

NOTES ON NEW BRUNSWICK WEATHER
FOR 1913

BY D. LEAVITT HUTCHINSON

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ARTICLE III.

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January.—The distinctive feature of the month was the steady and extremely cold weather with but two brief intervals of thawing temperatures. Snow fell on twelve days, light rain on three. At St. John, the average temperature was the lowest since 1888. Temperatures below zero were recorded on twelve days, attended by thick vapour over the Bay. An exceptionally heavy gale from the southeast through southwest to northwest occurred on the 9th and 10th; at Point Lepreaux it reached hurricane force and some local damage resulted. At the close of the month the depth of snow ranged from three inches near the coast line to two feet farther north. Highest temperature 51 at Sussex; lowest 31.5 below zero at Fredericton.

February.—A month of steady though not extremely cold weather. Excepting between the 9th and 12th, few or no zero temperatures were recorded. The only thaw occurred with the heavy rainfall of the 22nd. Snow fell on eight days, snow and rain on one, while the remaining days were mostly fine and bright. A heavy southeast through southwest to northwest gale on the 22nd and 23rd, and a gale from southeast and east on the 27th were the only storms of the month. The last mentioned was accompanied by the heaviest snowfall of the winter in New Brunswick. Highest temperature 48.7 at Grand Manan; lowest 29.5 below zero at St. Stephen.

MARCH.—Weather was of a very wintry type, rivers and lakes remained ice-bound with little prospect of an early opening. In southern New Brunswick good sleighing prevailed until the 15th, when a heavy rainfall put an end to

it. In northern New Brunswick the snowfall was excessive and at the close of the month a considerable depth was still on the ground. Ice firm in the River. Highest temperature 55 at Moncton; lowest 21 below zero at St. Stephen.

APRIL.—During the greater part of April fair, cold, backward and at times wintry weather prevailed, vegetation showing little sign of life. Rivers and streams were unusually late in opening and the spring freshets were checked owing to the lack of warm rains and seasonable temperatures. Roads bare of snow except near the North Shore where a heavy snowstorm prevailed on the 19th. Thunderstorms were fairly general on the 16th. St. John River opened on the 19th. Highest temperature 70 at Moncton; lowest 5 at Dalhousie.

MAY.—Mostly fair and comparatively dry weather was experienced up to the 22nd, but unsettled wet weather then set in and an excessively heavy rainfall occurred on the last three days, when in some localities over four and a half inches fell. A moderate southwest to northwest gale prevailed in the Bay of Fundy district on the 14th. Thunderstorms on the 24th and 25th were heavy and destructive in York County. Vegetation everywhere backward. Highest temperature 84.5 at Chatham; lowest 22 at Dalhousie.

JUNE.—Cold wet weather prevailed until the 18th, when fine and comparatively warm conditions set in, followed on the 30th by a return to cold with light frosts and flurries of snow in some localities. The total amount of rain recorded during the month was considerably less than the average. Severe frosts occurred on the 8th. Bright aurora on the 7th. Thunderstorms on the 21st and 26th. Highest temperature 93 at Chatham; lowest 30 at St. Stephen.

JULY.—During the first two weeks of the month the weather was generally fine, dry and extremely warm. In the interior and northern districts temperatures exceeding 95 were recorded in some localities between the 4th and 10th, and during this period thunderstorms of marked severity

caused considerable damage, and the fatalities reported were quite unusual. The remainder of the month was cold, wet and dull, and at times autumn-like. Highest temperature 98 at Chatham, lowest 36.5 at Sussex.

AUGUST.—A month of most persistent unsettled, wet and unseasonably cold weather. Thunderstorms were very heavy and destructive throughout the Province. The continuous heavy rains hindered farming operations and considerable damage resulted from the flooded rivers and streams. For cold, gloomy and wet weather the past summer leaves a record seldom surpassed. Slight earth tremors were reported from Charlotte and Carleton Counties on the 19th. Highest temperature 85 at Chatham, lowest 36 at Moncton.

SEPTEMBER.—Fine weather prevailed throughout the month while the mean temperature was below average in all districts. Frosts were remarkably infrequent and almost the total amount of precipitation occurred on three days. Winds were light and no gales occurred. Light snow fell in Carleton County on the last day of the month. Highest temperature 79.5 at St. Stephen; lowest 28.5 at St. Stephen.

OCTOBER.—The weather of the month for the most part was fair and mild. Rainfall varied from double the average in some localities to about average in others. Temperatures below freezing were recorded on the 16th, 21st and 30th. A moderate gale from southeast to southwest prevailed on the 13th. A stormy period occurred between the 24th and 26th with heavy rains and a southeast gale, maximum velocity of 60 miles an hour being registered at Point Lepreaux. Rivers, streams and lakes much above seasonal height.

