

IV.—PHENOLOGICAL OBSERVATIONS, CANADA, 1896. COMPILED
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I present here, in tables A and B, the observations made at twenty-two stations throughout Canada. The Province of Nova Scotia has by far the largest representation as usual; but that is not remarkable, as the observations were commenced in 1892 at Nova Scotia stations alone. In 1893 four New Brunswick stations were added. In 1894 the stations were extended to Winnipeg, and in 1895 to Vancouver.

In addition to the Dominion tables referred to, I give as a sample of problems which may be solved by an annual series of such tables, one showing the average date for five years of the first appearance of twenty objects in the Province of Nova Scotia. When these tables become fuller, as they promise to do in the future, averages for each station during a term of years would give interesting normals for each station for the comparison of the variations of climate from year to year. The comparison of the normals of each station throughout a province would be even more interesting. The publication of these tables will put all such data at the disposal of those wishing to utilize them for general or local purposes at present or in the future.

I expect this summer to have such reports from very many stations in Nova Scotia, as a great many of the public schools are making observations on a list of 100 objects in their respective stations in every quarter of the Province.

STATIONS AND NAMES OF THE OBSERVERS, 1896.

Nova Scotia.

Yarmouth, Yarmouth Co.—Miss Antoinette Forbes, B. A.

Berwick, Kings Co.—Miss Ida Parker.

Maitland, Hants Co.—Miss Bertha B. Hebb, B. A.

Halifax, Halifax Co.—Mr. Harry Piers.

“ “ Mr. G. M. Johnstone MacKay.

Amherst, Cumberland Co.—Principal E. J. Lay.

New Canaan, Cumberland Co.—Miss Sarah C. Ross.

River Philip, Cumberland Co.—Miss Jean McLeod.

Wallace, Cumberland Co.—Miss Mary E. Charman.

Pictou, Pictou Co.—Mr. C. L. Moore, B. A.

“ “ Mr. C. B. Robinson, B. A.

New Glasgow, Pictou Co.—Miss Maria Cavanagh.

Antigonish, Antigonish Co.—Prof. D. M. MacAdam.

Port Hawkesbury, Inverness Co.—Mrs. Louise Paint Forsyth.

Prince Edward Island.

Charlottetown, Queens Co.—Principal John MacSwain.

New Brunswick.

Saint John, St. John Co.—Geo. U. Hay, M.A., Ph. B., F. R. S. C.

Richibucto, Kent Co.—Miss Isabella J. Caie.

Ontario.

Niagara Falls, Welland Co.—Mr. Roderick Cameron.

Beatrice, Muskoka Co.—Miss Alice Hollingworth.

Manitoba.

Reston, Dennis Co.—Mr. H. B. MacGregor.

Assiniboia.

Pleasant Forks—Mr. Thomas R. Donnelly.

British Columbia.

Vancouver City, High School—Mr. J. K. Henry, B. A.

TABLE A.—Continued.

