

IX.—PHENOLOGICAL OBSERVATIONS, CANADA, 1897. COMPILED  
BY A. H. MAC KAY, LL. D., HALIFAX.

(Read 9th May, 1898).

In the following tables I have compiled the observations taken at fifteen stations throughout the Dominion from Halifax to Vancouver. Seven of these stations are in the Province of Nova Scotia. Between two and three hundred stations have had similar observations made in connection with the public schools during the year, so that there is very abundant material for the study of these phenomena in this province.\* The schedule names, which are abbreviated in the tables, are those of the Public School Schedule for Nova Scotia, used also by the Botanical Club of Canada during the present year:—

PHENOLOGICAL OBSERVATIONS, CANADA, 1897.

STATIONS AND NAMES OF THE OBSERVERS.

*Nova Scotia.*

Berwick, Kings Co.—Miss Ida Parker.

Halifax City.—Mr. Harry Piers.

Musquodoboit Harbour, Halifax Co.—Rev. James Rosborough.

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

New Glasgow, Pictou Co.—Miss Maria Cavanagh.

Port Hawkesbury, Inverness Co.—Mrs. G. Ormond Forsyth.

Sydney Mines, Cape Breton Co.—Miss Louise MacMillan.

*Prince Edward Island.*

Charlottetown.—Principal John MacSwain.

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\*As this is going to press, Nova Scotian observations for 1898 have come in from between six and seven hundred stations. These will be reduced to tabular form when opportunity admits of it.

*Ontario.*

Niagara Falls (Queen Victoria Park).—Mr. Roderick Cameron.  
Beatrice, Muskoka.—Miss Alice Hollingworth.

*Manitoba.*

Winnipeg.—Rev. W. A. Burman, B. D., (up to No. 57 in table).  
Reston.—Mr. H. B. MacGregor, (from No. 67 to end of table).

*Assiniboia.*

Pheasant Forks.—Mr. Thomas Donnelly.

*British Columbia.*

Langley.—Mr. A. H. P. Matthew.  
Vancouver.—Mr. J. K. Henry, B. A.

## PHENOLOGICAL OBSERVATIONS, CANADA, 1897.

Number.	Day of the year, 1897, corresponding to the last day of each month.														
		Berwick, N. S.	Halifax, N. S.	Musquodoboit Har- bour, N. S.	Wallace, N. S.	New Glasgow, N. S.	Port Hawkesbury, N. S.	Sydney Mines, N. S.	Charlottetown, P. E. I.	Niagara Falls, O.	Beatrice, Muskoka, O.	Winnipeg, Man.	Pheasant Forks, Assa.	Langley, B. C.	Vancouver, B. C.
	(First Flowering, etc.)														
1	Alder .....	144	108	110	105	.....	128	.....	129	93	.....	.....	.....	79	60
2	Aspen .....				115	.....	133	.....	125	118	129	.....	.....	.....	.....
3	Mayflower .....	86	98	103	113	113	113	116	114	.....	.....	.....	.....	.....	.....
4	Violet, blue ... ..	124	129	126	122	127	135	143	.....	.....	122	.....	.....	100	.....
5	Violet, white.....	117	129	118	122	126	135	135	.....	.....	118	.....	.....	121	.....
6	Maple, red .....	114	129	126	124	119	137	.....	134	98	.....	.....	.....	.....	.....
7	Bluets .....			135	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8	Horsetail .....						137	161	.....	.....	131	.....	.....	.....	.....
9	Dandelion .....	125	134	137	137	118	137	139	142	110	126	135	.....	117	89
10	A. T. Lily .....						131	.....	.....	111	120	.....	.....	79	.....
11	Hepatica .....						130	.....	.....	91	.....	.....	.....	.....	.....
12	Gold Thread .....	126	.....	128	135	.....	161	147	.....	.....	131	.....	.....	.....	.....
13	Strawberry.....	116	128	128	128	119	137	130	137	126	131	140	140	117	89
14	“ fruit .....	159	178	.....	167	158	182	177	.....	159	186	.....	.....	.....	.....
15	Cherry, red.....	134	147	144	144	144	.....	.....	.....	135	140	140	.....	.....	111
16	“ “ fruit .....						206	.....	.....	.....	204	.....	.....	.....	.....
17	Blueberry .....	129	145	144	144	.....	137	165	.....	.....	142	.....	.....	.....	.....
18	“ fruit.....	201	199	.....	195	.....	.....	.....	.....	.....	221	.....	.....	.....	.....
19	Buttercup, tall .....	145	.....	159	150	148	170	159	.....	.....	166	.....	.....	125	.....
20	“ creeping... ..	155	.....	166	167	.....	171	.....	.....	.....	.....	.....	.....	129	.....
21	Clintonia .....	144	.....	149	.....	154	.....	.....	.....	.....	.....	.....	.....	148	.....
22	Trillium, painted .....	.....	151	153	.....	154	161	.....	.....	.....	134	.....	.....	.....	.....
23	Starflower .....	145	151	148	.....	154	166	155	.....	.....	155	.....	.....	.....	.....
24	Lady's Slipper .....	144	154	152	.....	144	172	.....	.....	.....	150	.....	.....	.....	.....
25	Marsh Calla .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
26	Indian Pear .....	.....	140	142	.....	137	142	148	121	.....	131	120	139	.....	109





PHENOLOGICAL OBSERVATIONS, CANADA, 1897—Continued.

