

# WALK ON THE WILDSIDE

The Minnesota Conservation Federation

March 2016

## Maple syrup time is a sure sign of spring

**D**o you like maple syrup on your pancakes? Did you ever wonder where that syrup comes from?

Maple syrup comes from maple trees. The syrup is made from the tree's sap, which begins flowing in March.

If you watch the maple trees as temperatures begin to warm in March, you will notice dripping sap on the tree bark. The sap begins to flow when daytime temperatures are above the freezing point, but night time temperatures are still below freezing. The sap flows on and off for about a month.

Across much of Minnesota, wherever maple trees are found, people go out and collect the sap to make it into syrup. There are four species of maple trees found in Minnesota that are used for sap collection. The sugar maple, silver maple, red maple and boxelder are all used for making maple syrup, but it is believed that the sugar maple has the sweetest sap. Most



of Minnesota's maples are concentrated in the eastern and northern portions of the state, however, maple trees can be found just about anywhere in the state, so you don't have to go too far to find one.

### Tapping the trees

The process of collecting the sap from a maple tree is called tapping the tree.

People who collect maple syrup generally tap the tree long before the sap can be visibly seen on its bark. Some people, especially in the southern portion of the state, begin tapping their trees in February.

Tapping consists of drilling a

hole into the tree and placing a spout in the hole. A hole is drilled about 2-3 inches deep, at a level of between 2-4 feet off the ground. The spout is tapped into the hole with a mallet. A bucket, plastic bag or tube is placed on the spout to collect the dripping sap. Sap does not flow from a tree every day or continuously throughout the day. Depending on

its size and health, a tree may produce as much as a gallon of sap on a day when the sap is flowing heavily. During the entire season a good tree may produce as much as 12 gallons of sap. The sap is usually collected every other day.

### Making syrup

If you taste the sap running from the trees, it tastes something like slightly sweetened water. It tastes nothing like the maple syrup you put on your pancakes. There is still another step in the process before the sap becomes maple syrup.

Continued on page 4

# Busy Time

.....

*After spending the winter in their burrows, chipmunks emerge again during the month of March.*

.....



**The chipmunk emerges from its winter hibernation during March. They immediately begin looking for food.**

The eastern chipmunk is one of the most common and most easily recognizable mammals in Minnesota.

Chipmunks can be found from the northern forests of Minnesota, near the Canadian border, to the extreme south along the Iowa border. They are very adaptable and can live in remote forests, suburban neighborhoods or even in the city.

While chipmunks are very visible throughout the spring, summer and fall, they are noticeably absent from wild places during the winter. During the winter months, chipmunks hibernate in their burrows. Periodically, they awake and feed on food that has been stored in their burrows.

In March, when temperatures begin to warm and the snow starts to melt, chipmunks emerge from their burrows and start searching for food.

A chipmunk typically lives in

territory that is about 1/2-acre in size. Within that territory, it will defend the area immediately around its burrow. If you sit down and watch a chipmunk for a while, it won't be long before you see it angrily chasing another chipmunk away from its burrow.

A chipmunk's territory must have a good supply of food. Seeds, nuts and berries are among its main food sources, but chipmunks are omnivorous, which means they eat both plants and meat. Chipmunks will eat mice, baby birds, bird eggs, toads, salamanders and insects.

Many people see chipmunks as pests, because they dig holes and can cause damage to gardens and property. However, chipmunks play an important role in the ecosystem. Chipmunks help the ecosystem, because with all the seeds they gather and move about, they end up planting seeds, which helps

many plant and tree species flourish.

Chipmunks are also important to the survival of numerous bird and mammal species. Birds such as hawks and owls, and mammals such as foxes and coyotes depend on the chipmunk as a source of food.

Like many species of prey, chipmunks are very prolific. They mate twice a year. Babies are born in the spring and again in the fall. Usually a mother chipmunk has between 2-5 babies per litter. They stay with their mother for about two months and then go out on their own.

Chipmunks do not live for very long. Typically, a chipmunk lives for about three years. So, if there is a chipmunk burrow in your yard that has been used for many years, it is likely the children and grand children of the original burrow builder who are living there now.

# Cattails are important to aquatic ecosystem

Cattails are a common sight along Minnesota's shorelines. With their tall stalks and unique fuzzy brown cattail, this plant plays an important role in Minnesota's aquatic ecosystem.

