



FRESHWATER

CLEAN WATER FROM HEALTHY LANDS

Freshwater is teamed up with several land trusts on a regional approach to improving water quality around the Great Lakes, through an innovative project propelled by the Great Lakes Protection Fund. A primary goal is to restore select croplands to perennial vegetation, which reduces runoff and erosion while trapping carbon in the soil. Using state-of-the-art watershed modeling paired with local insights, our team selects high priority lands for conservation. These lands are then permanently protected with funding generated by individuals and businesses who live and work in the region.

Learn more at greaterlakespromise.org.



FEBRUARY PHENOLOGY

Jim Gilbert's Nature Notes

First week of February

Usually thousands of ice-fishing houses dot Minnesota and Wisconsin lakes, which are covered by ice about two feet thick. Pairs of trumpeter swans stand on pond and lake ice, claiming territories. House finches and northern cardinals sing, red-bellied woodpeckers are vocal and ring-necked pheasants are crowing. These are early spring sounds. Gray squirrels may use wood duck nesting boxes as safe sleeping places; often several squirrels are in one box. Coyote mating season is beginning.

February 7, 2024: This was the eleventh day of 50 degrees in the Twin Cities since December 1; there was no snow on the landscape here and miles beyond.

Second week of February

Red oak leaves, which have been attached since last growing season, are now falling – a subtle spring sign. Each year the Sun is high enough in its path that by February 11, greenhouses start to be hot and humid on sunny days from about 9:30 a.m. to 4 p.m. To keep early plantings going in greenhouses, heat is needed when the Sun isn't providing the warmth. We also notice that cars and other vehicles parked in the sunlight warm up, as do three-season porches.

A Boundary Waters Canoe Area Wilderness winter trip takes much preparation and skill. Probably less than 3 percent of warm season visitors try a winter BWCA adventure. A frozen season visit on skis and snowshoes offers solitude and raw beauty, ravens overhead, animal tracks in the snow, pristine lakes and forests, and a dark sky for star gazing.

February 12, 2024: Common snowdrops began blooming in a University of Minnesota Landscape Arboretum forest garden.

Third week of February

All of the tree squirrels – fox, flying, red and gray – have started their mating season. More raccoons are moving about the landscape. In Minnesota and Wisconsin, raccoons usually den-up in early winter and remain inactive for several weeks.

By mid-February, motorists in the southern half of the state often see flocks of small grayish-brown horned larks along roadsides and in fields. These first-of-the-spring bird migrants usually gather in groups of three to 20 birds that flip up as a car passes.

More than 200 wintering bald eagles may be counted along the Mississippi River between Red Wing and Winona. Meanwhile, timber wolves in northeastern Minnesota may have begun to mate, and they howl with increasing frequency.

Fourth week of February

It's time to prune apple and oak trees, and grape vines, and to plant begonia and geranium seeds indoors. The long bright, arching golden-yellow twigs of weeping willows glow on the landscape.

Black bear cubs, now about a month old and weighing less than three pounds, nestle close to their sleeping mothers. Migrating American crows are returning to northern Minnesota.

Late February 2024: A number of very early lake ice-outs in Minnesota included: East Chain Lake and Iowa Lake in Martin County on February 23, Lake Hendricks in Lincoln County on February 25 and Wells Lake at Faribault on February 28.

February 29, 2024: No snow on the landscape and a high of 59 degrees in the Twin Cities. Last day this year for ice boat sailing on Lake Waconia. This concluded the warmest meteorological winter (December through February) on record for the Twin Cities and area, and much of Minnesota.

LOOK FOR ...



First active eastern chipmunk seen (Carver County):

2024	Mar. 9
2023	Feb. 9
2022	Mar. 2
2021	Feb. 23
2020	Mar. 1
2019	Mar. 8
2018	Mar. 1
2017	Feb. 21
2016	Feb. 25
2015	Feb. 22



DENISE STROBEL | RED SQUIRREL | BLOOMINGTON, MN



Jamie Kagol
@JamieKagol
Meteorologist

Last winter's snowfall was less than impressive, but February delivered plenty of cold with 12 subzero days, double the normal six. During one particularly brutal cold snap, the mercury plunged to the teens below zero for two consecutive nights. So, while February keeps us bundled up against bitterly cold temperatures, we quietly look forward to warmer weather as spring is just around the corner... or so we hope.



