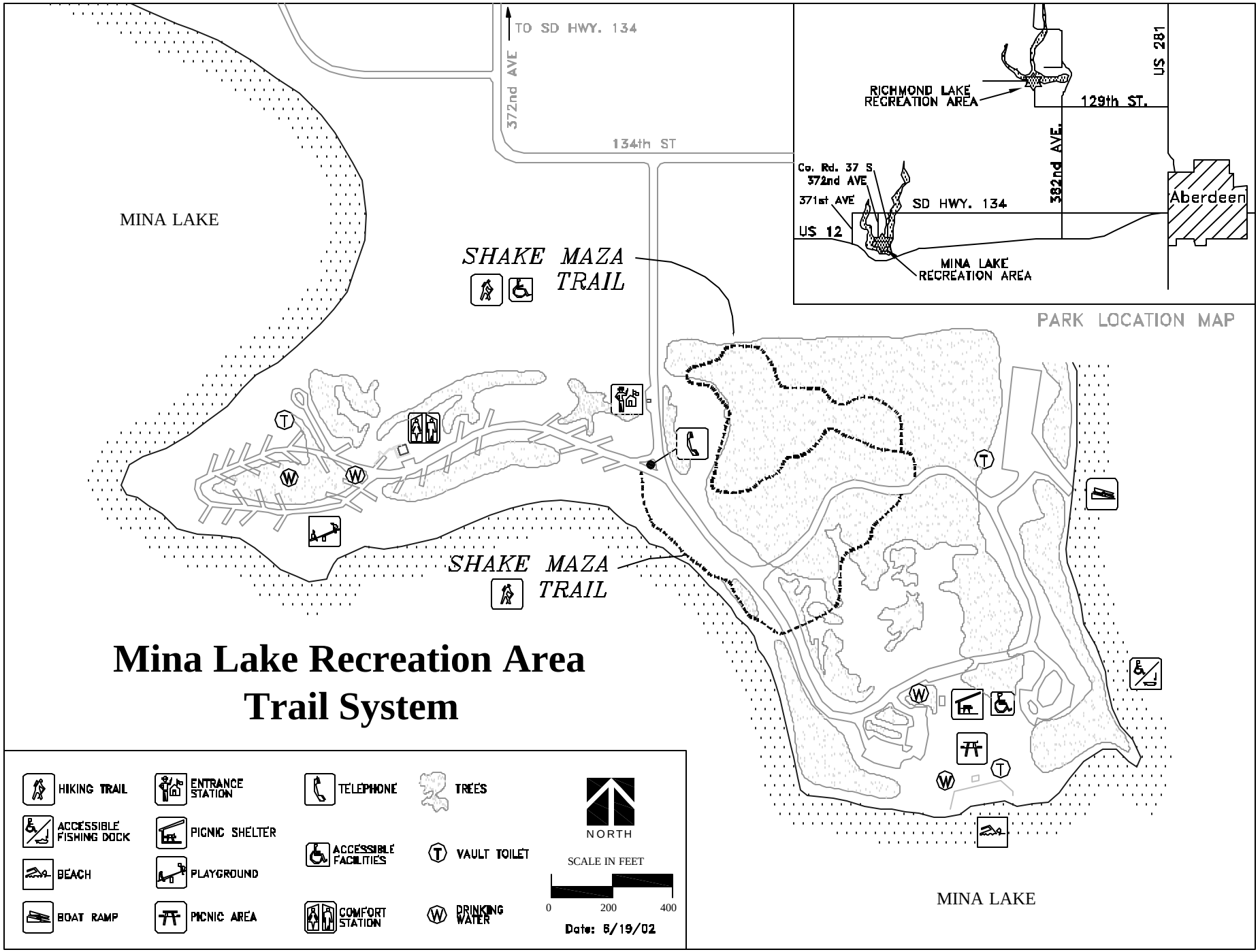

Mina Lake Recreation Area
Trail System

Mina Lake Recreation Area

Shake Maza Trail

Type of trail: Hiking, biking and interpretive/viewing nature

Trail surface: Gravel/limestone

Rated: Easy, appropriate for all ages

Fee required: Park Entrance Fee

Length of trail in miles: .75 mile

Location of the trailhead: On boat ramp loop

Facilities at or near the trailhead: Parking

Facilities along the trail: None

Will there be interpretive information available: No, only at trailhead

What lodging opportunities are provided IN the park: Tent camping, electrical and non-electrical campsites, wheelchair accessible campsite, camping cabin, group lodge