PHENOLOGICAL OBSERVATIONS, CANADA, 1896

Number.	Wallace, N. S.	Pictou (M), N. S.	Pictou (R), N. S.	New Glasgow, N. S.	Antigonish, N. S.	Port Hawkesbury, N. S.	Average Southern Nova Scotia.	*Charlottetown, P. E. I.	Saint John, N. B.	Richibucto, N. B.	Niagara Falls, O.	Muskoka, O.	Reston, Man.	Pheasant Forks, Assa.	Vancouver, B. C.
1	103	106	107	....	117	....	109·1	141	114	116	107	106	....	....	70
2	....	...	120	119	....	140	120·8	136	121	....	109	116	....	136	....
3	..	140	140	146	153	153	146·4	....	...	140	....	30	....	....	....
4	....	....	....	....	....	....	....	....	130	....	117	....	112	116	..
5	139	135	130	131	133	138	133·1	137	122	131	111	124	....	....	....
6	....	....	....	....	....	....	....	....	122	....	107	124	....	....	....
7	....	130	129	129	..	..	128·5	....	128	....	107	111	....	....	....
8	110	106	105	108	108	117	107·4	113	128	117	...	115	...	....	....
9	128	129	129	124	125	135	128·9	139	128	138	119	124	....	149	88
10	....	....	....	....	....	....	....	....	....	....	....	....	....	....	82
11	....	....	....	....	....	....	....	....	....	....	....	....	....	....	162
12	....	....	....	....	....	....	....	....	....	....	116	....	133	....	....
13	130	130	131	125	132	138	129·6	....	130	127	123	132	144	134	102
14	160	167	....	....	171	174	168·3	..	183	172	145	161	180	186	150
15	....	....	....	....	....	....	....	....	....	....	126	....	141	....	....
16	142	144	....	149	158	157	149·0	....	....	146	118	....	....	....	107
17	188	....	....	206	....	223	205·6	..	....	204	153	....	....	....	....
18	....	149	....	151	153	....	146·0	159	143	145	....	130	....	....	126
19	....	140	140	141	148	152	143·6	....	136	144	118	124	138	150	128
20	....	....	....	....	....	223	....	....	....	208	....	....	....	196	..
21	....	....	....	....	154	173	....	....	....	....	145	....	....	....	126
22	147	....	....	154	157	166	152·9	159	....	152	131	132	....	..	126
23	....	....	....	....	....	....	....	....	....	....	....	....	....	164	135
24	....	....	....	....	....	....	....	....	....	148	131	....	....	....	....
25	....	155	....	149	....	....	155·0	166	....	160	136	135	138	...	149
26	159	161	....	....	166	174	163·5	....	....	158	132	135	....	....	136
27	....	....	....	....	....	218	....	....	....	....	....	....	194	199	....

TABLE B.

PHENOLOGICAL OBSERVATIONS CANADA, 1896.

Number.	Day of the year, 1896, corresponding to the last day of each month											
	January.....	31 July.....	213	Yarmouth, N. S.	Berwick, N. S.	Maitland, N. S.	Halifax (P), N. S.	Halifax (M), N. S.	Average Southern Nova Scotia.	Amherst, N. S.	New Canaan, N. S.	River Philip, N. S.
31	Spring Wheat, first sowing.....	February.....	60 August.....	244								
32	“ “ flowering.....	March.....	91 September.....	274								
33	“ “ harvesting.....	April.....	121 October.....	305								
34	Last Spring Frost.....	May.....	152 November.....	335								
35	First Autumn Frost.....	June.....	182 December.....	366								
36	Opening of Still Lakes.....				146				146 0	144		
37	Closing of Still Lakes.....				268		300		284 0	268		
38	Opening of Rivers, Spring.....									104		
39	Closing of Rivers in Fall.....											
					173							
								130		139	100	
								114		143	146	
								172		172	172	
								174		173	173	
40	Thunderstorms.....				222					212		
					232					222		
41	Droughts affecting Vegetation.....											
42	Song Sparrow, first appearance.....				95	97	*74	103		98		
44	American Robin, Eastern.....				83	95	*104	103		92		
45	Merula propinqua, Western.....											
48	Junco, Eastern species.....				104		104			116		
49	“ Western species.....											
50	Red-winged Blackbird.....											
51	Spotted Sandpiper.....				137		105					
52	White-bellied Swallow.....				126	109	117			101	126	
53	Meadow Lark.....											
54	Kingfisher.....									120		
55	Hummingbird, first appearance.....				138		136			143	140	
56	“ Western species.....											
57	Night Hawk, Eastern species.....				147		139					
58	“ Western species.....											
59	Wild Ducks, first birds.....									101		
60	“ “ Flocks.....											
61	“ “ last Flock.....						298					
62	“ “ Birds.....											
63	Wild Geese, first Birds.....				92		93					
64	“ “ Flock.....									78		
65	“ “ last Flock.....											
66	“ “ Birds.....						346					
67	Frogs piping, first date.....				107	108	106			105	110	

* Winters in.

TABLE B.—Continued.

