Scrappy Trees: Raw and Exposed

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In 2007, several UW Extension educators attended a horticultural tour of the Cheyenne Horticultural Field Station as part of training for the Profitable and Sustainable Agricultural Systems team. The focal point was the trees of the field station. The trees were planted from the mid-1930s to the early 1950s for research purposes on the station. In the 1950s, the station changed its focus and the trees were left to fend for themselves. This bulletin consists of a compilation of pictures taken during that 2007 tour and pertinent information to help in tree selection. The pictures are of the raw and exposed trees. That is to say that since the late 1950s, they had not been pruned or received any other special care. The uniqueness of this publication is that the trees are seen at their worst yet they are amazing trees that can add variety and stability to a landscape. A brief history of the station from the USDA-ARS is below.

The Cheyenne Horticultural Field Station and High Plains Grasslands Research Station

An experiment station near Cheyenne was authorized March 19, 1928. Congress directed the U.S. Department of Agriculture to establish the station to experiment with and propagate flowers, vegetables, and shade, fruit, ornamental, and shelterbelt trees, shrubs, and vines adapted to the conditions and needs of the semiarid or dry land regions of the U.S. The station was named the Central Great Plains Field Station and was to cooperate with the Northern Great Plains Field Station at Mandan, North Dakota, and the Southern Great Plains Field Station at Woodward, Oklahoma. Construction began June 1928. The first superintendent was Robert Wilson from 1928 to 1930.

In 1930, the station was renamed the Cheyenne Horticultural Field Station, and A.C. Hildreth was named superintendent. The first plantings of trees, shrubs, fruits, and vegetables were made in 1930, and building construction was completed in 1931. A Civilian Conservation Corps camp of 200 men opened up on the station in 1935. In seven years, the CCC built roads, more than 2 miles of concrete-lined irrigation ditches, a water and septic system, and planted thousands of trees and shrubs.

More than 1,300 varieties of tree fruits, (apples, pears, plums, cherries, etc.) and 300 varieties of small fruits (raspberries, strawberries, currants, and gooseberries) were tested for hardiness to drought and cold.

Research the station personnel conducted slowly changed over the years and in 1974 the station’s mission changed from horticulture and shelterbelt research to livestock grazing management, mined land reclamation, and water conservation research. The name changed to the High Plains Grasslands Research Station.

Although the focus of the station has changed, you can still see the many acres of trees that were researched. Next to these trees are plaques giving a small description of each. Many of the trees at the station are included in this bulletin.
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American Linden or Basswood
*Tilia americana*

**General Description**
The American linden or basswood is a medium to large-sized deciduous tree grown throughout the country. The tree is tall with many low-hung, slender, spreading branches and a rounded crown. These trees reach heights of 60 to 80 feet and have a spread one-half to two-thirds the height of the tree. Occasionally, they can reach heights of 100 feet or more.

**Flowers**
The flowers of the American linden are a perfect pale yellow color about ½-inch wide and are fragrant. The bracts of the flowers are shaped like a spatula and are 3 to 4 inches long. Bees supposedly make the finest honey from these flowers.

**Fruit**
The fruit of the American linden is a non-ornamental, nut-like fruit ½- to ¾-inch long, with a hard shell.

**Hardiness**
Zone 3b to 8(9)

**Diseases and Insects**
The disease and insects that can attack these trees are leaf bite, canker, leaf spots, powdery mildew, Verticillium wilt, linden aphid, elm calligrapha, European linden bark borer, linden borer, caterpillars, basswood leaf miner, elm sawfly, thrips, galls caused by Eriophyid mite, scales and linden mite can be a serious problems; the foliage-feeding insects can damage the trees as they strip almost all foliage. If grown in a healthy situation it, is rare for the American linden to get any of these diseases.

**Landscape Value**
These trees are better used in large landscape areas like parks and golf courses. They make good wind blocks and protection for smaller trees.

**Culture**
The American linden prefers deep, moist, fertile soils but will grow in drier, heavier soils. It transplants readily and is pH adjustable. Grows in full sun or partial shade.

**Native Habitat**
Canada to Virginia and Alabama, west to North Dakota, Kansas and Texas. In the broadest interpretation ranging from Maine to Florida, west to eastern North Dakota, south to Oklahoma and Louisiana. Introduced 1752.
Amur Maple
Acer ginnala

General Description
The Amur maple is a multi-stemmed, large shrub or small tree. Usually 15 to 18 feet in height but can reach up to 25 feet. Spread is equal to or exceeds tree height. The shape varies and can be tailored to landscapes by pruning. Leaves are dark green on top and light green on the underside.