Many lakeshore owners see the cattail as a nuisance plant, which blocks views of the water and lake access. In many cases they remove the cattails without understanding their importance to the ecosystem.

The biggest role the cattail plays in the ecosystem is as a buffer against erosion. The cattail protects the shore from waves, which



would otherwise pound away at the shore and gradually erode shoreline sands and soils, causing significant damage..

The cattail also provides cover and food for a variety of wildlife. Northern pike spawn in cattails, which provide a refuge for the tiny

pike when they hatch. Muskrats and beavers eat cattail stalks and also use them for building materials.

Cattails are also important to ducks and geese. Numerous waterfowl species nest within cattail stands, which provide good cover from predators.

Other birds like the red-wing black bird, use the cattails as nesting areas.

Shorebirds, such as egrets and herons use the cattails for cover while they are hunting for food.

---

# Global warming affects precipitation

Global warming is expected to affect our weather and climate in many ways, right here in Minnesota.

One of the things global warming is expected to change is precipitation. Many scientists predict global warming will bring more rain and snow to much of the United States, but oddly, that doesn't mean we will have more water available.

Scientists who study global warming are predicting that rising temperatures will lead to higher precipitation across North America, but don't expect higher lake and river levels in Minnesota. This is because the higher temperatures will cause all that rain and snow to evaporate more quickly.

Some portions of the United



States could experience higher precipitation levels during their wettest periods of the year, but their drier periods could be even drier and stretch out for even longer.

With higher temperatures, the little moisture that is available during dry periods will evaporate more quickly, causing more intense droughts in many areas. This already appears to be happening in

some regions.

Scientists are also predicting that storms will become more intense. This means large storms that produce tornadoes could become more common than they already are and they could be more powerful. It also means hurricanes could become more frequent and have higher intensities than we typically see today.

More frequent and more powerful storms could cause severe damage that will affect thousands of people, the way Hurricane Katrina affected New Orleans or Hurricane Sandy battered the east coast, during the last decade.

These changes in precipitation changes could affect agriculture, water supplies and many other aspects of human life

# Winter can cause damage to trees

Most of Minnesota's native trees can survive a typical winter without much problem, but it is not uncommon for some trees to be damaged by the stresses of winter.

The most common form of damage comes from heavy snow and ice. Heavy snow and ice storms cause damage by bending and breaking branches. Among the trees most susceptible to damage

are birches and willows, because their wood is weaker than other trees.

Trees are also commonly damaged by animals. Deer, rabbits, mice and other mammals feed on twigs and bark during the winter. If too much bark is eaten off a small tree, it may be damaged or it may even die.

Trees can also be damaged if their roots become too cold. In a

normal winter, the soil temperature remains warmer than the air temperature, in part through the insulation of snow cover. Some winters, we experience extremely cold temperatures with little or no snow cover. This can cause the soil temperature to drop to dangerously low levels for trees. If roots are damaged, trees may not survive.

---

## Maple Syrup continued

When it is collected, the sap has a concentration of about 2 percent sugar. In order to transform the sap into syrup, you must boil it to remove much of the water content. Roughly, it takes about 40 gallons of sap to make one gallon of maple syrup.

The sap is typically boiled in a large shallow pan. It is best to boil the sap outdoors, because of the large amounts of steam that are produced during the boiling process.

As the water boils away from the sap, more sap is added. The process is repeated again and

again, until the sap reaches the color and consistency of maple syrup. Syrup makers know it has reached the right consistency by checking the temperature. Syrup boils at seven degrees above the boiling temperature of water, so when it approaches that mark, they know it is ready. If the sap is boiled too long, it will burn and be ruined.

Large commercial maple syrup operations use a more complicated evaporation system with specialized equipment, which greatly reduces the time it takes to turn the sap into maple syrup.

After the boiling process, the syrup is filtered to remove and unwanted particles.

Maple syrup is the most common product produced from the sap of maple trees, but it is not the only product. Some people also make maple sugar or maple candy.

Most people who make their own maple syrup in Minnesota do it for their own consumption, but there are others that make it to sell. There is a strong and steady market for homemade maple syrup. Many people prefer it over the major grocery store brands.

## **Learn more about the Minnesota Conservation Federation...**

*Dedicated to hunters, anglers and others who value our natural resources!*

Visit our website at [www.mncf.org](http://www.mncf.org)

...or contact our office at 651-690-3077

542 Snelling Ave. #104, St. Paul, MN 55116

*An affiliate of the National Wildlife Federation since 1936*