

# Foliage

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October. These reports were radioed to the forestry headquarters in Augusta, then mailed or phoned to Maine news agencies.

Reporting fall foliage conditions throughout the state fit with the forest service's mission to provide the public with accurate, relevant and timely information about the state's forest resource.

In 1996, the foliage reports moved to the Maine state government website, distinguishing Maine as the first state to post weekly foliage conditions on the Internet. In just one year, the Maine Fall Foliage website expanded to include a regional map showing peak fall foliage progression, as well as photos of fall foliage posted by the Maine Forest Service and park rangers throughout the state.

Over the years, the website has continued to expand. This season, it features a "frequently asked questions" section, facts about Maine's 17 million acres of forest, and links to relevant forestry and tourism resources.

More than 8.6 million people visited Maine during the fall season in 2014, according to the Maine Office of Tourism, out of a total annual visitation of nearly 33 million. These fall visitors spent more than \$1.6 billion out of an annual total of direct tourism expenditures of about \$5.5 billion.

"There's always a desire to get people out past the coast, to expand where they go," said John Bott, spokesman for the Maine Department of Agriculture, Conservation and Forestry. "I think the foliage season is one thing that helps us do that. It encourages people to visit all regions of Maine."

## The science behind the colors

We see it happen every year — the forest slowly transforming from a sea of green to a patchwork of golds, oranges, reds and browns.

"This year, we're tracking a bit late," Ross said. "But obviously it's still going to happen — that's Mother Na-



ture's way of putting the trees to bed for winter."

To survive the winter, many trees and other plants in Maine have to shed their leaves and seal up their branches so they won't lose moisture during the dry, frozen months ahead. But why the display of color?

"We're looking at what's been hidden all season long," said Kate Garland, horticulturist with the University of Maine Cooperative Extension. "It has just been masked by the green chlorophyll."

All summer, chlorophyll in leaves absorbs energy from the sun and uses it to produce sugars and starches to help the tree grow. But in addition to green chlorophyll, leaves contain yellow and orange pigments, such as xanthophyll and carotene — these colors are just hidden during the summer, according to a bulletin about leaf color published by the University of Maine Cooperative Extension.

In the fall in Maine, leaves stop producing chlorophyll. That's when the yellows and oranges become visible.

"It's a hard thing to wrap your brain around," said Garland.

But that's not all. In some species of trees, anthocyanins are formed, giving leaves red, purple or bluish hues.

"Different species tend to have different types of pigment, but within that, different individuals will have different pigmentation," Garland said. "Even if you have



AISLINN SARNACKI | BDN  
Leaves are starting to change color in the Rolland F. Perry City Forest in Bangor.

two sugar maples side by side, different parent plants will have different genetics and slightly different pigments will show."

Some trees, such as silver maple, aspen, birch and hickory, only show shades of yellow, according to the UMaine Cooperative Extension bulletin. Red or crimson leaves often are produced by trees such as red and sugar maple, flowering dogwood, black gum and red oak.

"My favorite tree in the fall is the tamarack — also called the hackmatack or larch — they turn a bright golden

color that's gorgeous," Garland said. "That's an interesting tree because it's a conifer that loses its leaves every year. Typically you think of conifers as evergreens."

In general, warm sunny days, combined with nighttime temperatures below 45 degrees but above freezing, result in brighter pigmentation in trees and raise the level of red coloration, according to the bulletin.

"All sorts of factors play into it," said Garland. "It's a really dynamic thing to understand, but it's also really fascinating."

# Hike

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falls. The Frenchman Bay Conservancy pieced together the preserve with two land purchases that total 123 acres on the east shore of the river and one conservation easement on 18 acres across the river on the west shore.

The conservancy then designed two trails on the property.

The 0.85-mile Fisherman's Trail starts at a gravel pit and descends a slope to the West Branch of the Union River.

The trail then turns right to travel upriver to Mariaville Falls. Along the way, the trail visits several viewpoints along the scenic river. The trail also travels up and over hills and along the side of a steep slope. At the falls, there is a rough side trail that people can take to access the water at the bottom of the falls. The side trail is extremely steep and travels over some jagged rocks. The Fisherman's Trail continues past the falls to a bend in the river, where there's a nice flat spot near the edge of the water for picnicking. At this spot, a sign is posted on a tree warning paddlers of the waterfall downriver.

The second trail is yet to be named and is 0.48 mile long, according to the preserve map provided by the Frenchman Bay Conservancy. It starts at the first parking area of the preserve, travels through the woods and descends a hill to connect with the Fisherman's Trail south of Mariaville Falls.

