Mile Plains, between Windsor (town) and Newport. Buckets of it were brought to an English colleague and myself, both of us being glad to renew our acquaintance with our pungent favorite of former days.

9. *Moneses uniflora* is mentioned in Prof. Lawson's elaborate Monograph of the Ericaceæ of the Dominion and Adjacent Parts of British America, (read before the Institute, 1871) as having been found at Mount Uniacke. I have met with it near Windsor and at Wilmot. We have here also *Pyrola elliptica*, and *P. secunda*. *P. rotundifolia* I have got near the Rectory at Wilmot.

10. *Echium vulgare*. Blue Weed. This European plant I have got in a field of Mr. McLean's, about 4 miles from New Glasgow, on the road to Merigonish, Pictou county. I was told that it grows only in that spot.

11. Of European plants observed near Sydney Mines, Cape Breton, may be mentioned *Urtica urens* which was said to have been introduced a little before 1859 when I saw it, *Lepidium ruderale* and *Euphrasia officinalis*.

12. *Viola rotundifolia*. This pretty plant, the one yellow violet, of which there is a specimen in the Herbarium before mentioned, I have only seen growing at the locality where that specimen was got, viz: at the Manganese Mine, in the woods at Teny Cape, Hants county.

Art. XIII. On the Meteorology of Halifax. By Frederick Allison, Esq.

(*Read May* 8, 1872.)

My paper this evening opens with a brief sketch of the Meteorology of Halifax for 1871. The accompanying table of figures is rather more extended than in previous years; since I have now obtained accurate observations of most elements for nine years, and can therefore venture to calculate normals with a fair guarantee of precision. Certainly a more lengthy series will give results more

3. **Hornbeam or Iron Wood.** In 1868 a tree was pointed out to me close to Moose River, Annapolis county, near Clementsport, as almost the only one remaining of many "hornbeam-trees" formerly existing in the vicinity. The two species *Carpinus*, L., and *Ostrya*, Michel, are included under the term "hornbeam," but I cannot say which of these the tree belonged to. So far as I remember it was 30 or 40 feet high at least, so that its size would be that of the latter, but its growing on the side of a stream would accord better with the recorded habit of the former.

4. **New station for *Osmorhiza brevistytis*, D. C.** In the Herbarium above alluded to is a specimen of this plant from East Mountain, Onslow, Colchester county. I have since seen it growing on Marble Mountain, C. B., and at Redden's, near the bridge at Kentville, King's county.

5. ***Actæa alba.*** In Prof. Lawson's valuable Monograph of the Ranunculaceæ of the Dominion of Canada, and adjacent parts of British America, read before the Institute in Dec. 1869, it is mentioned that *Actæa rubra* is widely spread throughout the whole Dominion, but *A. alba* is south western. Gray states that this variety is more common southward, extending to Virginia and Kentucky. It grows at three places in this vicinity, viz., Windsor Falls, Butler's Mountain, and Nesbit's Island.

6. **Potentillas at Windsor and westward.** At Windsor we have *P. Norvegica*, *P. Canadensis*, and *P tridentata* in abundance, and more sparingly *P. anserina*, and *P. argentea*; this last I have only seen at one spot, but it is common westward, viz: at Kentville and Coldbrook, King's county, and on the road as far as Digby. *P. anserina* I found at the head of Bear River, Digby county.

7. ***Dalibarda repens.*** The Herbarium spoken of above contains a specimen of this plant from Wilmot, Annapolis county. In 1868 I saw the plant at Jauvet Comeau's, Bloomfield, Digby county.

8. ***Nasturtium officinale.*** Water Cress. This plant is mentioned by Gray as found in the United States "in brooks and ditches, rare, escaped from cultivation, naturalized from Europe." Last year I learned that it is plentiful in two brooks near the Three

July was also below its normal temperature, and slightly above its normal pressure. This month was cloudy and rather moist; with S. W. winds, the mean velocity of which dropped to the lowest figure 4.87 per hour.

The temperature of August scarcely varied from that of last month. The normal heat of these months is also very close, August being a little the cooler. But one thousandth of an inch separated their pressures, and the precipitation was very nearly the same. Wind, however, got up in August as far as N. W., and the mean of speed slightly increased.

September was still cooler, relatively to its proper temperature, but as yet no frost. Mean pressure was rising gradually. The month had a fair amount of rain, but many bright days, and was generally fine, without a gale. Winds prevailed from W. N. W., and reached 8.46 miles as their average speed.

