



## LAKE FREEZE-UP

Ice anglers and pond hockey players look forward to this time of year when ice forms on Minnesota lakes and ponds. An ice-covered lake does not signal that it is safe to venture onto the ice. A thickness of four inches is necessary to support a person. A thickness of about 12 inches is needed before a vehicle or fish house can be moved onto the ice.

This month, visit a local lake or pond and observe safely from shore. Is the lake covered with ice? If not, is ice forming small shelves along the shoreline?

If it is ice covered, you can test the thickness while staying on shore. Pick up small rocks and throw them up in the air so they land on the ice. What happens? Does the ice crack? Do the rocks go through the ice?

If there is no ice, predict the ice-in date and check back periodically to see when it occurs. Repeat your observations in the following years and develop a data set of the average ice-in date for your local lake or pond.

For more outdoor learning resources, visit [jeffersfoundation.org](https://jeffersfoundation.org).

## FRESHWATER

### FINISH YOUR HOLIDAY SHOPPING TODAY

The Minnesota Weatherguide Environment Calendar and Almanac makes a great gift for the nature enthusiasts on your list. Plus, your purchase supports the work of Freshwater, which has been inspiring and empowering people to value and preserve water since 1968.

Order online at [freshwater.org](https://freshwater.org). It's a gift they will enjoy all year long.

When you're done shopping, step outside and take in the crisp December weather. Notice how snow and ice transform our woods and waters this time of year, and listen for wintering birds like the black-capped chickadee or the downy woodpecker. Appreciate the beauty of our unique winter landscapes.

## DECEMBER PHENOLOGY

### Jim Gilbert's Nature Notes

#### First week of December

Eastern chipmunks are awake but stay in and eat from the supply of food stored in their underground burrows.

Remember, it takes at least four inches of new ice in contact with stationary water for safe walking, skating and ice fishing.

#### Second week of December

Studies show that northern cardinals not only mate for life but they remain together the whole year. As winter approaches, the residents of an area often associate together in loose flocks.

Soon after freeze-up, ice sheets on lakes are heard cracking, thundering and roaring. These eerie sounds remind us to respect the ice. Eight to 12 inches of ice are needed to support a car, and 13 to 17 inches for a truck.

#### Third week of December

Red squirrels are active all winter. They prefer evergreen forests, which explains why they're far less abundant in southern Minnesota than in the north.

Showy fruit on highbush cranberry shrubs, bittersweet vines and crabapple trees is available to birds and other wildlife.

Found throughout Minnesota, the red fox is omnivorous. It readily consumes apples, berries, insects, fish, mice and rabbits, and may visit wildlife feeding stations to eat sunflower seeds, other seeds and suet. Red foxes are quite shy and do not pose a threat to children and dogs. They weigh from seven to 15 pounds.

#### Fourth week of December

With a heartbeat of 700 pumps per minute, black-capped chickadees need to eat the equivalent of their own weight each winter day. They are mainly seed eaters. It would take 40 of these energetic wisps of life to weigh one pound. Chickadees sometimes take seeds from human hands.

In December, snow is still thought of as marvelous and elegant. A fresh snowfall adds a new dimension to our

neighborhoods as it covers litter, heals scars and gives us soft beauty filled with wonder.

#### Fifth week of December

Screech owls sometimes roost in wood duck houses. Gray squirrels and other animals also use these nesting boxes for winter shelter.

Both white-tailed deer and moose have begun dropping their antlers.

Flying squirrels come nightly to a good number of wildlife feeding stations throughout Minnesota and

Wisconsin. They typically arrive about 5 p.m. to dine on sunflower seeds and suet. Floodlights don't scare these squirrels.

### LOOK FOR ...



#### Freeze-up for Lake Minnetonka:

2024	Dec. 12
2023	1/13/24
2022	Dec. 8
2021	Dec. 8
2020	Dec. 24
2019	Dec. 2
2018	Nov. 28
2017	Dec. 14
2016	Dec. 15
2015	Dec. 31



CHRIS HAYES | FROSTY | EXCELSIOR, MN

## TRADITIONAL ACTIVITIES FOR WINTER (BABOON) by John Roterman

In the winter, the Ojibwe hunted and trapped larger wild game. Ice fishing took place. And during the winters, when there was snow on the ground, it was storytelling time (aadiizookawin) around a warm fire. This is also the time of year when Ojibwe crafted many items every winter, including snowshoes, clothing, canoe paddles and objects of art.



Ben Dery  
@BenDeryKARE11  
Meteorologist

Winter is generally embraced this time of year compared to later winter months. Even the most curmudgeon among us can appreciate the sight of a snow-covered scene. A white Christmas in the Twin Cities is witnessed about three out of every four years.

