

MINNESOTA'S DECIDUOUS FOREST BIOME

There is a magic in the deciduous forest. Perhaps it is due to the green quality of light beneath the dense canopy of leaves. Perhaps it is in the silence that wraps itself around the sturdy trunks. Or perhaps it arises from the crumbling logs of fallen trees as they melt back into soil. A vast deciduous forest once covered the eastern half of North America. In Minnesota, it extended in a diagonal line from the southeastern part of the state to the northwest. Most of these forests were cleared and converted to farmland during Minnesota's first 50 years of statehood. European settlers often spared patches for wood lots or to tap maple trees for their sweet sap. These are the forests that have survived to our times.

WHAT IS A DECIDUOUS FOREST?

The deciduous forest is characterized by trees that lose their leaves at the end of each growing season. In Minnesota these woodlands include sugar maples in areas where lakes, rivers, and rugged terrain protect them from fire. At the prairie's edge, where fires are common, oaks dominate. Forests of silver maple and cottonwood grow along moist river flood plains. In northwestern Minnesota, scrubby bur oaks and aspen groves mingle with prairie.

FOUNDATIONS OF TODAY'S DECIDUOUS FOREST

In the last period of glaciation, ice sheets sculpted portions of the deciduous forest biome, but missed the southeastern corner known as the driftless area. The rest of this biome's glacial history left behind glacial ridges, sand plains, kames (hills), and kettle lakes.

CLIMATE IS KEY

Air masses from the Gulf of Mexico bring warm summer temperatures and humid, sunny days that provide an ample growing season for the deciduous forest biome. The optimal moisture and sunlight of this biome promote deciduous tree growth.

FALLING LEAVES

A large amount of energy is required to produce new leaves every year. So why do trees drop their leaves? The broad leaves of deciduous trees evaporate a lot of water and use a lot of sap. So to prepare for winter, deciduous trees shut down and drop their leaves. As an added benefit, dropped leaves decompose and add nutrients to the soil.

FUN FACT

In the spring, before the trees leaf out in many deciduous forests, spring wildflowers grow. Most of these flowers wither soon after the trees leaf out; they must wait until sunlight next spring stirs them into life again.



Red Columbine