October was comparatively the mildest month since March—28°.3 being its minimum. Mean pressure was much the same as in September. There was a deficiency of rain, and no snow. S. W. winds generally; and an average velocity of 9.99 per hour. The gale of the 12th deserves a separate notice.

No month last year was so abnormal as November. It was very cold: the mean being more than 5 degrees below nine Novembers; and thermometer falling to 8°.2. The barometer stood low; on one day touching 28.905. N. W. winds prevailed, and their speed was frequently high, attaining a mean of 15.39 miles per hour. Rain was light, but nearly compensated by the excess of snow, of which we had 10 inches, or twice the normal fall.

December remained cold, with a higher barometer, and 25 inches of snow, while but half the usual rain fall was measured. Wind returned to W. N. W., and this last month was again more quiet, giving an average velocity of 9.69 per hour.

Summarizing 1871, we find a cold year—mean temperature being 41°.94 against a nine years normal of 43°.18. March and October alone surpassed their normals in this element. Greatest heat was attained in May, and least noted in January. The range for the year was 100°.9. This is decidedly wider than usual.

accurate, and perhaps slightly, varying from these; but we may at present rely upon these deviations as closely approximating to the truth.

As the tables are before you I do not generally recapitulate the figures, but comment upon the monthly and yearly characteristics.

January, 1871, was slightly deficient in heat, with a maximum and minimum temperature both low, the latter—13°.7—being very seldom reached in Halifax. The month having been cold and dry, we naturally had a high mean barometer, and the extraordinary height of 30.643 was attained. N. W. wind succumbed to W. N. W., and the mean velocity was very nearly 12 miles per hour. Sleighing was confined to 14 days.

February, usually milder than January, was last year slightly colder, and the maximum remained low. We had no such cold days, however, in February as in January. Mean pressure declined considerably, and the relative humidity was much less. Though some falls of both rain and snow were heavy, the month had a fair share of brightness; wind direction remaining the same, and velocity almost identical. Sleighing on 17 days.

March became very mild, and the thermometer never marked below 16.2. Mean pressure was higher than normal, and did not fall to 29 inches. Rain exceeded its normal by 25 per cent, and there were but 2 days sleighing. Prevalent wind veered to N. W., with a speed of 12.29 per hour.

April on the contrary was cold and backward, with low maximum; and a barometer mean below its normal; with excess of N. wind and great velocity. Precipitation was much as usual, and we had one day of sleighing.

The characteristics of May might serve as a standard for that month, with the exception of the great heat at its close, when the thermometer marked 87°.2. This, however, did not bring the temperature quite up to the normal.

June was a very cool month, but exempt from frost. Its pressure was normal, and amount of cloud as usual. The peculiar direction of prevalent winds is worth noting, although the same S. E. triumphed in 1869. Mean velocity was 7.30 per hour. Wet and dry days were in their customary proportion.

and I will show from these Nova Scotian records, that both the frequency and quantity of precipitated moisture are entirely independent of the moon's size. I take first a month from the past winter—March—which, with its snow storms, will not soon be forgotten in this Province. In the first 24 days of March we had six separate heavy snow storms, besides two quiet falls, and several light flurries; also one rain storm. They are here in order, with the moon's condition at the time noted :—

A snow storm beginning at midnight of 2nd, and ending afternoon of 3rd. Moon 24 days old, and above the horizon during storm in early morning. On 5th, a snow storm from 6 a. m. to 1½ p. m.; moon 26 days old. Whole storm during daylight. On 7th, snow storm for short time in forenoon; and moon 28 days old. After a little snow, a rain storm during afternoon and evening of tenth, with a moon 1 day past new. During afternoon and night of 12th a bitter snow storm, extending into 13th with heavy squalls. Moon between 3 and 4 days old. 15th—the most violent snow storm of this stormy month, from 9 a. m. to 5–40 p. m. Moon 6 days old, and within one of first quarter. A fall of nearly two inches began before midnight of 17th and lasted till 10 a. m. 18th with the moon in its ninth day. In afternoon of 19th, with a 10 days moon, another quiet fall of nearly 3 inches of snow occurred. Lastly, in this series, before 1 o'clock of the morning of 24th a violent snow storm set in, lasting, with little intermission, till late that afternoon. This was on the moon's 15th day, and shortly before it was actually full.