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[mprnews.org/
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MPRnews

mprnews.org/podcasts/climate-cast

Winter trends sunnier

Long-term climate trends for Minnesota show our winters trend sunnier as we move into February. NOAA's [30-year climate normals*](#) for the Twin Cities from 1991-2020 show just 42 percent possible sunshine in December. Sunshine increases to 53 percent in January.

February is our sunniest month of winter on average with 59 percent possible sunshine. That means about six of 10 days on average during February are sunny! Colder arctic air is drier than milder Pacific air. So, it's sunnier when it's colder in Minnesota winters. Life is full of trade-offs.

* https://files.dnr.state.mn.us/natural_resources/climate/twin_cities/msp_normals_means_extremes_page3.pdf

MY NATURE NOTES

ASTRONOMY

Ron Schmit

Morning sky

Though swamped in dawn's glare, Mars is climbing away from the Sun. On 2/16, it rises at 7:01 a.m. Just 1° south will be the Moon, rising at 7:01 a.m., but hard to find just one day before New. The Sun rises at 7:12 a.m., when the Moon is just 1° above the horizon and Mars slightly less than 2° up. Together, they are approximately 10° south from the Sun. For cultures using the lunar calendar, finding a near-New Moon (waning or waxing) is a very useful skill.

Evening sky

On 2/2, the Moon will cover Regulus at 7:44 p.m. Mercury continues to climb out of twilight, passing just 0.13° north of the Moon on 2/18. It will reach Greatest Eastern Elongation on 2/19. At sunset (5:47 p.m.) Mercury will be 16° above the horizon, making it the best day this month to see it. The Moon passes Saturn on 2/19. On 2/26, Venus will be nearly 5° south of Mercury. Jupiter continues westward through Gemini, meeting the Moon on 2/26.

Highlights

Math is the language of astronomy, but all those numbers don't mean much without context. We use units to express the magnitude of physical quantities. The world's two major systems are *Système International* (SI), also known as Metric, and the Imperial System, also known as English. In 1776, Ben Franklin suggested that if they wanted to upset the king, they should adopt the French metric system. It didn't last. Then, 50 years ago, to prepare for the 1976 Bicentennial, Congress passed the Metric Conversion Act, stating metric was "the preferred system" in the U.S. Soon, road signs displayed kilometers and the temperature was reported in Celsius. It didn't last. Again. It's a shame because metric makes more sense. It is based on zero! For mass, volume and distance we have: 1 kilogram of water = 1 liter = 0.001 cubic meters. For temperature, water freezes at 0° Celsius and boils at 100° Celsius. Scaling up is simply a matter of applying powers of ten.

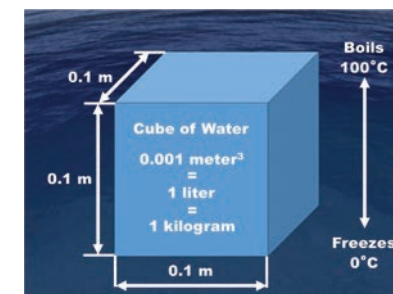
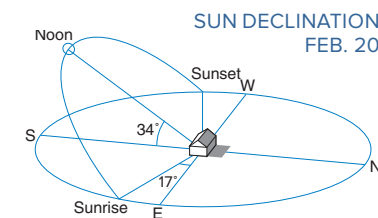


Image: Ron Schmit

SPECIES HIGHLIGHT by Jim Gilbert



DARCY SIME | SCREECH OWL | ALDEN, MN

Eastern screech owl (*Megascops asio*)

This owl is found throughout Minnesota except in the northeast, in woodlands and tree groves. It's our only small owl with ear tufts and two distinct color phases – red-brown and gray. They are about nine inches tall and have yellow eyes. These year-round residents roost and nest in tree cavities, and sometimes in wood duck boxes. Their song is a quavering whistle, and they also will give a screeching call. Screech-owls are active at dusk and during the night. Their food mainly consists of insects, small mammals and birds. They may also catch fish, amphibians and small reptiles.