Flowers
The flowers on the Amur maple are yellowish white and fragrant as the leaves unfurl in April to May. They are one of the few maples with flowers.

Fruit
The fruit is samara and is ¾- to 1-inch long. Color ranges from red to brown; red color most vibrant in June and July. The fruit ripens in September to October.

Hardiness
Zone 3 to 8 but does not perform as well in zones 7 and 8

Disease and Insects
Relatively free of problems but can be affected by similar pests of the more common silver maple. However, iron chlorosis can often be a problem in clay soils and Verticillium can also affect some varieties.

Landscape Value
Can be used as a patio tree or along buildings and walls. Does better in shade than most maples. Good for aboveground container use.

Culture
The Amur maple is easily transplanted and is quite adaptable to a wide range of soils and pH conditions. Does best in moist, well-drained soils. It can be grown as a container plant. It prefers full sun or light shade.

Native Habitat
Central and Northern China, Manchuria, and Japan. Introduced in 1860.
Apache Plume

Fallugia paradoxa

General Description

The Apache plume is a multi-branched shrub that usually reaches about 4 to 6 feet in height and has a spread about the same. In ideal conditions it can reach 8 feet in height and spread. It is also a member of the rose family. The leaves are small and are divided into about five lobes. This gives the plant a delicate look.

Flowers

The 2-inch flowers on the Apache plume are white and rose-like, and they bloom during the spring and persist from June to August.

Fruit

The fruit is a feathery fruit or seed and appears on the flowers in the summertime. The Apache plume was given its name because its fruit is pinkish-purple in color, is about 2½ inches in diameter, and resembles an Apache headdress.

Hardiness

Zone 4 to 8

Disease and Insects

No significant diseases or insects.

Landscape Value

Works great for erosion control because of its spreading root system. Also provides refuge for wildlife. Can be used as a hedge or screen.

Culture

The best time to plant Apache plume is fall, and early spring is the next best time. It prefers well-drained soils but will tolerate different types of soils. It is difficult to transplant a mature Apache plume once established.

Native Habitat

Southwestern United States
Blue Velvet Honeysuckle
*Lonicera korolkowi*

**General Description**
The Blue velvet honeysuckle is a loose, open, irregular shrub with spreading and arching branches. It grows to 6 to 15 feet with a spread equal to the height. The leaves are ovate to elliptic with a pale, bluish-green hue.

**Flowers**
The flowers are a pinkish rose color and are about ½-inch long. Bloom in May to June.

**Fruit**
The fruit is a bright red berry that matures in July and August.

**Hardiness**
Zone 3 to 7

**Disease and Insects**
No serious insect or disease problems known to affect this species.

**Landscape Value**
Can be used to add beauty to an area. Also can be used as a wind block or screen.

**Culture**
Blue velvet honeysuckle is more difficult to establish than other honeysuckles and should be transplanted balled-and-burlapped. Prefers full sun and will tolerate partial shade. Soil should be sandy or clay loam. Does best with dry to moderate watering conditions.

**Native Habitat**
Soviet Central Asia bordering parts of Afghanistan and Pakistan. Introduced in 1880.
Cheyenne Privet

*Ligustrum vulgare* ‘Cheyenne’

*Note: In the photo, the Cheyenne Privet is the larger shrub in the background*

**General Description**
The Cheyenne privet is a shrub with many irregular spreading branches. They grow to 12 to 15 feet with a spread equal or exceeding the height. The leaves are dark green with an oblong-ovate to lanceolate shape.

**Flowers**
The flowers are white and very fragrant.

**Fruit**
The fruit is a lustrous black color and is about ⅓ inch in length. They are a berry-like drupe that ripens in September and persists throughout March or later.

**Hardiness**
Zone 4 to 8

**Disease and Insects**
Can be susceptible to anthracnose twig blight, which causes drying out of the leaves, blighting of the stems, and development of cankers. It can get powdery mildew, leaf spot, aphids, leaf miners, mites, and whiteflies.

**Landscape Value**
The Cheyenne privet can be used as a hedge, screen, border, or for foundation planting.

**Culture**
They transplant easy and are very adaptable. They prefer full sun or partial shade. After they flower is the time to prune.

