

mountain and swampy barren; but the heart of the worthy Nova Scotian warmed towards us as he hurried us along to his dwelling, and soon with his table groaning under the weight of good fare, he bade us welcome to civilized life once more, and it is almost needless to add, that while enjoying such welcome hospitality, we soon forgot the weary tramp we had had during that ever memorable "Fortnight in the Backwoods of Shelburne and Weymouth."

ART. VII. NOTES ON THE WEATHER AT HALIFAX, NOVA SCOTIA, DURING 1866. BY COLONEL MYERS.

(Read March 4, 1867.)

January. The four first days of this month were mild, but dull and rainy. On the 5th a sharp frost set in, which lasted till the 9th, the thermometer standing during the night of the 6th, 7th, at 15° below zero. The remainder of the month was in general fine and moderate. Mean temperature 20° being 2° lower than that of the same month last year, and 5° below the average of the three preceding years.

February began with very cold weather. On the night of the 6th, 7th, the thermometer indicated 7° below zero, and on the 8th the harbour was sufficiently frozen to admit of persons crossing over on the ice, the ferry boats being unable to ply. On the 11th a rapid thaw occurred, and the ice broke up on the following day. The weather to the end of the month continued mild for the season, with some high winds from the southward, and rain. Mean temperature 25° , being 1° above that of 1865, and of the average of three preceding years.

March was ushered in with a strong gale from the north-east, but of short continuance. The month was generally cold and disagreeable, and towards the end of it very stormy, with snow and rain. Mean temperature 29° , 5° below that of 1865, but corresponding exactly with the average of three preceding years.

April. Some stormy weather at the commencement of this month, and a heavy gale from south-west on the morning of the 25th, but the month generally fine. Mean temperature 40° , the same as last year, but in excess of the average of three preceding years by 2° .

May. This month was characterized by cold and backward weather, with much rain and occasional snow squalls. On the 7th the North-west Arm was skimmed over with ice. Mean temperature 47° , was 7° below that of the same month last year, and 1° below the average of the three preceding years.

June. Rain fell on twelve days during this month, but for the most part in light showers, and the weather was in general fine and warm. Mean temperature 56° , being 2° below last year, but exactly agreeing with the average of the three preceding years.

July. Calm fine weather prevailed during this month. It was remarkable in the United States by long continuance, as well as for intensity of heat. Within a period of eleven days the thermometer rose five times to 95° and upwards, reaching at New Haven, on the 13th, to $103\frac{3}{4}^{\circ}$ in the shade; the highest temperature known to have been observed at that place for eighty-nine years. Here the highest noted was 87° on the 13th, the mean temperature being 61° , 1° in excess of 1865, and 1° below the average of three preceding years.

August had more rain than usual, but there was some beautiful weather during the month. Mean temperature 62° , 1° below 1865, and two below the average of the three preceding years.

September. Much unsettled weather this month, with heavy rains, but remarkably free from the high winds which often prevail at this period of the year. Mean temperature 58° , 1° above that of last year, and the average of the three preceding.

October. A beautiful month, clear and dry during three weeks, very favorable to farm work. The fine weather began to break up in the last week, when it became cold and stormy, with rain and sleet. Mean temperature 45° , 1° above 1865, 2° below the three years average.

November. Generally fine, and free from stormy weather till towards the end of the month, when gales occurred. Mean temperature 38° , being 1° below that of 1865, and the three years average.

December. The ordinary winter weather prevailed this month, with more snow than usual. We were visited by a sharp gale from the south-west on the 23rd, and a still heavier one

from the south-east, on the 27th. Our neighbours in New Brunswick and United States, appeared, from newspaper reports, to have suffered more severely from these gales, than ourselves. Mean temperature 28° , 4° above 1865, and 2° above the three years average.

The highest temperature noted in the shade was 89° , on 26th June.

The lowest temperature noted in the shade was 15° , night of 6th, 7th, January.

The highest monthly range, 59° in February.

The lowest monthly range, 31° , in August.

The range for the year, 104° .

The hottest month was August. The coldest January.

The mean temperature of the year 42° .

The highest reading of the barometer during the year was 30.36, on 17th February.

The lowest reading of the barometer during the year was 28.79, on 2nd May.

The mean for the year 29.62.

The highest monthly range was 1.24, in April.

The lowest monthly range was .32, in February.

The yearly range 1.57.

The most prevalent winds during the year were north-west and south-west.

The least prevalent winds during the year were east.

Rain fell on 134 days.

Snow fell on 52 days.

Hail fell on 3 days.

Fog prevalent on 61 days.

Auroræ Boreales were observed on 33 nights.

Solar halos were observed on 8 days.

Lunar halos were observed on 12 nights.

Thunder storms occurred on 22d April, 28th June, 4th, and night of 23d, 24th, August, and 23d November.

