

THE PHENOLOGY OF NOVA SCOTIA, 1917—BY A. H. MACKAY, LL. D.

(Read by title 14 May, 1918.)

These observations were made by the school children of the Province of Nova Scotia as a part of the Nature Study work prescribed. The pupils report by bringing into the school-room the flowering or other specimens when first observed, for authoritative determination by the teacher who generally credits the first finder by placing the name and the observation on the honor roll section of the blackboard for the day. The teacher after testing the correctness of the observation, marks it on the schedule with which every teacher is provided—a copy of which is sent in to the Inspector with the school returns at the end of June and January.

The following tables are compiled from 186 of the best schedules out of the 450 sent in. The selections were made and compiled under the direction of Mr. H. R. Shinner, B. A. and Miss M. G. McLeod, of the Education Department.

The schedules for each year are carefully bound up in a large annual volume which is placed in the Provincial Museum and Science Library where they can be used by students of climate, etc. The compilers of the phenochrons of the different belts, slopes or regions, have been rural science teachers who have most distinguished themselves as instructors. They were selected for the purpose on the recommendation of the Director of rural science education. The sheets from which the provincial phenochrons are calculated are also bound in annual folio volumes for ease of consultation and preservation.

The Province is divided into its main climate slopes or regions not always coterminous with the boundaries of counties. Slopes, especially those to the coast, are subdivided into belts, such as (a) the coast belt, (b) the low inland belt, and (c) the high inland belt, as below:—

No.	Regions or Slopes.	Belts.
I.	Yarmouth and Digby Counties,	(a) Coast, (b) Low Inlands, (c) High Inlands.
II.	Shelburne, Queens & Lunenburg Co.'s,	“ “ “
III.	Annapolis and Kings Counties,	(a) South Mts., (b) Annapolis Valley, (c) Cornwallis Valley, (d) North Mts.
IV.	Hants and Colchester Counties,	(a) Coast, (b) Low Inlands, (c) High Inlands.
V.	Halifax and Guysboro Counties,	“ “ “
VI.A.	Cobequid Slope (to the south),	“ “ “
VI.B.	Chignecto Slope (to the northwest)	“ “ “
VII.	Northumberland Straits Slope (to the n'h)	“ “ “
VIII.	Richmond & Cape Breton Co.'s,	“ “ “
IX.	Bras d'Or Slope (to the southeast),	“ “ “
X.	Inverness Slope (to Gulf, N. W.),	“ “ “

The ten *regions* are indicated on the outline map on the next page.

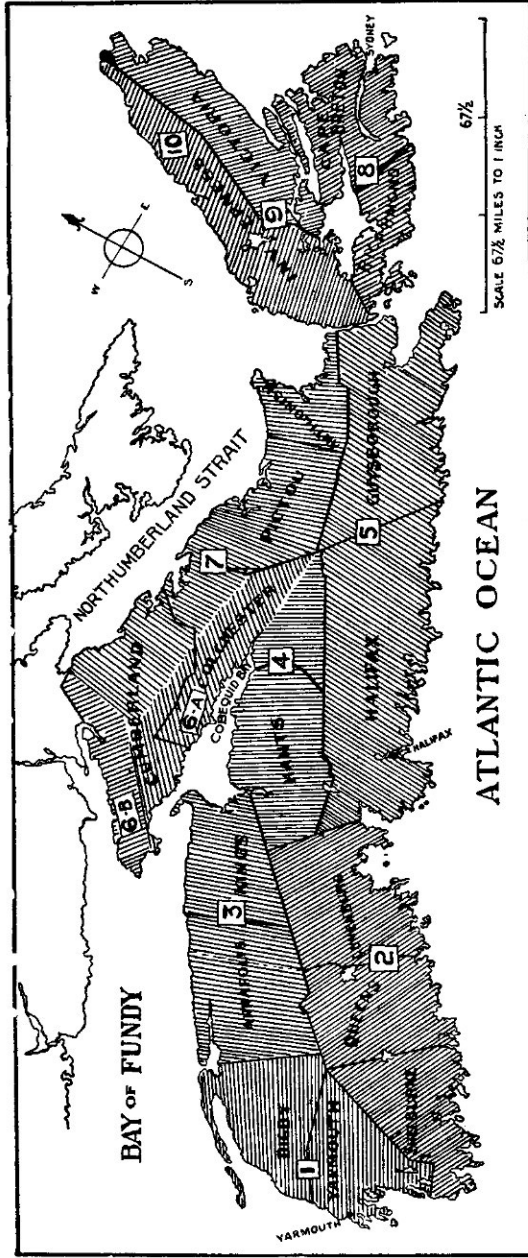
THE LOCAL COMPILERS FOR EACH REGION, 1917.