**Native Habitat**
Original found in Sarajevo, Bosnia. Introduced by the Cheyenne Field Station.
Dodd’s Hawthorn
Crataegus doddsii

General Description
The Dodd’s hawthorn is a small tree or large shrub with a nice growth habit with the tree becoming rounded. It has a brilliant red color in the fall. The Dodd’s hawthorn also has noticeably large thorns. Hawthorns are among the most problem-free trees.

Flowers
White flowers that appear in the spring.

Fruit
Red fruit after the tree flowers.

Landscape Value
Beautiful fall color makes it a good decorative tree.

Native Habitat
Native to Wyoming and Colorado.
Dwarf Russian Almond
Prunus tenella

General Description
The dwarf Russian almond is a low, suckering shrub that grows 2 to 5 feet high with an equal spread. Its leaves are a lustrous, dark-green color above and a pale green beneath and 1½ to 3½ inches in length and ½- to 1-inch wide.

Flowers
The flowers of the dwarf Russian almond are a rosy pink color and are a ½ inch in length.

Fruit
The dwarf Russian almond has a nutty, gray-yellow-tan fruit about ¾ inches long.

Hardiness
Zone 2 to 6

Disease and Insects
Aphids and various fungus diseases

Landscape Value
Has good color. Fruit makes this shrub good for wildlife browsing, and its dense nature makes it a good covering for birds and rabbits. Can be used for bank stabilization and erosion control or as an ornamental shrub in a yard.

Culture
Flowers best when planted in full sun. Fairly drought tolerant. Also does well in cold climates.

Native Habitat
Southeastern Europe, western Asia to eastern Siberia. Introduced 1683.
Japanese Tree Lilac  
*Syringa reticulata*

**General Description**
The Japanese tree lilac is a large shrub or small tree that grows 20 to 30 feet high and 15 to 25 feet in spread. It has stiff, spreading branches that form an oval to rounded crown. Its leaves are 2 to 5½ inches long and about half as wide with a dark-green color on top and a grayish-green color on bottom.

**Flowers**
The flowers on the Japanese tree lilac are fragrant, creamy-white flowers appearing in large clusters in early to mid-June about 2-3 weeks later than shrub lilac.

**Fruit**
The fruit on Japanese tree Lilac is a warty, dehiscent, two-celled, 4- to 6-inch long cluster of capsules. They are quite attractive in the fall and winter.

**Hardiness**
Zone 3 to 7

**Disease and Insects**
Bacterial blight, Phytophthora blight, leaf blights, leaf spots, powdery mildew, wilt, ring spot virus, witches’ broom, frost injury, graft blight, leaf roll necrosis, lilac borer, leopard moth borer, caterpillars, giant hornet, lilac leaf miner, and scales.

**Landscape Value**
One of the most trouble-free lilacs, good for use as a specimen tree, or use in groups or along buildings. Can be used as a street tree.

**Culture**
The Japanese tree lilac can be transplanted either balled-and-burlapped or from a container. Prefers well-drained, loose soils with a slightly acidic pH but can be pH adaptable. Grown best in full sun. Prune within a few weeks of blooming as new flower buds for the next year are set on new growth within a few weeks of blooming.

**Native Habitat**
Northern Japan. Introduced 1876.
**Kentucky Coffeetree**

*Gymnocladus dioica*

**General Description**

The Kentucky coffeetree grows 60 to 75 feet high and 40 to 50 feet in spread. Develops vertically ascending branches that form an obovate crown. Some like this species of tree because of its uniqueness. No two of these trees are exactly alike. The leaves are a dark-green almost bluish-green color and sometimes turn yellow in the fall. One of the main attractions of the tree is the unique branch structure visible during the winter.

**Flowers**

The flowers are greenish-white with four to five petals each spreading about 1/3 inches long. The Kentucky coffeetree flowers in May to early June.

**Fruit**

The fruit of the Kentucky coffeetree is reddish-brown to brownish-black with a leathery pod 5 to 10 inches long and 1 1/2 to 2 inches wide. Each pod contains a few hard-shelled seeds. The fruit ripens in October and stays on the tree throughout the winter. A good tree will produce the fruit on a three year cycle.

**Hardiness**

Zone 3b to 8

**Disease and Insects**

No serious disease or insects

**Landscape Value**

Great tree for parks, golf courses, school campuses, or any large area. Sometimes can be dirty because of falling pods. There are a few seedless forms available including Espresso.

**Culture**

Should be transplanted balled-and-burlapped into deep, rich, moist soil for best growth. Can adapt to a wide range of soil conditions. Prefers full sun. Prune in winter or early spring.