Does this trail connect with any other trails: No

Nearest facilities for purchasing snacks, sunscreen etc.: One mile north

Nearest motels/restaurants OUTSIDE the park: In Aberdeen

Name, address, and phone numbers of nearest Chamber of Commerce:
Aberdeen Chamber of Commerce, 516 S. Main St., Aberdeen, SD 57401, (605) 225-2860

Emergency phone numbers:
Ambulance – 911
Sheriff – 911
Fire Department – 911

Do most cell phones work on this trail: No

Mina Lake Recreation Area

Shake Maza Trail

Mina Lake began as a dream of Aberdeen and Ipswich residents who wanted a nearby recreation area. Private subscriptions were secured form area citizens, and the project was completed with the help of the state Game and Fish Department and federal relief agencies in the 1930s.

It was managed as an Edmunds County park for several years. Beginning in 1950, Edmunds County commissioners signed a cooperative park management agreement with the State Parks Division, and in 1969, the county awarded the land to the Game, Fish and Parks Department to develop as a state recreation area.

The 850-acre horseshoe-shaped lake, created when Snake Creek was dammed, was named "Shake Maza" by the people on the committee that worked to get the dam built. According to that committee, "Shake Maza" is the Sioux Indian term for "shaped like a horseshoe." Later in 1941, the Edmunds County commissioners named it "Parmley Lake" but the name "Mina Lake," named for the nearby community, has proven more popular through the years.

As you walk this trail, follow the numbered stations; they are keyed to numbers on these pages.

This information is intended to acquaint you with some of the natural as well as human-made features in the park. Pause frequently during your stroll; it will help you to observe some of the wild birds and animals that frequent the area.

Please observe normal trail courtesy, leave wild plants and wildlife where you find them, and deposit litter in trash barrels. Vehicles and horses are prohibited; this is a foot trail.

STATION 1
Early travelers on the western plains, where streams are few and sluggish and often disappear entirely in the summer, soon learned to appreciate the cottonwood tree. The trees acted as a beacon, directing the covered wagon caravans to water areas, for these trees grew only along watercourses or spring areas.

Many of the tall cottonwood trees that line the shoreline of Mina Lake are dying as you can see. The type of soil, drought, insects, disease, too much moisture and age are some of the factors that affect the growth of trees.

In the summer, notice how the large triangular-shaped leaves rustle with the slightest breeze. This is because they're attached by a flattened stem that allows them easy movement.

Can you find any sapling or young cottonwood trees growing that will eventually replace the older ones that are dying?

Where it grows in abundance, cottonwood is used for making pulp for paper, especially for newspapers. The soft, weak wood is not durable for lumber other than for making crates and boxes.

STATION 2
The red-brown to grayish bark of the Russian olive tree makes the specimen behind this post easy to remember. Even more striking is the elongated silver leaves of the tree. The yellow are flowers in the spring which develop into oval pea sized fruits that are eaten by many songbirds. The fruits cling even during the winter months and afford a ready meal for birds and animals when the snow is deep. Russian olive trees are popular for landscape plantings because of their attractive foliage. They were introduced from Asia and used extensively for shelterbelt plantings, for they are well adapted to the rigors of growing conditions on the Great Plains. Notice the many Russian olive seedlings growing in the vicinity. As they grow taller and become more dense, their spined branches will afford nesting areas for songbirds and escape cover for small animals in the park.

En route to Station 3 several herbaceous (nonwoody) plants along the trail have elongated silvery leaves similar to the Russian olive. These knee-high plants are called cudweed sagewort or white sage. Smell the plants and notice the strong sage odor. The plants are common in South Dakota and have been used by American Indians for religious ceremonies. Smoking the dried leaves of sagwort was practiced by some American Indian people for easing the pain of a sore throat.

Another silvery leaved plant growing in the area is the leadplant. This woody shrub has leaves divided into many leaflets arranged along a central stem. The purple flower clusters are borne at the end of the branches from June through August. Generally growing about knee high, the plant was popular with early pioneers who brewed the leaves into a tea-type drink. Some American Indians smoked the leaves like tobacco. The leaf of this low-growing shrub is called “compound.” Do you know why? Observe how leaf is divided into several leaflets.