Examination of other months taken at hazard, shows like results. August, 1871, will suit our purpose as well as any month. Then we had rain, generally heavy, during 1st afternoon and following night. Showery on the 3rd, and a storm on the 5th. Violent rain on the 9th morning, and showers during 10th and 11th. Not so much wet weather in middle of month, but on 17th there fell a fine misty rain all day. A rainy evening on the 24th; rain almost constant from morning of 27th to that of 28th, succeeded by intermittent falls on 30th and 31st, closed last August.

So that, reviewing these memoranda, rain, clouds, and clear sky are noticed entirely independent of the moon's age. For instance,

The mean amount of sky obscured was 6.0, which corresponds exactly with the mean of 5 consecutive years.

W. N. W. winds exceeded any other, with an average speed of 10.10 miles per hour. The rain fall—41.31 inches—was slightly deficient; but snow, of which we had 97.3 inches in its new fallen condition, exceeded its normal by 22.1 inches. The total precipitation, measuring rain and melted snow, was 51.14 inches. Of days completely dry we had 220—average being 206.

I observed 54 auroras,—26 gales,—57 fogs,—88 dews,—43 hoar frosts,—6 thunders,—7 lightnings,—3 hails,—7 rainbows,—10 lunar halos,—15 lunar coronæ,—1 solar halo; and on 48 days only had we sleighing.

I will now take up the second branch of these meteorological notes:

I propose this evening to examine a few of the popular beliefs and sayings concerning the weather, and to endeavour to show how far these may be correct or otherwise.

First, with regard to that much discussed luminary—our moon. By some all weather changes are referred to that source. Others limit its influence by looking thither for prognostications of bad weather only. For ages the connections of the moon's position relative to the earth, and its appearance as seen through our atmosphere, have swayed the minds of men always; by instinct, peering into the veiled future. When we consider the undoubted relationship of the moon to the ocean tides, we cannot deny it an influence over our own planet as yet uncomprehended. On the other hand, knowing that temperature is the base of all meteorological conditions, and that the effect of the direct moonlight upon a thermometer fully exposed to it, and free from terrestrial radiation, is scarcely appreciable, I cannot adhere to the popular theories concerning dispersion and accumulation of cloud being largely attributable to the moon's apparent size. Upon the first thought, one considering that where there is light there ought to be sensible heat—an erroneous supposition—would infer that the cloud vapours should be rolled away by the moonlight; and in some places it is a common saying at or near the time of full moon that it will not rain, or snow much, as "the moon is too big." This is a complete fallacy;

clear weather. Observations of coronæ for that same year give a large proportion of succeeding wet days, but not as a necessary sequence.

In 1871—and I take years not immediately following, that the series may be less partial, though necessarily brief—I counted 6 lular halos and 17 coronæ. The former were exactly divided as to their successors: three wet and three fine days. The latter were also very nearly so, being followed by 9 wet days, and 8 dry. Summing up these 35 observations, we find the halos preceding wet and dry days, in the proportion of 5 to 4, and the coronæ giving a percentage of result closely similar. By a wet day I mean a day on which precipitation is appreciable—or in other words measures .01 inch in the guage. If we include fog and mist, and all kinds of inappreciable precipitation in our calculation, the resulting dry days will dwindle to one third of the whole, after the two species of moon rings.

To separate truth from error, then, both halos and coronæ indicate moisture, and are therefore frequently followed by rain or snow; but not necessarily so, as the condition of the earth and the different strata of atmosphere must be carefully considered, especially in connection with their capacity to hold moisture.

The phenomenon variously known as hoar frost, white frost, and rimy frost, is very widely considered to be a sure forerunner of a change from fair weather to foul. There is an atom of truth to induce this belief, but I think that it can be shown that the general deduction from this small source is erroneous. Indeed this belief is directly contradicted by another, viz., that a dew at night is followed always by a dry day. Both of these suppositions cannot be correct, for the difference between hoar frost and dew is merely one of season. Dew may be called the summer hoar frost, and this the winter dew. I need scarcely say here that terrestrial radiation is the cause of these deposits. By the casting off of heat, the earth's surface, as the sun's rays fall more and more obliquely, becomes cooler, till the dew point is reached, and the moisture of the warmer air becomes visible. Naturally, then, we should expect this phenomenon to occur every night; and it would do so were all conditions always fulfilled; but a clouded sky is a blanket

taking up weeks, we had much rain, and the sky was invisible on the 1st; thorough cloud and heavy rain on the 9th, with no clearing till near midnight. The 17th a rainy clouded day. Very little break in the clouds on the 24th, and rain in the evening. Again on the 7th, 15th, 22nd, and 29th, the sky was either quite or mostly clear. Proving that at any stage of the moon's circuit, storms may occur, or fine weather be enjoyed.