Lightning was seen, but no thunder heard on 6th July.

Thunder heard but no lightning seen 20th June, 8th, 10th, 13th August, and 22d September.

A fine Parhelion was visible for about an hour, from 5 o'clock, p. m., on the 9th June.

The latest snow in the Spring, fell on 15th May. The earliest seen in the Autumn, was on the 14th October.

Winter.	<p>The mean temperature of the winter of 1865—1866, deduced from three daily observations, was 23°, with a range of 67° from 15° below, to 52° above zero.</p> <p>The mean pressure of the atmosphere was 29.66, with a range of 1.85 from 28.51 to 30.36.</p> <p>Rain fell on 23 days—three in excess of the average of the three preceding years. Snow fell on 26 days—three less than the average of three preceding years.</p>
Spring.	<p>The mean temperature of the spring of 1866 was 39°, with a range of 60° from 10° to 70°.</p> <p>The mean pressure of the atmosphere was 29.52, with a range of 1.45 from 28.79 to 30.24.</p> <p>Rain fell on 37 days—three in excess of the average of three preceding years. Snow fell on 17 days—six in excess of average of three preceding years. Hail fell on 1 day.</p>
Summer.	<p>The mean temperature of the Summer was 60°, with a range of 50° from 39° to 89°.</p> <p>The mean pressure of the atmosphere 29.61, with a range of 76 from 29.13 to 29.89.</p> <p>Rain fell on 38 days—exceeding the average of three preceding years by five.</p>
Autumn.	<p>The mean temperature of the Autumn was 47°, with a range of 51° from 23° to 74°.</p> <p>The mean pressure of the atmosphere was 29.69, with a range of .84 from 29.24 to 30.08.</p> <p>Rain fell on 37 days—one in excess of the average of the three preceding years. Snow fell on 5 days—one less than average of three preceding years.</p>

An examination of the table (to be found in the Appendix,) of the mean temperature and atmospheric pressure of the several seasons during the past four years, together with what has just been stated, will at once show how very little each season varies year by year. The winter is seldom too rigorously cold; the unpleasant weather, which sometimes occurs in spring, is not of long continuance, while the summer and early months of the autumn are, with rare exceptions, invariably delightful. Indeed Halifax with its fine healthy climate—with its facilities for the

erection of bathing establishments, so much needed,—and with the many inducements it already has, or might be made to possess, cannot fail, by and by, when the extension of railroads will render it more easy of access by land, to attract not a few of the many excursionists, who annually flock to the north to escape from the extreme heat of their southern residence.

On reviewing the past year it appears that part of the winter of 1865–1866 was of more than ordinary severity. On the night of 6th–7th January the thermometer fell to 15° below zero, not having reached a lower degree than 10° below zero during three preceding years; but the mean temperature was only 1° below that of the same period. It is remarkable, with regard to the freezing over of the harbour, as noted in February, that what a temperature of 15° below zero in January failed to accomplish, was afterwards, in February, effected when the thermometer indicated only 7° below zero; but it must be borne in mind that the combination of two conditions of the weather is required, viz: a perfect calm with a certain low state of the temperature, without which the harbour does not freeze; and to this may perhaps be attributed the infrequency of what was witnessed last winter; such an event completely interrupting the navigation of the harbour, not having, as far as I can ascertain, occurred oftener than five times during the past 55 years, viz: in February, 1866, 1859, 1839, 1834, 1821.

The Spring, though cold and backward, was not altogether unfavourable to the farmer. The summer was remarkable for its intense heat in some parts of this continent lying to the westward of Halifax, especially the month of July, as previously noted, but here the mean temperature did not exceed that of three preceding years. There was more rain than usual. The hay harvest, to those who were fortunate enough to house it early, was good; but the weather proved unfavourable to the later crops, and much was got in in a bad condition, and much entirely lost—other crops promised well at the end of summer; but there was a change at the commencement of autumn, and the very unsettled rainy weather of September, seemed for a time to endanger them. A fine dry October, however, removed all anxiety, and the generally good harvest was at last

the subject of much thankfulness. The days of rain in 1866 were two less than 1865, but the quantity that fell must have been greatly in excess, though not possessing nor having had access to an ombrometer or rain-guage, I cannot speak with accuracy. There were some heavy freshets which did much damage throughout the Province. There were twenty gales of wind during the past year, for the most part moderate, and lasting but a few hours. Auroræ boreales were of less frequency than usual, and deficient in brilliancy and beauty. The few thunder storms that occurred were neither violent nor of long endurance. There were also fewer halos than recorded in former years.

The following periodic phenomena were observed during the year. March 13th, small "song sparrow" heard to sing,—14th, lilac buds beginning to develope themselves in gardens in town,—17th, huckleberry in bud,—18th, full blown mayflower plucked in the Tower woods,—25th, flock of seven wild geese observed going south-east,—31st, lilac in bud at the Dutch village.