Region No.

- I. Miss Helen Pitman, Brooklyn, Yar. Co.
- II. Mr. G. L. Leslie, Mahone, Lun. Co.
- III. Miss Anna R. McGregor, Kentville, Kings Co.
- IV. Mr. R. H. Wetmore, Truro, Col. Co.
- V. Miss Katherine Manson, Dartmouth, Hfx. Co.

Region No.

- VI.a. Mr. R. N. Bagnell, Great Village, Col. Co.
- VI.b. Miss E. A. O'Regan, Parrsboro, Cumb. Co.
- VII. Miss Flora Zwicker, Pugwash, Cumb. Co.
- VIII. Mr. Dara Cochrane, Sydney, C. B.
- IX & X. Mr. L. A. DeWolfe, Truro, Col. Co.



THE TEN PHENOLOGICAL REGIONS OF NOVA SCOTIA.

THE PHENOLOGY OF NOVA SCOTIA, 1917.

[Compiled from the best 186 out of 450 local observation schedules.]

WHEN FIRST SEEN.

OBSERVATION REGIONS.

1. Yarmouth and Digby	2. Shelburne, Queens and Lunenburg	3. Annapolis and Kings	4. Hants and Colchester.	5. Halifax and Guysboro	6a. Chignecto and Cobequid Slope.	6b. Chignecto and Cobequid Slope	7. Northumberland Straits Slope	8. Richmond and Cape Breton	9 & 10. Bras d'Or and Inverness Slope.	Average Dates.
110	106	109	106	129	129	104	114	128	107	113
124	117	161	118	121	120	127	134	121	120	127
95	100	105	109	107	115	111	110	118	125	109
115	124	127	129	126	120	134	138	145	131	128
110	121	129	126	123	133	141	135	132	132	132
119	123	132	130	129	123	131	135	131	140	129
122	127	135	133	131	134	137	139	137	143	133
140	125	124	133	132	130	129	129	137	166	136
130	135	124	133	132	130	141	141	140	141	137
124	127	131	131	129	130	132	136	133	138	131
169	170	171	170	174	169	175	174	174	178	172
124	129	136	134	136	138	143	141	139	143	136
143	143	143	142	144	142	142	142	138	158	142
130	135	147	142	137	140	145	145	148	146	141
115	121	129	135	145	121	141	137	144	142	133
148	136	149	142	142	143	138	154	152	157	146
146	147	151	161	147	155	154	154	157	157	151
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YEAR 1917.

Day of the year corresponding to the last day of each month.	For leap year add one to each except January.
Jan..... 31 July..... 212	1. <i>Alnus incana</i> , Wild
Feb..... 59 Aug..... 243	2. <i>Populus tremuloides</i>
March..... 90 Sept..... 273	3. <i>Epigea repens</i> , L.....
April..... 120 Oct..... 304	4. <i>Equisetum arvense</i>
May..... 151 Nov..... 334	5. <i>Sanguinaria Canadensis</i>
June..... 181 Dec..... 365	6. <i>Viola blanda</i>
	7. <i>Viola palmaria</i> , <i>cucullata</i>
	8. <i>Hepatica trilobata</i> , etc.....
	9. <i>Acer rubrum</i>
	10. <i>Fragaria Virginiana</i>
	11. <i>Fragaria Virginiana</i> (Fruit ripe).....
	12. <i>Taraxacum officinale</i>
	13. <i>Erythronium Americanum</i>
	14. <i>Coptis trifolia</i>
	15. <i>Claytonia Caroliniana</i>
	16. <i>Nepeta Glechoma</i>
	17. <i>Amelanchier Canadensis</i>
	18. <i>Amelanchier Canadensis</i> (Fruit ripe).....

WHEN BECOMING COMMON.

OBSERVATION REGIONS.