To reach the falls, turn right onto the Fisherman's Trail and hike a couple tenths of a mile.

While following the trails through the shaded evergreen forest, it's hard to imagine the land was once the location of a village. In the early 1800s, William Bingham of Philadelphia established a settlement at Mariaville Falls, and it grew to include a dam, two timber mills, a tannery, a boarding house and homes for about 50 families, according to the Frenchman Bay Conservancy. Today, there are no noticeable traces of this village along the preserve trails.

While hiking, be sure to pick up after yourself and leave nature as you find it. Dogs are permitted but must be kept

under control at all times.

For more information about trails maintained by Frenchman Bay Conservancy, visit frenchmanbay.org or call 422-2328.

**Personal note:** I gave a presentation about hiking trails a few months ago at Frenchman Bay Conservancy's beautiful headquarters at Tidal Falls in Hancock. While there I learned about FBC's new Mariaville Falls Preserve. Working with staff members of the conservancy, I planned to visit the preserve before its grand opening on Oct. 3.

Joined by my husband, Derek, and our dog, Oreo, I visited the new preserve Sunday, Sept. 27, which turned out to be the perfect temperature for hiking. It was a crisp fall day, but the sun was warm enough for us to shed our fleece jackets while snacking on the rocks near the falls.

The trails were marked with blue flagging tape tied around tree trunks, but the conservancy staff told me the tape soon would be replaced with either blue painted blazes or tiny square signs nailed to trees. I've seen both methods used to mark trails of other FBC lands.

We were the only visitors to the preserve that afternoon. Chickadees sang to us as we walked through the shady forest.

We paused to photograph an American toad, white tree mushrooms and shiny brown capped mushrooms growing up out of the forest floor covered with pine needles.

The river frothed and roared at the stair falls, which I imagine looks very different when the water is higher in the spring. Above and below the falls the river appeared quite different. Lined with tall grasses, the river's clear water flowed slowly. Its surface was smooth, disturbed only by darting water beetles.

Enjoying the peacefulness of the spot, we lingered at the preserve for several hours. We knew it would be one of the last days of the year warm enough for us to wear T-shirts and watch Oreo splash in the water.

For more of Aislinn Sarnacki's adventures, visit her blog at [actoutwithaislinn.bangordailynews.com](http://actoutwithaislinn.bangordailynews.com). Follow her on Twitter: @1minhikegirl.

# Holyoke

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Figure: This year, 2,740 hunters received moose permits. If, as has been the case in previous years, the success rate hovers around 80 percent, that means that about 2,200 moose will be shot by hunters this year.

Kantar said an 800-pound moose will provide 350 to 400 pounds of meat to the hunter.

"You can certainly feed a family of four for well over a year [on the meat of a single moose], where they don't have to purchase any other meat," Kantar said. "It's all-natural moose venison, and you know where it comes from. I don't think we talk about that enough. That's a critical piece of the hunt."

Some families prefer moose steaks and roasts, but an average moose will also provide plenty of sausage and mooseburger. Those with dehydrators also make their own moose jerky.

Maine's modern moose hunt was first staged in 1980, on a one-year, experimental basis. After a year hiatus, it returned in 1982 and has been held every year since.

This year's hunt is split into four sessions. The first six-day session began on Monday and wraps up on Saturday. Future sessions will be staged from Oct. 12-17, Nov. 2-7, and Nov. 2-28.

Some Mainers maintain that the state's moose herd has shrunk in recent years, and warn that biologists should be more conservative when they allot permits in the future.

Kantar conceded that the 76,000-moose estimate that was established in 2012 is likely not accurate any longer, but said research, including aerial surveys that have been conducted over the past two years, will help biologists as they make plans in the coming years. Biologists are currently working on establishing an up-to-date population estimate.

"We're basically going through a new process of rotating through [areas that we've already surveyed] and going back and surveying again," Kantar explained. "It's going to be a bit of time before we come back with a brand new estimate, but it's some-

thing we're working on."

In the meantime, he says he's confident that Maine biologists are gaining an understanding of the state's moose that was not previously available. The DIF&W is also working on a new 10-year management plan for moose.

"We've really developed and created a very dynamic moose management and research program that certainly equals anybody else's in North Amer-

ica," Kantar said. "This is a really significant [research] project that Mainers can be really proud of, because it's really giving us a lot of information to make the best management decisions possible for everybody who enjoys moose."

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