**Native Habitat**

Northern Red Oak
Quercus borealis

General Description
The Northern red oak is a fast-growing tree that reaches heights between 60 and 75 feet tall, with a spread about equal to the height. It is rounded in youth and rounded at the top and symmetrical once mature. Its leaves are 4½ to 8½ inches long and are known for their red color in the fall.

Flowers
This tree does not flower

Fruit
The fruit is an acorn nut, ¾- to 1 inches long and varies in shape, but usually subglobose. They are enclosed at the base in a thick, saucer-like cap. These nuts are a medium-brown color with greyish streaks.

Hardiness
Zone 3b to 7(8)

Disease and Insects
Basically free of problems but can encounter some of the same problems as the white oak.

Landscape Value
Works great for lawns, parks, golf courses, and commercial areas. Also has been successfully used as a street and urban tree.

Culture
Transplants readily because of negligible taproot; prefers sandy loam soils that are well-drained and on the acid side. Should be grown under full sand; withstands the polluted air of cities.

Native Habitat
Nova Scotia to Pennsylvania, west to Minnesota and Iowa. Introduced 1800.
Oakleaf Mountain Ash  
*Sorbus x hybrida*

**General Description**  
The oakleaf mountain ash is a deciduous tree that grows to heights of 30 feet with a spread of 20 feet. Its leaves are a dark green on top with silver undersides; these leaves turn yellow in the fall. The oakleaf mountain ash also has a low canopy.

**Flowers**  
Showy clusters of white flowers appear in the spring.

**Fruit**  
Dark-red berries are held in abundance in the fall.

**Hardiness**  
Zone 4

**Disease and Insects**  
Resistant to fire blight

**Landscape Value**  
Great as an accent tree or as a shade tree.

**Culture**  
This tree should be pruned after winter when the threat of extreme cold has passed. Prefers full sun. It is adaptable to wet and dry conditions and different soil types.
Peking Tree Lilac
*Syringa pekinensis*

**General Description**
The Peking tree lilac is a slow-growing, flowering tree similar to the Japanese tree lilac. It has an oval form in its youth becoming rounded with age. It grows to heights of 20 to 25 feet with an equal spread.

**Flowers**
The flowers are white and appear in clusters in late spring.

**Fruit**
No fruit present.

**Hardiness**
Zone 4 to 7

**Disease and Insects**
No serious diseases or insects.

**Landscape Value**
Peking tree lilac can be used in parking lots or for street trees and for other urban applications. Can also be used in yards and for groupings.

**Culture**
This tree is tolerant to many environmental conditions, but it does prefer well drained-soils and flowers best in full sun. Prune within a few weeks of blooming as new flower buds for the next year are set on new growth within a few weeks of blooming.

**Native Habitat**
Native to northern China.
Russian Hawthorn

Crataegus ambigua

General Description
The Russian hawthorn is a moderate to slow-growing ornamental tree. It reaches heights of 15 to 20 feet with a spread of 15 to 20 feet. Its leaves are simple, alternate, and have a deep-green color in the summer with a green or yellow color in the fall.

Flowers
The flowers of the Russian hawthorn are white and bloom in the spring. These flowers give the tree an appearance of being covered in snow.

Fruit
Showy red berries appear in abundance through late fall. Can be very messy if you let the berries fall on the lawn or walkways.

Hardiness
Zone 4 to 8

Disease and Insects
No significant disease or insects.

Landscape Value
The Russian hawthorn is a very decorative tree that looks great in smaller landscapes. Its cherry-like fruit is great for attracting birds.

Culture
It is best to prune this tree in late winter to early spring or once the threat of extreme cold has passed. Should be grown in full sunlight. Is adaptable to many soil conditions but does not tolerate standing water well.

Native Habitat
Native to Russia.
Sungari Rockspray Cotoneaster
*Coloneaster racemiflora soongorica*

**General Description**
The Sungari rockspray cotoneaster is a hedge plant that provides winter food and shelter for many songbirds. It has bluer foliage and an abundance of pink fruit. It can tolerate dry sandy soils.

**Flowers**
Hanging racemes of white flowers appear in the spring.

**Fruit**
Red fruit.

**Hardiness**
Zone 3

**Landscape Value**
Hanging white flowers make it very appealing. Provides winter food and shelter for songbirds.

**Native Habitat**
Found near the Sungari River in China.
Sutherland Caragana  
*Caragana arborescens Pyramidalis ‘Sutherland’*

**General Description**  
The Sutherland caragana is a tall, oval shrub that grows 6 to 14 feet high with a spread of 6 to 12 feet. It has light-green leaves that become dark-green in the summer and yellow in the fall. Its roots are dense and spreading.

