

## Observations in Nature – A Year in the Life of Spring Creek- December

Winter has come to Wyoming. Spring Creek is a small waterway that cuts through the southern edge of Laramie, Wyoming, USA. It originates east of town and terminates when it confluences with the Laramie River. This series of articles will follow the micro-environment over the course of a year. For a complete description of the area of observation, see the October issue of this publication.



Spring Creek in December. Note the increased ice build-up on the left side of the water. The ice on the right side (south side) has increased build-up also.

I made my observations on a surprisingly warm day, December 10, 2022, at 1:45 p.m. Mountain Standard Time. The air temperature was 40° F, with a wind chill, or feels-like temperature of 31° F. The water temperature was 45° F or 7.4° C. Both the actual air temperature and the water temperature are almost identical to November's observations. The wind was reasonable at 23 miles per hour, from the south-south-west. It was mostly sunny, with high, thin streaks of clouds

and contrails. There were also scattered lenticular (lens-shaped, or flying saucer) clouds. These are considered an unusual type of cloud, but are quite common above the Laramie valley.

I did three water surface flow rate trials of the seventeen-foot (5.183 meters) section. I used fallen leaves again, which may have contributed to some inconsistencies in the actual flow rate. This month, the speeds were 7.29 seconds, 8.70 seconds, and 9.25 seconds, for an average of 8.413 seconds/17 feet, or 5.183 meters. These figures worked out to 2.02 feet/second, or 0.616 meters/second. This was slightly slower than in November, but not significantly so. Each month the water movement has been just a little slower. It will be interesting to see if the trend continues. I plan to use wine bottle corks for future readings. This will lend consistency to the data.

The depth of the water has increased. It is now 8.5 inches deep at the start of the observation section, where it exits a box culvert.

As predicted, I did not find any macroinvertebrates. However, because the water temperature was almost identical to last month's, there may have been a few present that I did not find. In the small tank I set up following November's observations, I have a scud (*Malacostraca*), a leech (*Hirundinea*), and a few unidentified snails. These organisms were not collected intentionally. This tank is all-natural and is in an unheated part of my home. I am reasonably certain there are a variety of microscopic organisms in the tank, too. They will become future research.

I did observe one very tiny sprig of watercress (*Nasturtium officinale*) in the creek that was still green. It was sheltered between some rocks. The watercress in my observation tank is dying back, even though it does get natural light from a window. This is to be expected, as it is a perennial. Uncultivated specimens have a growing season that lasts from March/April to October/November.

January and February are traditionally quite cold months. It will be interesting to see how that affects this little waterway.

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All photos by the author.

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