There are some theories regarding lunar halos, and coronæ—commonly called indiscriminately, "Circles round the moon"—which are interesting to examine, as these popular ideas are not completely false, being based upon truth. These circles are generally believed to herald rain or snow; and in so far as they betoken a moist atmosphere these signs are correct. But moisture need not be precipitated upon the spot where it is formed. First, let us distinguish between the larger and smaller lunar circles—between halos and coronæ. Halos themselves are of two sizes; always either of 90 or 45 degrees, according to the younger Herschel. The two sizes are generally seen separately, but may appear at once. They are more common in winter than in summer, and sometimes a month passes without one being seen. The prismatic colours are more or less distinct; here generally pale and undefined at their edges, but the red always inside. Halos are formed by the rays reflected and refracted by the icy crystals which make up the high and feathery clouds known to meteorologists as cirri.

Coronæ are in fact interference colours arranged in this shape by the moon's light, with the blue nearest the centre; at times but one, at times several of these circles are observed; but always concentric and larger or smaller according to the size of the watery globules in the atmosphere. As has been said the light thrown from the moon and broken upon clouds passing causes this phenomenon, which seems to be a more sure forerunner of rain or snow than the halo, as it indicates an atmosphere nearly saturated far from Earth. Still even in this case precipitation need not immediately follow. I proceed to the proof.

In 1869, 12 lunar halos were here observed. In four cases we had decided rain or snow; in four cases cloudy weather with some slight precipitation; and on the remaining four following days

own neighbourhood being fairly known, tolerable accuracy will already attend the constant and careful consideration of a painstaking observer. Through the public press, and private ears, I have lately urged the beginning of a weather signal system for which this country is now ripe. If on a future evening I can report to this Institute—from which I have received so much encouragement for several years—the beneficial working of such a system, I shall be satisfied.

While for centuries false ideas, mingled with tiny truths, have gained general credence, let us now pursue an opposite course, and place faith only in substantiated doctrines.

I conclude this somewhat rambling paper with extracts from correspondence passing during last winter, illustrative of some of the details of weather telegraphy. These first remarks came to my hands from Mr. Kingston, chief meteorological superintendent at the central station for Canada—Toronto :—

"The present form of weather telegraphy is to record at numerous points the readings of the instruments, and certain facts descriptive of the weather, three times in the 24 hours; the observations being made simultaneously at all the stations, and *regularly*, in fine as well as in bad or threatening weather. According to the new Washington code the message from each station consists of ten words, and, subject as they are in the States, to numerous and varied combinations, the message there could hardly allow of compression; but I have little doubt that, with our far more simple mode of operation the ten words could be reduced to six. Hence, if you were to have reports from ten stations combined, you would have, for each observation, one message of 60 words."

"It will be the duty of the agent" (*i. e.* the chief meteorological agent in each District, or Province; which post in Nova Scotia I have the honour to hold) "to superintend the translation of the telegrams, and arrange the figures in the form of a weather bulletin, which exhibits the present atmospheric conditions, and the changes since the previous report. Two or three copies of the bulletin should be posted in conspicuous places; and it should also be print-

to the earth, and confines and throws back again its lost temperature. Brechan tells us that Glaisher has observed passing clouds to raise the temperature of raw wool, much cooled by radiation, 15° in 15 minutes. Wind also, by transferring and mixing strata, obstructs terrestrial radiation, and dew or hoar frost deposits. We see now why a clear calm night is most favorable to these occurrences. Considering the above causes, it needs little reflection to see that neither dew nor hoar frost is a sign of either fair or foul weather to come.