**Flowers**  
The flowers are small and pea-like and are a showy yellow color in the spring.

**Fruit**  
Its fruit are pods with multiple seeds. When ripe, pods open with a popping sound. Mature fruit color is brown.

**Hardiness**  
Zone 2

**Disease and Insects**  
Stem decay, Septoria leaf spot, branch cankers, and blister beetles.

**Landscape Value**  
Good tree for windbreaks or highway and road use, screening, and borders. Also is used by many songbirds for nesting and is a food source for hummingbirds.

**Culture**  
This tree is drought tolerant and adapted to a wide range of soils. Does not perform well in very wet or very dry sandy soils. It prefers full sun.

**Native Habitat**  
Native to Siberia.
Tatarian Maple

*Acer tataricum*

**General Description**
The Tatarian maple is a large, multi-stemmed shrub or small tree reaching 15 to 30 feet in height with a comparable spread. The leaves are a medium-green color in the summer and range from yellow to red to reddish brown in the fall.

**Flowers**
The flowers are a greenish white color and appear with the leaves in April-May.

**Fruit**
The fruit are samara and are ¾- to 1-inch long and are a red to reddish brown color in the fall. On some trees, the fruit can be green or brown.

**Hardiness**
Zone 3 to 8 but seldom seen in zones 7 and 8

**Disease and Insects**
No serious diseases or insects.

**Landscape Value**
This tree is good as a residential or street tree. It can also be used in planter boxes or groupings. It is a great replacement for more common trees such as Canada Red Chokecherry and flowering pear.

**Culture**
Transplant balled-and-burlapped, is tolerant of adverse conditions such as drought.

**Native Habitat**
Southeast Europe, western Asia, in sunny, dry conditions, often as forest undergrowth, rarely as a solitary tree. Introduced 1759.
**Tidy Caragana**  
*Caragana microphylla ‘Tidy’*

**General Description**  
The tidy caragana is a small-sized, spreading shrub with upright branches and narrow, bright green foliage. It is similar to Siberian peashrub, but it is a smaller plant, and the leaves are a darker green. It has narrow leaflets and lemon-yellow flowers, making it attractive when it blooms in late May or early June.

**Flowers**  
Yellow pea-like flowers.

**Hardiness**  
Zone 3

**Landscape Value**  
Perfect for courtyards or similar places.

**Culture**  
Hardy plant; prefers full sun.
Ussurian Pear
Pyrus ussuriensis

General Description
The Ussurian pear is a dense and upright tree growing to heights of 40 to 50 feet, with a spread of 15 to 20 feet. It has simple ovate leaves 2 to 4 inches long that are dark green and orange to yellow or red to reddish purple in the fall.

Flowers
The flowers on the Ussurian pear are umbel-like racemes with a faintly pink color while budding and then turn white.

Fruit
The fruit are subglobose pome with short stalks and are greenish-yellow in color.

Hardiness
Zone 3 to 7

Disease and Insects
This pear is the least susceptible to fireblight.

Landscape Value
This tree can be used for field windbreaks; also good for a specimen tree or can be used in borders or screens. The fruit of the tree is edible and can be used for jams or jellies.

Culture
Prefers well-drained, clay loam to sandy loam soils and full sun.

Native Habitat
Northeastern Asia. Introduced 1855.
Wavyleaf Oak

*Quercus undulata*

**General Description**
The Wavyleaf oak is a hybrid of gambel oak and shrub live oak. It is a large shrub or small tree growing to heights of 10 feet. It has simple, oblong, alternate leaves that are dark bluish-green on top and a dull green on bottom.

**Fruit**
The fruit is an acorn nut that is \( \frac{3}{8} \) to \( \frac{9}{16} \) of an inch long with a scaly cup covering about one-third of the nut.

**Hardiness**
Zone 5 to 8

**Disease and Insects**
No significant diseases or insects.

**Landscape Value**
This is a good shrub for decorative purposes in smaller landscapes or as a filler in a larger landscape.

**Culture**
Can grow in full sun or partial shade. Prefers moist loamy to clay soils. Intolerant of root disturbances.

**Native Habitat**
Native to Colorado, New Mexico, Arizona, Utah, Oklahoma, and northern Mexico.
Sources