STATION 3
The cluster of shrubs behind this post are wild currants. Note the 3- to 5-lobed maple-like leaves of the plants. Unlike the maples which have leaves in opposite pairs along the branches, the leaves of currant are alternate with the leaves staggered on alternate sides of the stems. Currants are often confused with wild gooseberries but the latter generally have branches armed with sharp spines. The yellow flowers of the currant are replaced by pea-sized berries that ripen to a deep reddish black in late summer. The tender branch tips are eaten by whitetail deer and rabbits. Jams, jellies and pies are commonly made from the wild fruits by people who complete with the birds and animals for the tasty berries.

The tall shrub to the right of the post is a tartarian honeysuckle. Imported from Asia, the honeysuckle has proven popular for planting in shelterbelts. It is a favorite of songbirds for nesting and for the tasty red and orange berries that ripen in late summer. The base of the whitish pink flowers is sweet to the taste like honey.

STATION 4
The juniper, or red cedar, behind this post is the only native evergreen tree in eastern South Dakota. Moths are repelled by the fragrant odor of cedar wood, and many homes have closets or cedar chests lined with the red-orange wood.

The tree is popular for windbreak plantings, it provides good cover for wildlife, birds and animals eat the berries, and in many parts of the United States the juniper is the No. 1 choice for a Christmas tree. Can you find two kinds of needles (leaves) on the juniper? Older branches usually have tiny scales while those on younger branches are sharp lead pencil-like spines. The berries of juniper, 1/2 inch to1/3 inch in diameter, take two years to mature and at that time are a dark blue color. Scientifically, these are “cones,”

for the tree is a conifer or "cone-bearer." The trees were especially important to the culture of the Plains Indians, and they are recognized worldwide for their many uses.

Galls, called "cedarapples, are often present on red cedar trees where there are apple trees nearby. The cork-like gall is the wintering stage of rust that attacks apple trees. During the warm moist days of spring, the over wintering galls enlarge to become masses of finger-like orange gelatin which then forms spores of rust that are carried to apple trees in the vicinity.

En route to Station 5 are goldenrod and blazing star plants on the right of the trail. Can you identify them? In the fall, the goldenrod has a dense cluster of yellow flowers on the ends of the branches while the blazing star's stem is lined with bright purple flowers. Leadplant is also growing in the vicinity, and it also has purple flowers. Its woody stem makes it easy to identify.

STATION 5

Here is another silvery-leaved, spiny branched, woody stemmed shrub. It is called silver buffaloberry and is native to South Dakota. Can you see how it differs from Russian olive and leadplant, which also have silvery leaves? The spiny branches of buffaloberry afford ideal nesting sites for many songbirds. Birds and animals eat the tasty red BB-sized fruits that persist into the winter. The bright red fruits make a colorful scene with winter's snowy background. Many people harvest the tart fruit for pies, jams jellies and muffins. The fruit was a favorite of Plains Indians.

If you're walking the trail during the fall, you'll probably be aware of several plants whose white and purple flower heads are clustered at the ends of the branches. These are asters, and their fall color often adds beauty to otherwise colorless fall foliage. Aster seeds are an important fall and winter food for songbirds. Many generations ago, American Indians proved that a tea made from the dried stems (without leaves) was an excellent remedy for "tired" blood. Rheumatism victims washed affected areas with a brew made from the aster plants.

STATION 6

The woody shrub behind the post is a lilac. Everyone recognizes the fragrant odor of lilac blossoms in the spring. Now cultivated around the world, the lilac is thought to have originated in Persia. On the opposite side of the trail is another imported shrub. It's called the Siberian peatree or more commonly, caragana. It's widely used for shelterbelt plantings. Its yellow flowers in the spring develop into 1½ inch long slender pods that contain the seeds. They appear like miniature bean or pea pods. Notice the attractive bark; the rich green-brown color makes the shrub a poplar landscape specimen. Each leaf consists of several leaflets arranged along a central stalk; this is called a compound leaf. The leaves are favored by many insects, which results in early defoliation of the caragana shrubs. In the undergrowth you may find fringed sagewort with silvery leaves, and it has a distinctive sage odor.

