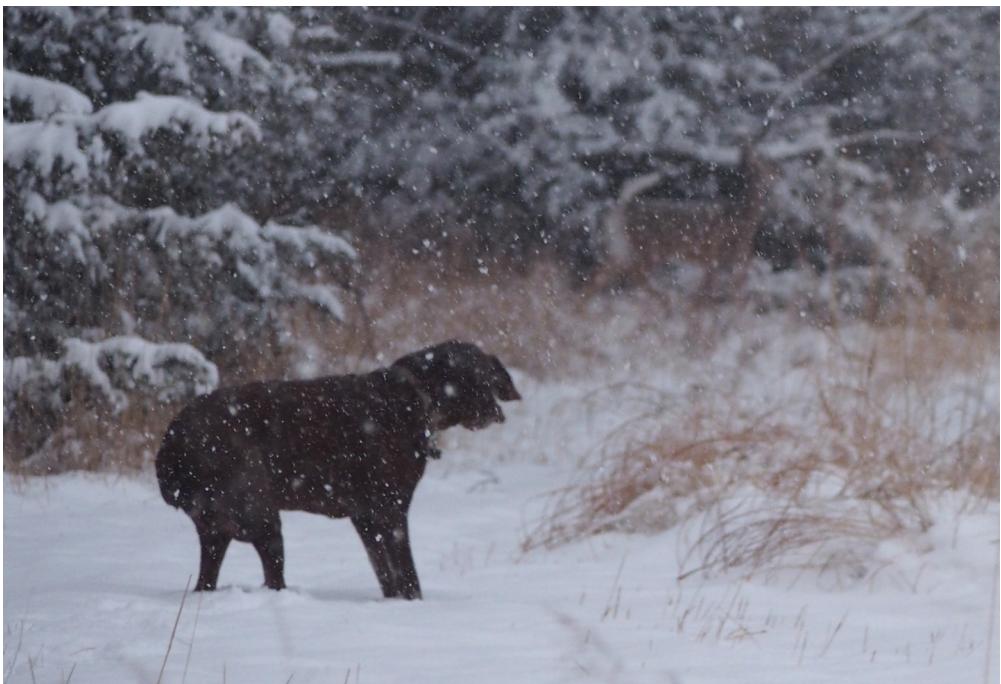


Kaw Valley Almanac

December 16 - 22, 2019

www.kawvalleyalmanac.com twitter: @KVALmanac

Day	Moon rises	South	Moon sets	% Illum/Phase
Monday	09:52 PM	04:06 AM	11:21 AM	78%
Tuesday	11:03 PM	05:00 AM	11:59 AM	68%
Wednesday		05:53 AM	12:33 PM	3rd Quarter
Thursday	12:12 AM	06:43 AM	01:04 PM	45%
Friday	01:22 AM	07:33 AM	01:35 PM	34%
Saturday	02:31 AM	08:23 AM	02:06 PM	24%
Sunday	03:40 AM	09:14 AM	02:40 PM	15%



While walking the dog while it was snowing on Sunday, I took this photo at the exact moment he turned his head to see a deer. It blends perfectly into the snow and grass: look carefully to the right and up and you can see it too!



Sun

Jupiter, Saturn, Venus in SW at dusk; Mercury, Mars E at dawn

Day	Gets light	Sunrise	Sunset	Gets dark
Monday	06:35 AM	07:32 AM	05:00 PM	06:06 PM
Tuesday	06:35 AM	07:33 AM	05:00 PM	06:07 PM
Wednesday	06:36 AM	07:34 AM	05:00 PM	06:07 PM
Thursday	06:36 AM	07:34 AM	05:01 PM	06:07 PM
Friday	06:37 AM	07:35 AM	05:01 PM	06:08 PM
Saturday	06:37 AM	07:35 AM	05:02 PM	06:08 PM
Sunday	06:38 AM	07:36 AM	05:02 PM	06:09 PM

Live outside the Lawrence area? Get rise and setting times, moon data where you live at: <https://www.timeanddate.com/astronomy/>

Nature Notes

§ Snow is like a book where animals write down their activities for you to read through their tracks, sleeping body imprints and other evidence of behaviors that are otherwise invisible. This week should be a great time to do just that!

§ Freshly fallen snow has a blue tinge to it as the millions of icy edges scatters the other wavelengths of the sun's light the same way that the air does, resulting in our blue skies.

§ Trumpeter Swans are one of the heaviest flying birds in North America and right now there is a record number of almost 2,000 of them at Loess Bluffs National Wildlife Refuge north of Kansas City near the Missouri River.

§ This week includes the winter solstice: Saturday has only 9 hours and 24 minutes between sunrise and sunset, making it the shortest daytime of the year. Look to the north at noon this week to see how deep blue the sky is at high noon, due to the low altitude of the sun at its highest point. See the sunrise/sunset point at a given location and return to that point throughout the year: the sunrise/sunset point will never go further south than on Saturday.

§ Look for the white sycamore trees which line many valley creeks and oaks that hang onto their leaves all winter long.