NOVEMBER.—Fine, mild, pleasant conditions typical of Indian Summer prevailed during the greater part of the month. The snowfall was everywhere light, but on the North Shore and in parts of the interior sleighing was fair during the last two weeks, elsewhere the ground was almost bare of snow. A southeast to southwest gale occurred on the 8th, and a northeast gale on the 14th with a maximum

velocity of 60 miles per hour at Point Lepreaux, but in all localities the wind movement was considerably below average. No extremely low temperatures were recorded and the St. John River was open for navigation throughout the month. Highest temperature 67 at Moncton, and St. Stephen; lowest 11.5 at Fredericton.

DECEMBER.—An unseasonable fine, mild month with remarkably high winds. No severe cold spells were experienced and the snowfall was abnormally light. Near the coast-line the ground was practically bare of snow throughout the month, but fairly good snow roads obtained on the North Shore and in parts of the interior. Six gales occurred, that on the 19th being attended by excessively heavy precipitation. Pronounced earth tremors occurred on the morning of the 11th. Highest temperature 54 at Sussex; lowest 13 below zero at Chatham.

ST. JOHN OBSERVATORY.

WIND DIRECTION AND VELOCITY FOR 1912.

1912	N.		N. E.		E.		S. E.		S.		S. W.		W.		N. W.		C.	Total Miles
	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours Calm	
January.....	155	1,480	101	1,347	8	97	33	690	22	443	42	925	50	755	331	5,737	2	11,474
February.....	93	857	25	247	27	275	31	711	24	273	75	1,350	83	1,069	315	4,930	23	9,712
March.....	94	1,045	60	814	21	169	66	886	40	362	155	2,345	31	215	265	4,824	12	10,660
April.....	72	700	49	481	42	329	88	835	114	948	106	1,452	30	215	214	3,897	5	8,857
May.....	74	592	80	850	20	147	51	573	223	1,890	219	2,769	18	109	37	535	22	7,465
June.....	60	736	13	147	18	114	65	626	215	1,649	154	2,030	22	144	162	2,611	11	8,057
July.....	123	1,540	50	384	10	92	45	455	320	2,327	102	945	12	43	68	972	14	6,758
August.....	82	664	9	56	16	103	49	441	220	1,302	190	1,668	28	170	116	1,613	34	6,017
September.....	130	1,014	106	789	31	114	22	158	108	603	138	1,379	28	149	70	733	87	4,939
October.....	61	601	23	190	37	482	81	1,292	77	817	180	2,321	42	304	221	3,750	22	9,757
November.....	158	1,905	65	830	17	199	17	242	63	915	136	1,904	76	723	170	2,292	18	9,010
December.....	106	1,254	62	587	20	183	33	398	59	916	119	2,643	69	1,014	263	5,163	13	12,158
TOTALS.....	1,208	12,388	643	6,722	267	2,304	581	7,307	1,485	12,445	1,616	21,731	489	4,910	2,232	37,057	263	104,864

NOTES ON NEW BRUNSWICK WEATHER.

METEOROLOGICAL ABSTRACT FOR 1912.

ST. JOHN OBSERVATORY.

METEOROLOGICAL SERVICE OF CANADA.

Latitude, 45°, 16.' 4.50." N.

Longitude, 66°, 3.' 47.70." W.

MONTHS. 1912.	BAROMETER.			THERMOMETER.			Cloudiness 0 = Clear 10 = Wholly Cloudy	Precipitation Rain and Melted Snow	Thunderstorms	Fogs
	Mean	Highest	Lowest	Mean	Highest	Lowest				
January	29.893	30.586	28.557	13.3	46.3	-12.7	5.3	3.72	0	0
February	29.754	30.304	29.001	20.3	43.7	-12	4.8	3.00	0	2
March	30.021	30.647	29.216	28.6	49.2	3.3	5.5	3.89	0	4
April	29.916	30.584	29.053	37.7	56.5	16.7	5.1	3.36	1	5
May	29.965	30.387	29.316	48.8	67.6	34.3	6.2	7.49	3	6
June	29.895	30.187	29.509	55.6	76.3	40	5.5	2.65	1	6
July	29.928	30.266	29.452	60.3	77.5	45	6.5	4.00	3	6
August	29.928	30.365	29.526	59.2	73.9	46	6.0	5.75	5	9
September	30.052	30.432	29.616	55	71.2	38.5	5.7	3.45	0	2
October	30.001	30.482	29.486	47.9	68	32	4.9	3.23	0	1
November	29.937	30.355	29.358	37.7	57.5	21.7	6.1	3.93	0	1
December	29.906	30.567	29.562	28.4	52.5	3.7	4.5	7.38	0	4

Mean height of barometer for year was 29.933, the highest reading 30.647 on 6th March, and the lowest 28.557 on the 9th January. The average temperature for the year was 41.1, which was 0.1 below the average of the past forty years. Maximum temperature 77.5 occurred on the 2nd of July and the minimum 12.7 below zero on the 13th January. Total precipitation 51.85 was 4.69 above average.

