; 3 – 5 lobes
Fruit	Yellow flowers (May); rounded, edible fruit (purple-black when ripe)
Stem	No thorns

Common uses:
Habitat and food for wildlife
Good for outside row of windbreaks, though poor for single-row windbreaks
Fruit used in pies, jams and jellies

Other traits:
Prefers well-drained soils – common in sandy areas
Often found in loose, open thickets
Especially common in central Kansas
Intermediate host for rust that attacks 5-needle pine trees