



FALL COLORS

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OF IOWA

FALL COLORS

Introduction

Iowa is not known to many as a state that possesses many trees and forests. Although it is true that agricultural areas dominate our landscape, there are over 2 million acres of trees and forests in our state. These trees grow on slopes too steep to farm, along streams and rivers and even in our backyards. Our trees provide vital functions such as protection of our drinking water supply, critical habitat for over 100 species of wildlife, reduce cooling and heating energy consumption and even sustain employment of more than 7,000 Iowans in the wood products industry.

With the coming of Autumn to Iowa, the magic of shorter days and cooler weather creates dazzling displays of color on our oaks, maples and over 100 trees that grow in our state. The average timeframe for fall colors in Iowa lasts about three weeks and encourages us to get out and enjoy the outdoors. In fact, many Iowa communities hold fall festivals to coincide with the beautiful fall colors, such as the Forest Crafts Festival at Lacey-Keosauqua State Park. Perhaps there is one near you?

Iowans can thank the 55,000 private woodland owners, who control 92% of our state's forests, for the fall colors which bring economic development to Iowa. A study by the Resource Conservation and Development of Northeast Iowa found that over 150,000 people visit Northeast Iowa during the Fall Colors, spending over 5.9 million in that region.

This brochure, "Fall Colors," will help you gain a greater knowledge about why trees change color and where to find the best viewing sites. Learn and enjoy Iowa trees. Become involved in efforts to plant and protect our valuable natural resources, so that generations of Iowans can enjoy nature's most fantastic show of colors. ■

Iowa DNR Forests & Forestry Division



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JAN 27 1998
Enjoy Iowa's Fall Beauty

Fall is often one of the best times in Iowa, warm days and cool nights, low humidity, no bugs to bother you and yes, the brilliant Autumn colors of our trees. Every year thousands of Iowans and visitors alike flock to the countryside to view nature's colorful display of red, orange, yellow and purple leaves. While most people appreciate this celebration of Fall colors, most people do not understand why and how the leaves of Iowa's trees change color. ■

Why Do Our Trees Change Colors?

All through spring and summer the leaves have served as factories manufacturing the food necessary for the tree's growth. The food-making process takes place inside leaf cells in tiny structures called chloroplasts. The chloroplasts contain chlorophyll which gives the leaf its green color. The chlorophyll absorbs energy from sunlight and uses it to transform carbon dioxide and water to carbohydrates such as sugars and starches. Along with the green pigment, chloroplasts also contain pigments called carotenoids. Carotenoids are yellow and orange in color and are common in many plants such as carrots, corn, daffodils and bananas.

Most of the year these yellowish colors are masked by the greater amount of green chlorophyll. But in fall, because of shorter days and cooler temperatures, the leaves stop their food-making process. The chlorophyll breaks down, the green color disappears and the yellow and orange colors become visible.

Carotenoids tint the leaves of hardwood species such as hickory, maple, yellow-poplar, birch, sycamore, cottonwood, and green ash with the fall color yellow.

The reds, purples, and their blended combinations that decorate autumn foliage come from another group of pigments in the cells, called anthocyanins. These pigments are not present in the leaf through the growing season like the carotenoids. They develop in late summer in the sap of the cells. The formation of anthocyanins depends on the amount of sugar in the leaf and the weather conditions.