D. L. HUTCHINSON,
Director St. John Observatory.

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JANUARY.—Phenomenally mild, spring-like conditions prevailed throughout the greater part of January. In southern New Brunswick the ground was generally devoid of snow. The St. John River was open in places and covered with poor ice in others. Trees budding and sap running. In the north, comparatively mild weather prevailed, with about three feet of snow in the woods at the close of the month, and lumbering conditions ideal. Six gales occurred, that of the 4th being the heaviest for many years. The wind reached hurricane force from the northwest with an hourly velocity of upwards of eighty miles at Point Lepreaux. Considerable damage and some wreckage was occasioned thereby, but the early warning of this severe storm must have prevented many disasters. Highest temperature 56 at Sussex on the 3rd; lowest 20 below at Dalhousie on the 28th.

FEBRUARY.—In marked contrast to the two preceding months conditions during February were decidedly wintry, and temperatures near and well below zero were of frequent occurrence. Snow fell on nine and rain on two days, otherwise fine bright weather prevailed. The gales of the month were unimportant. During the last half of the month, fairly good snow roads obtained in southern New Brunswick. At the close of the month, the snow covering ranged from six inches near the shores of the Bay of Fundy to two feet in the interior and greater depth in northern localities. Highest temperature 52 at Sussex on the 1st; lowest 25 below zero at Sussex on the 25th.

MARCH.—Dull, unsettled, mild weather was general throughout the month, although temperatures well below zero were recorded on the 8th. A remarkably heavy fall of

hard sleet occurred on the 26th, and the total precipitation for the month was much above the average. The snow covering was light in all localities, and in southern New Brunswick the ground was bare of snow after the 15th. Near the close of the month freshets were exceedingly heavy, roads were flooded, bridges carried away, and travel by rail delayed by washouts. The St. John River was open for navigation, excepting near Fredericton, where the ice was holding firm. Highest temperature 66 at Moncton on the 31st; lowest 20 below zero at St. Stephen on the 8th.

APRIL.—The weather was mostly unsettled and cool; light snow falls and flurries until the 20th, when a spell of fine, dry and unseasonably warm conditions set in, continuing until the 28th. Temperatures of 80 and considerably above were recorded in most localities between the 25th and 28th. It then turned cold and wet, with frosts on the last day of the month. The St. John River opened for navigation on the 1st, but was not entirely free of ice for some days; freshets on this river did not reach the normal. Wind movement was everywhere less than the same month last year and no gales of importance occurred. Highest temperature 85 at Chatham on the 25th; lowest 12 at Sussex on the 8th.

MAY.—May was unseasonably cold with an excess of dull, wet days. Temperatures well below freezing were general on the 2nd, and between the 15th and 17th. Rain fell on fourteen days; and there was a northwest gale and heavy rain with an extremely low barometer on the 30th. Highest temperature 88 at Chatham on the 6th; lowest 22 at St. John on the 16th.

JUNE.—Fine, bright, exceptionally dry, but unusually cool weather was general throughout New Brunswick. Coast fogs were light and infrequent. Slightly damaging frosts occurred locally in the River counties on the 10th and 23rd. Highest temperature 83 at Fredericton on the 11th; lowest 30 at Dalhousie on the 2nd.

JULY.—The greater portion of the weather of the month was fine and warm, rainfall in most places above the average, but fell in heavy showers and during the passage of thunderstorms; coast fogs were few and of short duration. Crops throughout the province, although somewhat backward, promise a good yield. Highest temperature 92 at Chatham; lowest 41 at Moncton.

AUGUST.—The weather of August was for the most part fine, warm and pleasant, no extremely high temperatures being recorded; nearly the total amount of rain fell on four days; light frosts were locally reported on the 26th. Highest temperature 90 at St. Stephen on the 16th and 18th; lowest 32 at St. Stephen on the 26th.

SEPTEMBER.—The weather during September was mostly fine and bright with a moderate and scattered rainfall. A heavy thunderstorm occurred on the 3rd. Freezing temperatures were recorded locally between the 27th and 29th. Trees retained their leaves, but the color was gradually changing. Highest temperature 90 at St. Stephen on the 3rd; lowest 27 at St. Stephen on the 28th.

OCTOBER.—Unseasonably mild, gloomy and wet, with a marked deficiency of bright sunshine and clear nights. Rain fell on twenty days, was much above average and excessively heavy in all districts between the 24th and 27th, causing abnormally high water in rivers, marshes and lakes. Light local falls of snow with a decided drop in temperature occurred on last day of the month. Moderate gales on the 2nd, 14th and 21st. Highest temperature 74 at St. Stephen; lowest 23 at Moncton.

