Superior National Forest: Fall Color Report

October 23, 2014

**"No shade, no shine, no butterflies, no bees,
No fruits, no flowers, no leaves, no birds -
November!"**

- Thomas Hood

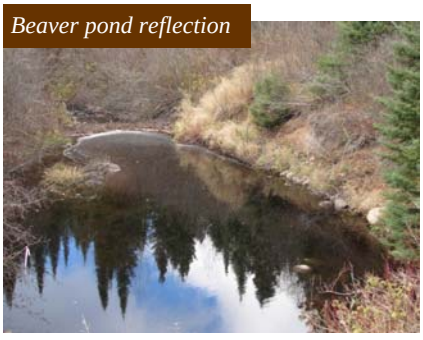
Honeymoon Trail, Oct 22, 2015

While it is not quite November yet, it is certainly late in the autumn with winter in the morning air. While the calendar has hasn't changed, nature certainly has. Fall is a season of huge changes, but we often forget the enormity of autumn in its familiarity. Take a moment to really try to comprehend what has happened in the past two months. From the beginning of the fall color season, back on September 4, we have lost two hours and forty five minutes of daylight, going from over thirteen hours a day to a mere ten and a half. Our average temperature has gone from a high of 71, with only 36% of the time in the 'cold' temperature zone and 24% in the 'comfortable' zone, to an average high of 50 with 77% of the time in the 'cold' zone - and virtually no time in 'comfortable'. Our summer diversity of 225 species of birds has been reduced by migration to only 57 species willing to spend the winter here. Our mammal species list has dropped as well, not through migration but by hibernation as bears, bats, and others take to their beds for the winter. The diversity of insects has dropped to near zero as cold weather forces insects into dormancy, or outright kills them.

Snow Bunting

In the plant kingdom, annual species also die off, trusting in seeds to sprout again in the spring. Perennial species cope in many ways. They may die off above ground while roots continue to live, or they may be one of the few that brave the winter weather as evergreens and mosses do. The deciduous trees have a different strategy. They keep the woody trunk through the winter, but drop their leaves. Millions, perhaps billions, of leaves with a total of millions of acres of surface area have fallen to the ground, forming a carpet several inches high. That amounts to an estimate of almost a cubic mile of leaves across the Forest if someone decided to rake them into a gigantic pile. During the course of the next few weeks, while temperatures remain high enough, and then again in the spring, this mile high mountain of leaves will rot down into soil, disappearing almost entirely by next fall.

Beaver pond reflection



The changes in the natural world in fall have been huge, far more than our human changes of turning on the furnace and replacing the swimsuit in your dresser with turtlenecks. It is a sweeping, far reaching, and truly amazing change as the natural world shifts gears for winter. The changes are in preparation for the most significant change of all: the replacement of liquid water by ice, ice that will stop blood and sap in their vessels, ice that will expand and rupture living cells, ice that will tie up the water needed for the chemistry of biology to function. There has been frost on the grass, and a few drifting flakes of snow, but as yet no skim of ice coating the lakes. But nature knows what is coming, and after delaying as long as possible, it is quickly getting ready for the approaching season.