Number.	Day of the year, 1897, corresponding to the last day of each month.		Berwick, N. S.	Halifax, N. S.	Musquodoboit Har- bour, N. S.	Wallace, N. S.	New Glasgow, N. S.	Port Hawkesbury, N. S.	Sydney Mines, N. S.	Charlottetown, P. E. I.	Niagara Falls, O.	Beatrice, Muskoka, O.	Reston, Man	Pheasant Forks, Assa.	Langley, B. C.	Vancouver, B. C.
	Jan... 31 Feb... 59 Mar... 90 April... 120 May... 151 June... 181	July... 212 Aug... 243 Sept... 273 Oct... 304 Nov... 334 Dec... 365														
	(Meteorological.)					5						68				76
												95				
											113	113				
								117				114				
								126			131	129			125	126
						140	138			140		132	139			
			151			142				141		150	141	141	149	
			167			166		165		160		157	165	160		
			169			169				169		174	166	165	174	
			176			171	176	179		176		186	166	166	177	176
						176				181		191	181	169		
						189		191		197	192	192	184	171		
			203			213	190					194	197			
80	Thunderstorms.....		205	218		218		203			199	200	198		202	
			211	221		223				205	202	201				
			213			224					204	202				
						225		213			205	203		224	219	
						226		218			206	223	225		220	
			227			227		226		218	207	227				
			228	228				229		221	221	236				236
			252			252				225	222	241			243	
						253				227	228	254			248	249
						254		238		228	229	278			249	
			256			256				229	241	289			286	
										232						
										253						

PHENOLOGICAL OBSERVATIONS, CANADA, 1897,—Continued.

Number.	Day of the year, 1897, corresponding to the last day of each month.		Berwick, N. S.	Halifax, N. S.	Musquodoboit Harbour, N. S.	Wallace, N. S.	New Glasgow, N. S.	Port Hawkesbury, N. S.	Sydney Mines, N. S.	Charlottetown, P. E. I.	Niagara Falls, O.	Beatrice, Muskoka, O.	Reston, Man.	Pheasant Forks, Assa.	Langley, B. C.	Vancouver, B. C.
	Jan. .... 31 Feb. .... 59 Mar. .... 90 April ...120 May. ...151 June ...181	July ...212 Aug. ...243 Sept. ...273 Oct. ...304 Nov. ...334 Dec. ...365														
	(Meteorological.)															
80	Thunderstorms	}								258						
	(Migrations, &c.)									289						
81	Wild Ducks									{ 74 270 }			97	127		
82	Wild Geese		81	72	{ 83 340 }	85	79	{ 86 270 }	91	132	297		87	1	21	
83	Song Sparrow		102	90			95	99	77							
84	Robin		67	77			87	114	110	102	74	69		116		24
85	Junco		87	96						106			284			
86	Sand-piper			129				146			95					
87	Meadow-lark										96		95			
88	Kingfisher		144	140				141			74					
89	Yel'w-crowned Warbler		137					119								
90	Yellow-bird		135	137		110	135									
91	White-throated Sparrow			120												
92	Humming-bird		139			145	145				132	138				
93	Kingbird		138					154					139			
94	Bobolink		138					175					144			
95	Goldfinch			148							139					
96	Redstart															
97	Cedar Waxwing			157												
98	Night Hawk			142				189		162		164	143	149		
99	Piping Frogs		107	115		113	116	115	112	79	105	104	105		33	
100	Snakes, seen		116			120	175						103			

MEAN OF TWENTY PHENOLOGICAL OBSERVATIONS, NOVA SCOTIA,  
FOR THE FIVE YEARS, 1892 TO 1896, COMPARED WITH 1897.

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 1st flowering, etc.	Average Date 1897.
(First appearance).								
Mayflower, flower . . . .	98	108	104.7	113.55	102.70	104.79	5th April.	106.
Alder, " . . . . .	102	114	116.3	103.8	107.55	108.73	9th " .	119.
Aspen, " . . . . .	131	123	122.2	117.5	121.90	123.12	4th May .	128.
Maple, " . . . . .	123	130	126.3	123.85	124.55	125.54	6th " .	124.8
Strawberry, " . . . . .	129	133	131.6	128.55	128.50	130.13	11th " .	126.5
Dog-tooth V., " . . . . .	135	136	132.2	125.	128.50	131.34	12th " .	131.
Cherry (Cult.), " . . . . .	146	142	146.3	136.6	143.00	142.78	23rd " .	146.
Indian Pear, " . . . . .	145	144	146.	138.35	141.65	143.	24th " .	141.8
Cherry (wild) " . . . . .	150	144	147.	138.15	145.25	144.88	25th May..	142.6
Apple, " . . . . .	146	146	152.1	166.65	151.10	152.37	2nd June .	155.3
Lilac, " . . . . .	154	160	162.3	153.5	160.50	158.06	8th " .	157.
Hawthorn, " . . . . .	163	160	160.3	148.75	160.25	158.46	8th " .	156.
Wild Goose . . . . .	54	88	70.6	78.00	80.00	74.12	6th March	80.
Robin . . . . .	96	94	73.2	99.30	96.14	91.73	2nd April.	91.
Song Sparrow . . . . .	99	115	79.	96.65	94.66	96.86	7th " .	95.6
Frogs piping . . . . .	105	113	112.8	110.55	106.30	109.53	10th " .	113.2
Swallow . . . . .	106	119	119.	125.75	117.76	117.50	18th " .	.....
Kingfisher . . . . .	128	137	128.7	127.50	122.00	128.64	9th May..	141.6
Humming Bird . . . . .	143	159	143.0	137.25	139.30	144.31	25th " .	143.
Night Hawk . . . . .	150	144	158.8	148.00	154.33	151.03	1st June..	165.5

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