Let us take last year—1871—and observe what did actually succeed these phenomena in the 131 instances recorded. I saw hoar frost 43 times, and dew on 88 nights, with these results:—On 19 occasions the days following deposits of hoar frost on the previous evenings were without precipitation, giving 44 per cent. against the prediction, and 56 in its favour,—while after 36 observations of dew appreciable rain fell, giving 41 per cent. adverse to the popular creed, and 59 per cent in its favour. So that regarding both forms of this phenomenon no certain conclusion, as to their effect, can be arrived at, beyond the established fact that their influence, if any, is not perceptible in the precipitation of the 24 hours immediately succeeding. In former papers—to be found in the Transactions of this Institute for 1870 and '71—I have endeavoured to dispel the notorious idea that displays of aurora are always followed by gales and foul weather; and that a high barometer must mean fine weather, and a low standing column the opposite. These conclusions have been hastily formed in the public mind from insufficient data; and the instances when the opinion has proved correct have left indelible marks upon the judgements of superficial observers, while the contrary results have readily faded from the willing memories.

The truth is that the branch of the science including prediction, is as yet scarcely shooting forth. No man, unaided by telegraphic reports, can from his own observations at a single station, at present prophecy the coming weather, beyond 24 or 36 hours, with any approach to certainty. For this purpose, we now need—and probably always shall need—reports at least twice a day from connected stations. Having these, and the climatic peculiarities of our

lithographed copies of our daily weather reports, for exhibition at seaports; but in our warning messages we hardly ever send any actual readings at all. The storm signal we use is the drum, and we hang up under it in a frame the order to hoist it."

I hope next year to speak of the weather signal system of the Dominion, in a more advanced stage.

General Meteorological Register for 1871.

HALIFAX, NOVA SCOTIA.

Latitude 44° 39′ 20″ North. Longitude 63° 36′ 40″ West. Height above Sea, 132 feet.

OBSERVED BY F. ALLISON.