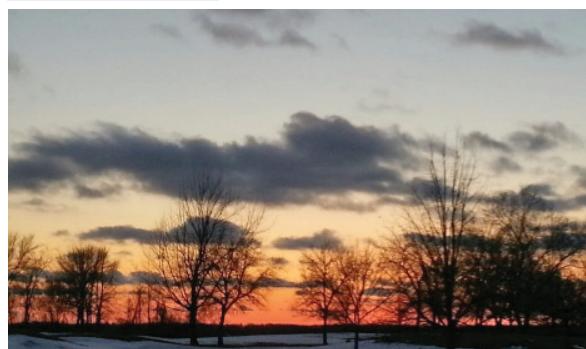


## MPRnews

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## Early sunsets

Let's face it, December is the darkest month of the year in Minnesota. Our annual daylight minimum occurs around December 21 with the winter solstice. Daylight peaks at a low of just 8 hours and 46 minutes around the solstice! And sunset peaks at an early 4:31 p.m. around December 10.



Winter sunset at the Huttner Weather Lab. Photo by Paul Huttner.

On cloudy days it feels like it's getting dark a couple hours after lunchtime. Toss in an average of just 42 percent possible sunshine in December, and you can understand why snowbirds escape to sunnier climates!

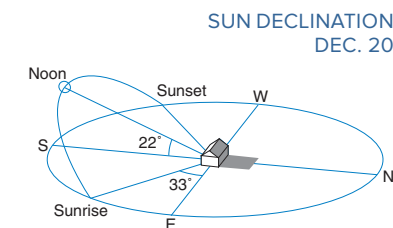
## MY NATURE NOTES

## ASTRONOMY

Ron Schmit

## Morning sky

Disappearing into the dawn, Mercury ends the year at Superior Conjunction. Venus starts the month at maximum brilliance, still climbing into the dawn sky. Other than the Sun and Moon, it's the brightest thing in the sky – so bright, you may think it's an airplane coming in for a landing, but then you notice it is not moving. When people call to report a UFO this month, they are usually calling about Venus.



## Evening sky

Saturn is in the south at sunset. Its Retrograde Motion ends on 12/10. It is joined by the Moon on 12/17. Now part of the evening sky (coming up before midnight), Jupiter and Mars make a lovely trio with Regulus. The heart of Leo the Lion, the ancient Persians held Regulus as one of four bright stars considered guardians of the sky. The Moon will make it a quartet on 12/28. A Full Moon on 12/23 will be the third Supermoon of the year. Winter arrives at 2:50 p.m. on 12/21.

## Highlights

The Earth completes an orbit around the Sun in one year, Mars in two years, Jupiter in 12 and Saturn in 29. As the Earth is whizzing by these slow pokes, the positions of these outer planets shifts against the background stars. They appear to run counter to their natural eastward motion. This phenomenon is called retrograde. The retrograde of Mars lasts on average 72 days. Although Mars was not in retrograde this year, it will start on 1/10/2027 and end 4/1/2027, shifting  $20.1^\circ$  against the background stars. Jupiter's retrograde is typically 121 days, most recently ending on 3/10/2026, having shifted  $9.9^\circ$  against the background stars. It begins another retrograde on 12/12/2026 and ends on 4/12/2027. Saturn's retrograde is typically 138 days. It started on 7/26/2026 and is ending on 12/10/2026, shifting  $6.8^\circ$  against the background stars. As you can see, the farther away the planet, the smaller the displacement.

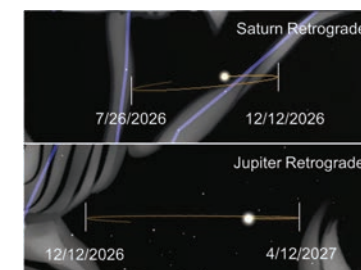


Image: Stellarium

## SPECIES HIGHLIGHT by Jim Gilbert



DOMINIQUE BRAUD | RED SQUIRREL | ROSEMOUNT, MN

### Red squirrel (*Sciurus vulgaris*)

The range of a red squirrel is small, seldom more than 400 feet in diameter. Like the blue jay, it's a sentinel of the forest. If anything unusual is going on in its territory, this small squirrel, with the rusty-red coat and prominent white eye ring, responds with loud chattering and scolding. Red squirrels prefer evergreen forests, so they are not as abundant in southern Minnesota as farther north. They prefer a home in a hollow tree but will build a nest of leaves if no tree cavity is available. Although they store cones and nuts under tree roots or in underground burrows, they will also tunnel through snow to search for nuts and other seeds on the ground.