PHENOLOGICAL OBSERVATIONS, CANADA, 1896.

Number.	Wallace, N. S.	Pictou (M), N. S.	Pictou (R), N. S.	New Glasgow, N. S.	Antigonish, N. S.	Port Hawkesbury, N. S.	Average Southern Nova Scotia.	Charlottetown, P. E. I.	Saint John, N. B.	Richibucto, N. B.	Niagara Falls, O.	Muskoka, O.	Reston, Man.	Pheasant Forks, Assa.	Vancouver, B. C.
31					125			127		127			114	126	
32								227		221			191		
33				237				221		159	113		221		
34	166				165	176	162.7	144		275	266	248	137		
35	281				249	239	259.2	266						215	
36						118									
37					329	353	341.0								
38					72				101	109	89		106	95	
39	357							356	356	336			309	295	
40	110					111		110	110	109	89	107	126	98	
	133					139		111	109				129		
	169							131			113	146	132	145	
	173					172		174		156	128	157	137	158	
	174							185		170	136	159	162	169	
	180							192		174	138		166		
	194							194		194	148		168		
	197					197		197		197	158		169		
	203										160		174		
	213					215		208					178		
	217					232		217		217			186	215	
	222					242		225		222			190		
	225					250				249			198		
	251					260							214		
	263					263							217		
						279						303			
												323			
41													178 to 198		
42						101		101			88				
44				99		97		102		106	88	95	119	105	
45											89				
48								101					291		
49													114	105	
50											88		104		
51											104				
52	116					130		137		116	105		135		
53											94		97	108	
54						124				116	103				
55	139			138		141				138	140	121			
56											140				
57						177		179				141		149	
58													134		
59						*					88		104	87	
60								91			88		111	106	
61						264									
62															
63	67	75									87	118	87	87	
64	68					80		98		87	87		94	98	
65	252					298		271				317			
66	340														
67	103	103	103		107	111		105	116	105	104	112	115	50	

MEAN OF TWENTY PHENOLOGICAL OBSERVATIONS, NOVA
SCOTIA, FOR THE FIVE YEARS, 1892 TO 1896.

Species common to the Tables of the five years.		Average Date 1892.	Average Date 1893.	Average Date 1894.	Average Date 1895.	Average Date 1896.	Five Year Mean.	Normal date of first flowering, etc.
Mayflower,	first flowering	98	108	104·7	113·55	102·70	104·79	5th April.
Alder,	" "	102	114	116·3	103·8	107·55	108·73	9th "
Aspen,	" "	131	123	122·2	117·5	121·90	123·12	4th May.
Maple,	" "	123	130	126·3	123·85	124·55	125·54	6th "
Strawberry,	" "	129	133	131·6	128·55	128·50	130·13	11th "
Dog-tooth V.,	" "	135	136	132·2	125·	128·50	131·34	12th "
Cherry (Cult),	" "	146	142	146·3	136·6	143·00	142·78	23rd "
Indian Pear,	" "	145	144	146·	138·35	141·65	143·	24th "
Cherry (wild),	" "	150	144	147·	138·15	145·25	144·88	25th "
Apple,	" "	146	146	152·1	166·65	151·10	152·37	2nd June.
Lilac.	" "	154	160	162·3	153·5	160·50	158·06	8th "
Hawthorn,	" "	163	160	160·3	148·75	160·25	158·46	8th "
Wild Goose,	first	54	88	70·6	78·00	80·00	74·12	6th March
Robin,	"	96	94	73·2	99·30	96·14	91·73	2nd April.
Song Sparrow,	"	99	115	79·	96·65	94·66	96·86	7th "
Frogs piping,	"	105	113	112·8	110·55	106·30	109·53	10th "
Swallow,	"	106	119	119·	125·75	117·76	117·50	18th "
Kingfisher,	"	128	137	128·7	127·50	122·00	128·64	9th May.
Humming Bird,	"	143	159	143·0	137·25	139·30	144·31	25th "
Night Hawk,	"	150	144	153·8	148·00	154·33	151·03	1st June.