Several prickly pear cactus are growing in this vicinity of the trail. They are identified by the spiny rounded or oblong fleshy pads that appear like leaves. Actually these segments are thickened stems designed to store moisture for periods of drought. Like most cacti that live in the desert, the prickly pear develops beautiful brilliantly colored flowers to attract the insects capable of pollinating the plants. The bright yellow flowers with red centers appear in June and July.

In the fall, asters are abundant in this area. The next stop is a rest area and overview of the lake.

STATION 7
Mina Lake is horseshoe-shaped because a dam was built at the junction of two tributaries of Snake Creek. The resulting reservoir backs water into both branches of the watershed. The lake is popular with local fishermen who match wits with the numerous species of game fish.

Looking over the lake and to the right (southwest), you can see the town of Mina for which the lake is named. Mina is said to be named for a daughter of a president of the Milwaukee Railroad.

Below this vista area is the rock foundation remains of a pump house that was built during the 1930's to provide irrigation water for the trees that were planted to enhance the recreation area.

Aberdeen is to the left (east) about 12 miles and another state recreation area, Richmond Lake, is about 8 miles and another state recreation area, Richmond Lake, is about 8 miles northeast of Mina Lake.

From this station the trail crosses the black topped road to resume on the other side.

STATION 8
These hedge rows of wood shrubs include lilac, wild plum and Russian olive. Notice how the plum shrubs are sending up new shoots from their roots. This is called "suckering" and is not desirable in plant selected for lawn plantings, but is makes ideal wildlife habitat. Upland game birds and small animals escape predators in the protection of the dense thickets. Many songbirds favor these woody clusters for building their nests. The barriers stop drifting snow and offer winter protection for wildlife. For a bonus, the plum bears a delicious fruit readily eaten by birds and small mammals, and the fruit of Russian olive clings until deep winter, giving a ready source of food for wildlife during the lean months. Can you think of additional plants that would be beneficial to wildlife in South Dakota?

STATION 9
The attractive grass growing in this field is crested wheatgrass. A bunchgrass introduced from Russia, the plants grow to 30 inches tall. Notice the flattened spiked heads that are characteristic of this grass. Intermixed with the grass are many young juniper (red cedar) seedlings. These are growing from seeds dropped from the larger trees in the area, and in some cases you can see where birds have dropped seeds that have passed through their digestive tracts. This reproduction results in different age classes of junipers in the park, which is the sign of healthy woods. Can you see any birds' nest in the larger red cedars growing in this vicinity? Watch for them along the way.

The open crested wheatgrass meadow is ideal habitat for pheasants and duck nesting.

STATION 10
There are many green ash trees in this vicinity. Note the compound leaf divided into leaflets. The seeds of ash resemble tiny canoe paddles and hang in clusters like bananas. Legend tells that early American Indians fashioned their canoe paddles after the shape of the ash seeds. Mature ash lumber is very durable and is used for making axe handles, baseball bats and other products where strength is required.

Folklore in Scotland tells that the shadow of the ash tree kills snakes. Being a hardy tree of rapid growth and desirable habit, it is extensively planted as an ornamental shade tree in cities as well as in farm shelterbelts. Oyster-shell scale may be observed on some of these ash trees. The small insects that cause the formation of tiny oyster shell-like growths on the branches may be harmful to ash trees in some

localities. The insects feed by sucking juice from the twigs, resulting in abnormal tree growth. Can you find some of these scale insects? The scale protects the insect like a roof over its head.

STATION 11

This is an American elm tree. Notice how the leaves differ from those of green ash. The seed of elm trees are enclosed in round waferlike pods. The papery edge (wings) of the wafer aids the wind in transporting the seeds. When growing as a specimen tree, the America elm has a distinct shape, looking like an enormous bouquet of flowers or an ice cream cone standing on end.

Dutch elm disease, carried from tree to tree by a small beetle, has killed most of the American elm trees in the eastern states. In more recent years it has taken a tragic toll of American elm trees in South Dakota. Nearly all of the American elm trees in southeastern South Dakota have been lost. If you have an apparently healthily American elm in your yard and a portion of the leaves suddenly go wilted and yellow, you can suspect that Dutch elm disease has infected the tree, and it will soon die. Some disease resistant elms are available for planting instead of the American elm, but no tree will ever be as popular as the American elm. At one time it was the favorite lawn and shade tree in the eastern two thirds of the United States.