NOVEMBER.—An exceptionally fine, open and dry month, the coolest periods being near the opening and close. During the interim, weather was phenomenally mild with occasional summer-like conditions. Only about one-third of the normal precipitation occurred. Very little snow fell and the ground was bare in most sections on the 30th. St. John, maximum for the month, 62, was the highest recorded for the past ten

years. Rainfall which was much under average, fell almost altogether on the 14th and 20th. Snowfall consisted of flurries at the end of the month. Moderate northwest gales on the 1st, 4th, 5th and 23rd; southeast on the 9th. Highest temperature 65 at St. Stephen; lowest 4 at Fredericton.

DECEMBER.—Unseasonably mild with bare ground in most localities till the 24th when more wintry conditions set in; sleighing then good for remainder of month. Temperatures well below zero in some districts on the 29th. Ice formed at head of St. John River on the 1st but navigation continued until the 8th. A heavy southerly gale on the 8th caused some local damage. In southern New Brunswick the snow covering at the close of the month ranged from two to eight inches. Highest temperature 52 at Sussex on the 8th; lowest 13 below zero at Fredericton on the 29th.

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WIND DIRECTION AND VELOCITY FOR 1913.

1913	N.		N. E.		E.		S. E.		S.		S. W.		W.		N. W.		Hours Calm	Total Miles
	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles		
January.....	111	1,164	35	332	19	112	31	489	111	2,116	146	2,679	77	1,018	199	4,152	15	12,062
February.....	207	2,663	67	795	41	490	19	348	3	45	51	1,068	102	1,682	179	3,433	3	10,524
March.....	38	344	32	375	22	315	69	785	98	1,108	255	4,081	66	899	161	3,315	3	11,222
April.....	174	2,059	53	521	71	531	11	90	167	949	116	1,615	43	466	72	1,543	13	7,774
May.....	61	717	99	1,015	75	690	51	342	146	1,255	108	1,166	86	850	111	2,101	7	8,136
June.....	67	732	69	571	25	205	41	226	207	1,960	183	2,617	22	217	105	1,773	1	8,301
July.....	36	381	44	393	28	230	166	1,205	268	2,367	121	1,517	35	348	30	518	16	6,959
August.....	76	874	25	240	6	46	51	472	313	2,723	172	2,104	9	64	68	774	24	7,297
September.....	97	1,022	54	484	33	260	62	768	129	953	188	2,434	16	197	133	1,561	8	7,679
October.....	127	1,793	164	1,935	44	738	127	1,626	102	785	75	997	19	141	67	730	19	8,745
November.....	52	583	55	523	46	526	42	706	39	500	216	3,225	96	1,076	169	3,284	5	10,423
December.....	153	1,636	88	831	28	293	21	486	18	389	92	1,392	96	931	243	4,075	5	10,033
TOTALS.....	1,199	13,968	785	8,015	438	4,436	691	7,543	1,601	15,150	1,723	24,895	667	7,889	1,537	27,259	119	109,155

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METEOROLOGICAL ABSTRACT FOR 1913.

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METEOROLOGICAL SERVICE OF CANADA.

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MONTHS. 1913.	BAROMETER.			THEROMETER.			Cloudiness 0 = Clear 10 = Wolly Cloudy	Precipitation, Rain and Melted Snow	Thunderstorms	Fogs
	Mean	Highest	Lowest	Mean	Highest	Lowest				
January	30.064	30.791	28.647	28.4	51.5	- 1	6	4.27	0	3
February	29.895	30.374	29.266	16.2	43	- 10.7	5	2.69	0	2
March	30.075	30.858	29.205	32.7	52.3	- 4.8	6	7.60	0	3
April	29.985	30.447	29.257	40.2	61.4	19.3	6	2.89	0	4
May	29.959	30.475	28.957	45.8	65.5	31.3	6	3.64	1	0
June	29.957	30.272	29.493	55.6	73.7	41.3	5	0.56	2	3
July	29.901	30.227	29.505	61	80	52.3	5	3.55	4	9
August	30.038	30.422	29.724	59.9	77.2	47.2	5	2.76	3	11
September	30.134	30.533	29.713	54.6	70.2	36.3	5	2.14	2	3
October	29.992	30.584	29.400	54.9	69.3	30.2	8	5.95	0	7
November	30.089	30.883	29.492	39.5	61.8	12	6	1.37	0	1
December	29.904	30.594	28.816	28.9	50.2	8.5	6	3.73	0	1

Mean height of barometer for the year was 29.999, the highest reading 30.883 on the 28th November, and the lowest 28.647 on the 4th January. The average temperature for the year was 43.1, which was 1.9 above the average for the past forty years. Maximum temperature 80 occurred on the 30th July and the minimum 10.7 below zero on the 10th February. Total precipitation 41.15 was 5.15 below average.

D. L. HUTCHINSON,
Director St. John Observatory.