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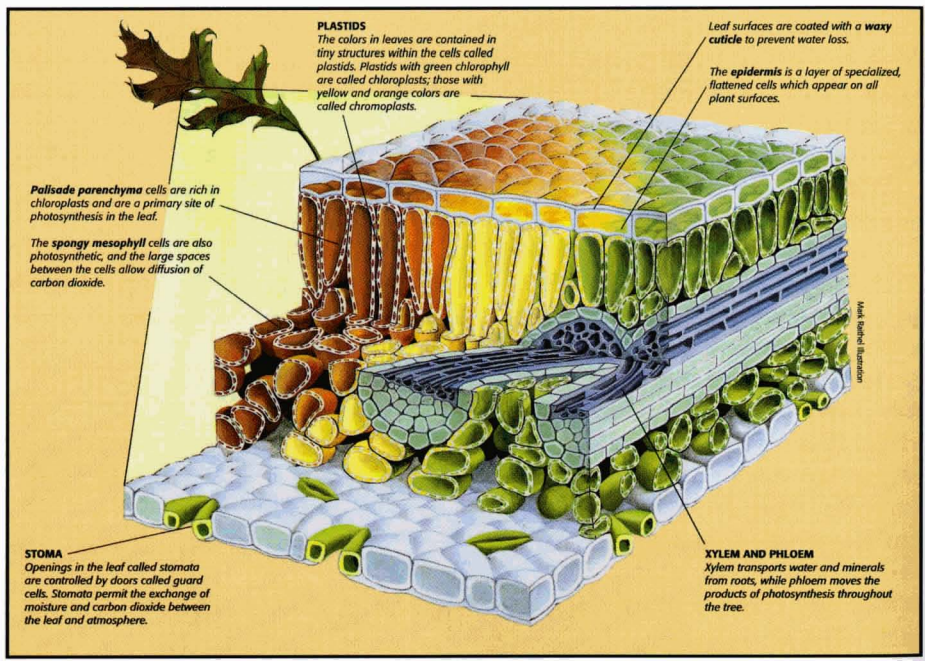
Warm, sunny days followed by cool nights favor the formation of brilliant red colors. Sugar is made by the leaves during the daytime, but cool nights prevent movement of the sugar from the leaves. Anthocyanin is formed from the sugars trapped in the leaves. The brighter the light during this period, the greater the production of anthocyanins, producing a more brilliant color display.

Anthocyanins give the color to common fruits like cranberries, red apples, purple grapes, blueberries, cherries and plums. In our autumn forests, they show up vividly in our sugar and black maples and red and white oaks. These same pigments often combine with the carotenoids to give deeper oranges, fiery reds and bronzes typical of many hardwood species.

The degree of color may vary from tree to tree. For example, leaves directly exposed to the sun may turn red, while those on the shady side of the same tree or on other trees in the shade, may be yellow. The colors may also vary from year to year, depending on the weather conditions.

Warm, cloudy and rainy fall weather will cause the leaves to have less red color because of fewer anthocyanin pigments. Well distributed rain-fall during the summer and fall, however, will favor a good fall color display. Trees under drought stress will many times drop their leaves without showing much color.

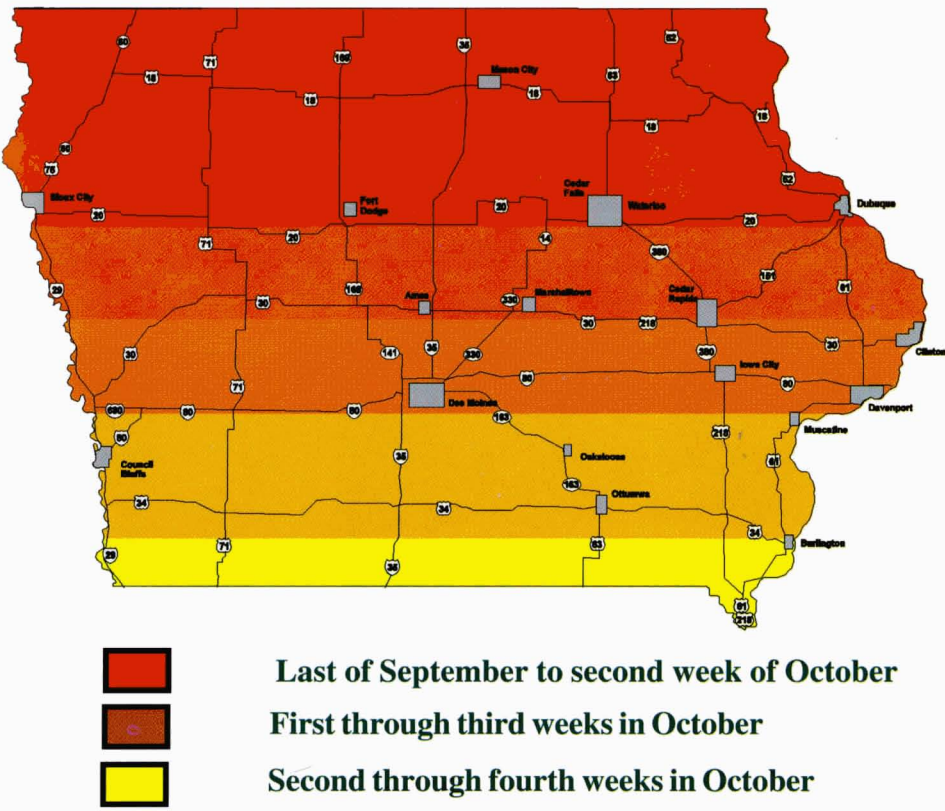
Temperature also has an effect on fall color. An extreme cold snap will kill the leaves before allowing them to change to their fall display. And even though the colors may be brilliant, a heavy rain or high winds during the peak of color will cause the leaves to drop early. ■



Where are the best viewing sites in Iowa?