Norsemen had an ancient legend that told how the ash tree was the father and the elm tree was the mother of the human races.

Notice the many green ash seedlings in the understory and also the numerous honeysuckle seedlings. The honeysuckle seeds were deposited in the droppings of birds, which stopped to rest in the tree tops.

En route to Station 12, you will cross another park road. The station stop is visible on the opposite side.

STATION 12

A different grass surrounds the post at this stop. It is called smooth bromegrass. Examine one of the smooth flat blades, and notice the characteristic “M” constriction about halfway down. Smooth bromegrass is a popular feed for livestock when grown with alfalfa and pastured or cut as hay. It is often seeded in road ditches in eastern South Dakota.

En route to the next stop, notice the numerous catnip plants growing on the left of the trail under the cedar trees. Note the square stems. When the plant is dry or when part of a growing plant is crushed, it will cause cats to roll on it, eat it and literally destroy it in their ecstasy. Cats do not seem to bother growing plants, and the volatile oil in the stems and leaves is not disturbed. The dried leaves are popular in some areas for brewing as a hot tea-type drink. The whitish flowers grow in dense spikes at the ends of stems and branches from spring to fall.

STATION 13

Behind this dense vegetative cover is a more open area, containing thousands of Siberian elm seedlings. This tree is related to the American elm (note the similarity of the seeds and leaves) although it was introduced from China. It is a fast-growing, drought resistant tree, and for these reasons was introduced to plant in prairie shelterbelts. It is still one of the most popular species for windbreak plantings. Several hybrids have been developed from the original stock, and today the trees are marketed under such names as Chinese elm, Dropmore elm, Siberian elm, Ardmore elm and others.

You may observe many green ash seedlings interspersed with the young Sigerian elm. Another type of sage also may be observed in the vicinity. It is called wormwood sage and grows to six feet tall or more. The silvery leaves when crushed give off a distinctive sage odor. The tough stems and roots of the plant make it difficult to control on farms where it often infests feedlots and shelterbelts. Wormwood is an ancient and reputable herb with many medicinal uses, but it also has poisonous qualities that should discourage experimenting with the plant.

STATION 14

Siberian elm is growing near the base of a green ash tree. Can you see where the branches are rubbing together and exposing the worn areas to insect and disease attack? With landscape trees, it is desirable to prune branches to avoid weakening areas of the tree. During periods of high wind, breakage, usually occurs at such weakened areas.

En route to the next stop note the Siberian elm trees about 30 feet to the right of the trail ahead. It is nearly 14 inches in diameter, an unusually large Siberian elm tree to grow in this vicinity.

STATION 15

Behind this post is a thicket of chokecherries. Individually they grow as trees. In clusters, like the ones before you, they appear like shrubs. All outdoor people are familiar with the fruit of chokecherries. Chokecherries make excellent wine, jam and jellies, and Plains Indians found them equally tasty when mixed with meat and fat. They called this mixture pemmican or wasna, and when properly prepared it is claimed that is kept for five years or more. Pemmican was a main staple of American Indians when traveling between camps.

Stems and leaves of chokecherries are poisonous to some livestock. Farmers and ranchers avoid cutting the young suckering shoots if they invade the edge of a hay field. The fragrant odor of chokecherry blossoms fills the woods in early spring. The flowers develop later into clusters of reddish-purple pea-sized fruit so familiar in August. The seeds of this tree are also favored by songbirds, which deposit them far and wide over the countryside. Some disadvantages of the tree are its appeal to tent caterpillars whose dense webs make and undesirable appearance and the “black knot” fungus, which causes the formation of elongated black swellings several times the diameter of the normal stem. During the fall and winter, you may notice several birds’ nests in chokecherry thickets.

STATION 16

The seeds of the trees behind the post identify them as maple trees, but they’re called boxelder. The paired key-shaped seeds are called samara. Boxelder trees have leaves different from other maples; they are the only ones with compound leaves. Each leaf is divided into 3 to 7 leaflets and this often results in the tree being called the ash leaf maple. Boxelder trees were tapped by early American Indians for their sweet juices to make maple sugar. This species produces more juices than traditional sugar maple trees, however, the sugar is not as high quality. If you see some of the sap oozing from a wound in a boxelder tree, taste some on our finger. It’s quite sweet and a favorite dessert of squirrels and other animals. Maple sap is usually most abundant in the early spring when cold nights and warm days cause the sweet juice to flow up and down the tree.