April 7th, robin first heard singing,—9th, frog (*Rana fontinalis*) first heard to croak at 2 p. m.—14th, blue hawk seen about poultry yards, and water spider on ponds,—15th, clover in leaf,—16th, swallows first seen at the Dutch village,—18th, golden-winged woodpecker chuckles,—19th, first peep of the frog (*Hylodes pickeringii*) heard,—22nd, hermit thrush first heard,—29th, scutch grass five inches high; crowfoot, dandelion, dock and strawberry in full leaf.

May 1st, hacmatac and withrod bursting into leaf; humblebees about,—3rd, king-fisher at Downs' pond; white violet in flower,—6th, wild rose coming into leaf,—10th, black flies appear and very troublesome on the 12th,—13th, strawberries in bloom,—25th, French willow in leaf and flower,—27th, spider webs shew on dewy mornings,—28th, balsam poplar in full leaf; dandelion in seed,—29th, wild cherry coming into blossom.

June 21st, white weed in flower.

October 6th, ash and birch leaves killed by frost; maple leaves begin to turn in moist spots,—18th, black birch leaves begin to turn,—24th, leaves of the beech all turned brown,—

25th, shore lark in flocks about Halifax; all the leaves of the red maple off,—27th, beeches stripped of leaves.

Nov'r. 1st, leaves of apple trees still green,—3rd, hachmatac leaves all turned yellow.

I cannot close these remarks without adverting to the grand meteoric display which was the object of such universal expectation last November, unhappily to be disappointed here by the prevalence of cloudy weather at that interesting period. The night of the 11th November was hazy; that of the 12th overcast, with heavy rain, which encouraged a hope that it would clear off before the next night,—the eventful 13th, 14th,—but no; for cloudy and overcast weather was continuous till the 17th. Judging from my personal observations, the atmosphere on the night of the 13th, 14th was densely opaque, not affording the slightest glimpse of what was going on above. The local newspapers reported a few meteors having been seen through occasional breaks in the clouds, but nothing worthy of note. From accounts received from places more fortunate, we were made keenly sensible of what we lost in not having been permitted to view the wondrous display. At the Royal Observatory, Greenwich, no less than seven thousand meteors were counted between 11 p. m. of the 13th, and 5 a. m. of the 14th—of which four thousand occurred between one and two o'clock a. m. of the 14th. The London "*Times*" of 15th November noticed that an observer at Highgate, from a window of circumscribed view facing north-north-east, counted one hundred meteors in the four minutes between 12.32 and 12.37, and two hundred in the two minutes between 12.57 and one o'clock a. m. of the 14th. The meteors were of various colours, orange, green, &c., their trails of a bluish cast; their paths of divergence apparently from a point within the constellation "Leo." Their course generally irregular; those which shot from east to west seemingly larger and more brilliant than the others.

It would be foreign to this unpretending paper to discuss the various theories concerning meteors which have from time to time been advanced and discarded—of their origin and nature, and of the laws by which they are governed, much has yet to be learned; but of the accuracy of the prediction of the return of

showers of meteors every thirty-three years little doubt can now be entertained. The confirmation of these forecast last November, with the fine opportunity afforded in England for observing the phenomenon, will, it may be hoped, assist science in further unravelling the mystery in which these erratic bodies have been shrouded, from the ages of ignorance and superstition when they were looked upon with terror as portents of coming evil, to the present day, in which they are better understood; but whatever may be the addition to the knowledge already possessed of these wonderful bodies to be obtained from the numerous simultaneous observations taken on the night of the 13th—14th Nov. last, man will find himself still, as it were, only at the very threshold of the Great Creator's sublime works, the amazing profundity of which time itself will prove too short, and the most powerful human intellect too feeble, entirely to fathom.

ART. VIII. OBSERVATIONS ON THE FISHING GROUNDS AND FISH OF ST. MARGARET'S BAY, N. S.,—*Continued.* BY REV. JOHN AMBROSE.

(Read March 4, 1867.)

IN resuming my account of the Fishes of St. Margaret's Bay, I shall commence with the pollack. These fish—the full grown ones—strike into the Bay in June, and leave about the last of November. The young ones come much earlier. Their food is the same as that of the cod, but the most taking bait is something white and shining, such as a strip cut from the belly of the herring or mackerel. In the summer months they delight in the rough shoal water off the points or promontories where different currents meet. In such places a dexterous angler with strong salmon-gear and a whitish fly, may in the month of July kill many more fish in a given time, and enjoy very nearly as good sport, as among the salmon in our best streams. There is one of these “pollack-rips”—as they are called—within a mile of my residence, and in passing in my boat I often rest on my oars or lay-to to watch the gambols of those lively fish, as on all sides they leap out of water in pursuit of their insect prey. In rowing down through a narrow channel between Dover and Blind