"Knowing when and where the fall colors are going to be most brilliant, is kind of a roll of the dice", according to John Walkowiak, Urban Forester with the DNR's Forests and Forestry Division. "But in general, the northern 1/2 of Iowa has prime fall colors during the last week of September to the second week of October, and the southern 1/2 of the state has prime fall colors during the second to the fourth weeks of October", he said. All of Iowa's state parks and forests are excellent viewing sites, as well as the numerous county and city park areas. The areas around Yellow River State Forest in Allamakee county in extreme Northeast Iowa has wonderful viewing points during the later part of September. During the Forest Crafts Festival at Lacey-Keosauqua State Park in Van Buren county, individuals can not only marvel at excellent wood crafts, but witness beautiful fall colors during the second weekend of October. However, good fall colors may be found anywhere in the state.■

Best Viewing Times in Iowa



Fall Leaf Colors

Because fall leaves vary so much in color--from fierce red to deep ruby, bittersweet rust to vibrant lemon and every shade in-between--we have included the list below to help you identify which tree you are admiring.

Ash- Green Ash leaves turn yellow, but White Ash has a purplish cast. The leaves fall after those of walnut trees, but earlier than those of oaks and maples.



Bur Oak- Buff to yellow colors predominate in bur oaks. The leaves remain on the tree and turn brown before falling.



Elms- Elm leaves turn various shades of yellow with some turning brown before falling, others falling while still yellow.

Hickory- Leaves turn yellow on hickory trees, then brown before falling.

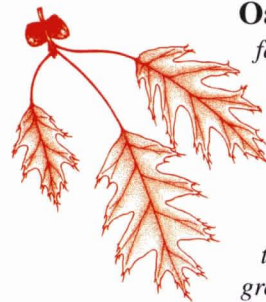
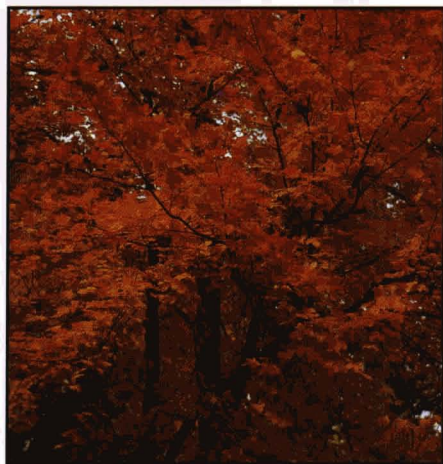
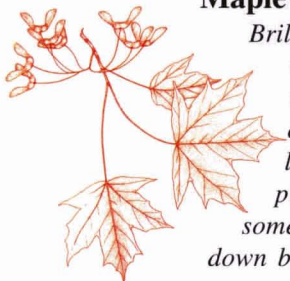


Maple (Soft)- The leaves of soft (silver) maples turn yellow but do not turn brown before falling.



Maple (Hard)-

Brilliant flame red hues are the signature of hard maple leaves. The red pigmentation of some leaves breaks down before falling.



Oak (Red)- The red oaks have brilliant red leaves in fall though the color is probably not as intense as that of some hard maples.

Oak (White)- White oaks have a more subdued purple fall leaf color. The leaves then turn brown and often stay on the tree until new leaves begin to grow in the spring.



Sumac- The fall color in these leaves can be redder than almost any other tree, but sumacs are often overlooked because they are small trees confined to openings and edges. Sumac are also the first plants to change color.

Virginia Creeper- This plant adds a bright, intense splash of red to many fall scenes. It is very spectacular when it grows on dead snags with the vibrant red starkly contrasting with the soft gray.



Walnut- These small, pointed leaves turn yellow in the fall. Walnut trees are one of the last trees to leaf out in spring and one of the first to turn and drop leaves in autumn. ■



Keep Updated on the Best Viewing Sites

For weekly updates on the best fall color locations, the DNR's Forests and Forestry Division has a recorded phone message available from mid September to late October. Call (515) 233-4110 to find out conditions across the state and then take a few minutes outside to witness one of nature's most spectacular shows.



Created by Amanda Carstens

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