Boxelder trees have some severe drawbacks that make them undesirable for ornamental plantings. They attract boxelder bugs, and they have a poor growth form.

If you find a pair of boxelder seeds, divide them and allow one to fall to the ground. Does it remind you of a propeller? This is nature's way of spreading the seeds farther than just below the parent tree. They can be propelled for great distances with a little wind.

En route to the next stop, notice the row of plum trees along the edge of the woods. The plum trees have died from a combination of disease, age and drought. Notice the grayish colonies of lichens on the bark of the trees. These colonies of tiny plants are found everywhere in nature, and they are a good indicator of clean air because they are conspicuously absent in areas where air is polluted.

STATION 17

Pause for a rest at this site, and ponder the open sweep of prairie before you. It was cultivated for many years before being planted to crested wheatgrass and set aside for park purposes. But before that it was virgin prairie with native grasses as far as the horizon. Today, the scene is broken by scattered plantings of shelterbelts, landscape plantings and wilding trees that have taken foothold along the shore of human-made Lake Mina. Roads, building and fences also break the once endless prairie. Can you imagine yourself a pioneer in a covered wagon viewing this flat, unbroken, treeless plain?

The trail to the next stop winds through many stunted boxelder trees. Notice how the tops have died back on many of the trees. This is an indication of drought. The trees' roots simply were unable to get sufficient moisture to sustain the entire tree and the top is first to die.

As you pass through an opening in the tree plantings, notice the long, slender blades of Kentucky bluegrass. The seeds are borne on a pyramid shape head. This is a popular grass for lawn plantings in cities.

The trail leads through an unusual cluster of clover like plants. It's called American deervetch. The knee high, slender stems produce three foliate leaves with pinkish flowers in the early spring and develop in the fall into mature bean sized pods containing the seeds.

STATION 18

Note the colorful colonies of lichens on the trunk and branches of the boxelder tree behind this post. The rust, gray and yellow colors are different species of these tiny plants. Some lichens grow on the driest and barest rocks. Like the crustose (crust like) lichens on the tree before you, most of the common rock lichens appear like fragile dry crust. They shrivel and are easily broken in hot, dry weather, but when rain falls or even with heavy dew, the lichens become soft and jellylike and continue growing. Those growing on rocks actually help speed up decomposition of the rocks and turn them into new soil.

The lichens growing on the bark of this tree are only slightly detrimental to the tree, and are an indication of low vigor of the tree produced by some other cause. Do you suppose this tree was weakened by drought, and the lichens moved in to begin their decomposing process? Deer and other wildlife often nibble on the various lichens. Some Plains Indians were said to roll lichens into balls and bake them to eat. Other types of lichens may appear mossy, and still another group appears leaf like such as those on the dead plum trees at Station 16. Watch for different lichens as you proceed to the last stop on the trial.

En route notice the effects of too much moisture on trees. The trail follows along a low area that is normally a bog or slough. Notice how most of the trees have died in the low area and other plants have taken over. Can you recognize kochia (fireweed), ragweed, nightshade, sunflowers, wild rose and curly dock?

STATION 19

These trees are able to survive long periods with their roots under water. They are golden willow. In many shelterbelts, farmers will plant willow trees in the low areas to assure a solid barrier against the wind. If other species were planted, they might die and leave an opening in an otherwise solid row of trees. Willows as a group require considerable moisture and are often found growing on the banks of streams and lakes. The branches are quite brittle and are easily broken during windstorms. They are comparatively short-lived trees in the Great Plains region.

Plains Indians boiled the bark of willow trees to produce a tea which they drank to relieve headache and reduce fever. Today, salicylic acid, a compound derived from willow bark, is used in the manufacture of aspirin.

From this station, the trail leads back to the starting point. We hope you have enjoyed your hike and that you have become more familiar with some of the natural surroundings at Mina Lake Recreation Area. Please walk the trail again on future visits to the park. The different seasons will provide you with ever-changing outdoor attractions.