1871.	Jan'y.	Feb'y.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Year 1871.
Mean Temperature	22°.60	22°.06	32°.99	36°.90	46°.68	56°.13	62°.76	62°.58	54°.72	48°.44	32°.74	24°.68	41°.94
Difference from Normal (nine years)	-.24	-1°.57	+4°.28	-1°.26	-.83	-3°.52	-.58	- 58	-2°.60	+.26	-5°.09	-1°.56	-1°.24
Maximum Temperature	49°.4	47°.3	52°.8	62°.8	87°.2	77°.9	82°.1	83°.0	80°.9	71°.8	54°.8	48°.8	87°.2
Minimum Temperature	-13°.7	-7°.7	16°.2	23°.6	28°.3	37°.3	45°.0	44°.3	35°.1	28°.3	8°.2	-8°.7	+13°.7
Monthly and Annual Ranges	63°.1	55°.0	36°.6	39°.2	58°.9	40°.6	37°.1	38°.7	45°.8	43°.5	46°.1	52°.5	100°.9
Mean Maximum Temperature	30°.62	30°.81	41°.56	44°.55	58°.82	68°.48	73°.79	73°.85	64°.98	56°.64	38°.91	32°.61	51°.30
Mean Minimum Temperature	13°.72	13°.26	25°.90	31°.13	37°.05	47°.19	54°.99	54°.80	46°.31	40° 16	27°.18	15°.52	33°.98
Highest Daily Mean Temperature	45°.37	40°.04	43°.16	48°.52	64°.23	63°.26	67°.54	68°.85	66°.32	60°.51	45°.47	43°.31	68°.85
Lowest Daily Mean Temperature	-6°.50	-0°.72	25°.71	28°.95	33°.93	51°.51	54°.29	57°.32	44°.85	35°.85	10°.45	4° 41	-6°.50
Mean Daily Range of Temperature	16°.90	17°.84	15°.67	13°.42	21°.77	21°.72	18°.79	19°.04	18°.66	16°.35	11°.78	17°.09	17°.41
Greatest Daily Range of Temperature	38°. 0	32°.1	24°.4	27°.6	32°.0	32° 8	27°.2	29°.9	27°.6	26°.2	23°.5	28.°6	38°.0
Mean Terrestrial Radiation	.....	.....	.....	.....	34°.77	46°.03	53°.50	53°.10	43°.31	37°.50	29°.94	.....	.....
Mean Pressure, corrected	29.965	29.749	29.784	29.694	29.723	29.748	29.814	29.815	29.885	29.874	29.626	29.778	29.787
Difference from Normal (nine years)	+.223	-.024	+.053	-.034	+.030	-.003	+.058	+.060	+.047	+.079	-.096	+.044	+.026
Maximum Pressure	30.643	30.370	30.345	30.218	30.286	29.984	30.212	30.369	30.347	30.464	30.397	30.596	30.648
Minimum Pressure	29.065	28.911	29.094	29.002	29.031	29.272	29.368	29.311	29.451	29.036	28.905	29.018	28.905
Monthly and Annual Ranges	1.578	1.459	1.251	1.216	1.255	0.712	0.844	1.058	0.896	1.428	1.492	1.578	1.788
Highest Daily Mean Pressure	30.613	30.303	30.278	30.120	30.209	29.941	30.133	30.300	30.266	30.411	30.268	30.395	30.618
Lowest Daily Mean Pressure	29.143	29.008	29.165	29.181	29.154	29.475	29.454	28.480	29.537	29.484	29.095	29.145	29.008
Mean Pressure of Vapour	.118	.099	.152	.179	.232	.345	.462	.465	.359	.288	159	.118	.248
Mean Relative Humidity	81.7	72.5	76.4	80.7	72.3	77 1	81.5	82.9	81.9	81.3	81.0	79.7	79.1
Mean Amount of Cloud	7.21	5.40	6.49	7.43	5.38	5.65	6.19	5.88	4.79	5.18	5.60	6.65	6.0
Difference from Normal (five years)	+.73	-.80	+.63	+1.06	-1.35	-.04	+.52	+.69	-.99	-.42	-1.20	-.04	0
Prevalent Direction of Wind	W.N.W.	W.N.W.	N.W.	N.	N.W.	S. E.	S.W	N.W.	W.N.W.	S.W.	N.W	W.N.W.	W.N.W.
Mean Velocity of Wind	11.95	11.36	12.29	13.23	10.94	7.30	4.87	5.72	8.46	9.99	15.39	9.69	10.10
Amount of Rain	2.38	4.1I	4.39	3.42	2.59	2 96	3.38	3.69	4.81	4.49	3.21	1.88	41.31
Difference from Normal (nine years)	-1.40	+ 61	+1.24	+.28	-1 55	+.05	+1.06	+.43	+.87	-.55	-1.30	-1.63	-1.91
Number of days Rain	8	6	8	11	10	12	12	14	8	8	7	8	112
Difference from Normal (nine years)	+ 2	0	+2	0	-5	0	+2	+3	-2	-4	-5	-1	-10
Amount of Snow	14.7	19.3	15.1	13.4	Inap.	0	0	0	0	0	10 0	24.8	97.3
Difference from Normal (nine years)	-1.25	+5.79	-1.5	+4.9	-.1	0	0	0	0	-.6	+5.7	+9.5	+22 1
Number of days Snow	10	7	7	3	0	0	0	0	0	0	6	13	46
Difference from Normal (nine years)	0	-1	-1	-2	-1	0	0	0	0	-2	+2	+3	-1
Total Precipitation	3.73	5.88	6.16	4.88	2.59	2.96	3.38	3.69	4.81	4.49	4.18	4.39	51.14
Difference from Normal (nine years)	-1.92	+.08	+1.73	+.77	-1.56	+.05	+1.06	+.43	+.87	-.65	-.82	-.39	-.85
Number of Dry Days	16	16	18	16	21	18	19	17	22	23	20	14	220
Difference from Normal (nine days)	-1	0	0	-1	+5	0	-2	-3	+2	+9	+5	0	+14
Number of Auroras	0	4	3	7	8	3	3	7	6	5	6	2	54
" Gales	2	3	3	5	1	0	0	0	0	3	5	4	26
" Fogs	6	3	4	2	3	7	15	9	2	1	2	8	57
" Dews	0	0	2	1	6	13	14	18	21	13	0	0	88
" Hoar Frosts	3	11	8	5	2	0	0	0	2	3	5	4	48
" Thunders	0	0	0	1	1	3	1	0	0	0	0	0	6
" Lightnings	0	0	0	1	1	2	1	2	0	0	0	0	7
" Hails	0	0	0	1	1	1	0	0	0	0	0	0	3
" Rainbows	0	0	1	0	2	2	0	2	0	0	0	0	7
" Lunar Halos	2	1	2	1	1	1	0	0	0	1	0	1	10
" Lunar Coronæ	0	0	0	0	2	2	3	3	1	1	0	8	15
" Solar Halos	0	0	0	0	0	0	1	0	0	0	0	0	1
" Days Sleighing	14	17	2	1	0	0	0	0	0	0	0	14	48