1. Yarmouth and Digby	2. Shelburne, Queens and Lunenburg	3. Annapolis and Kings	4. Hants and Colchester.	5. Halifax and Guysboro	6a. Chignecto and Cobequid Slope.	6b. Chignecto and Cobequid Slope	7. Northumberland Straits Slope	8. Richmond and Cape Breton	9 & 10. Bras d'Or and Inverness Slope.	Average Dates.
117	112	118	109	134	147	110	120	133	113	121
127	130	123	117	121	134	132	132	126	128	127
138	106	129	114	116	124	118	121	125	133	136
133	119	127	123	135	132	138	144	149	132	138
137	126	130	130	132	135	132	139	146	138	137
141	128	130	134	138	135	132	138	141	138	141
141	133	134	143	139	138	142	144	145	145	147
143	138	125	149	.....	.....	.....	.....	.....	.....	.....
144	141	140	141	140	145	144	146	146	147	148
142	136	136	132	141	142	145	145	144	146	146
178	178	178	172	179	177	181	179	179	180	178
143	138	136	143	142	145	139	149	144	146	149
150	165	155	153	139	148	148	148	144	162	144
149	138	142	140	177	143	145	150	152	152	151
143	129	130	140	148	143	147	128	150	150	159
154	161	142	159	151	147	147	143	160	159	160
157	156	153	156	155	161	157	157	159	160	160
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PHENOLOGICAL OBSERVATIONS IN

THE PHENOLOGY OF NOVA SCOTIA, 1917.—Continued.

WHEN FIRST SEEN		WHEN BECOMING COMMON.	
OBSERVATION REGIONS.		OBSERVATION REGIONS.	
YEAR 1917.		YEAR 1917.	
Day of the year corresponding to the last day of each month.		Average Dates.	
Jan. 31	July	1631	1601
Feb. 29	Aug. 243	1632	1602
March. 31	Sept. 273	1633	1603
April. 30	Oct. 304	1634	1604
May. 31	Nov. 334	1635	1605
June. 30	Dec. 365	1636	1606
For leap year add one to each except January.			
1. Yarmouth and Digby	19. Prunus Pennsylvanica (Fruit ripe)	1637	1607
2. Shelburne, Queens and Lunenburg	20. Prunus Pennsylvanica (Fruit ripe)	1638	1608
3. Annapolis and Kings	21. Vaccinium Can. and Penn.	1639	1609
4. Hants and Colchester	22. Vaccinium Can. and Penn. (Fruit ripe)	1640	1610
5. Halifax and Guysboro	23. Rannunculus acris	1641	1611
6a. Chignecto and Cobequid Slope	24. R. repens	1642	1612
6b. Chignecto and Cobequid Slope	25. Irid. erythrocarpum	1643	1613
7. Northumberland Straits Slope	26. Rhododendron Rhodora	1644	1614
8. Richmond and Cape Breton	27. Cornus Canadensis	1645	1615
9 & 10. Bras d'Or and Inverness Slope	28. Cornus Canadensis (Fruit ripe)	1646	1616
	29. Triticum boreale	1647	1617
	30. Triticum boreale	1648	1618
	31. Calla palustris	1649	1619
	32. Cyprinechium acule.	1650	1620
	33. Sium angustifolium	1651	1621
	34. Linnaea borealis	1652	1622
	35. Kalmia glauca	1653	1623
	36. Kalmia angustifolia	1654	1624
	37. Crataegus oxyacantha	1655	1625
	38. Crataegus coccinea, etc.	1656	1626
	39. Iris versicolor	1657	1627
	40. Chrysanthemum Leucanthemum	1658	1628
	41. Nuphar advena	1659	1629
	42. Rubus strigosus (Fruit ripe)	1660	1630
	43. Rubus strigosus (Fruit ripe)	1661	1631

THE PHENOLOGY OF NOVA SCOTIA, 1917.—Continued.

WHEN FIRST SEEN.		WHEN BECOMING COMMON.	
OBSERVATION REGIONS.		OBSERVATION REGIONS.	
YEAR 1917.			
1. Yarmouth and Digby	84	1. Yarmouth and Digby	.....
2. Shelburne, Queens and Lunenburg	85	2. Shelburne, Queens and Lunenburg	.....
3. Annapolis and Kings	86	3. Annapolis and Kings	.....
4. Hants and Colchester.	87	4. Hants and Colchester.	.....
5. Halifax and Guysboro	88	5. Halifax and Guysboro	.....
6a. Chignecto and Cob-equit Slope	89	6a. Chignecto and Cob-equit Slope	.....
6b. Chignecto and Cob-equit Slope	90	6b. Chignecto and Cob-equit Slope	.....
7. Northumberland Straits Slope	91	7. Northumberland Straits Slope	.....
8. Richmond and Cape Breton	92	8. Richmond and Cape Breton	.....
9 & 10. Bras d'Or and Inverness Slope.	93	9 & 10. Bras d'Or and Inverness Slope.	.....
Average Dates.	94	Average Dates.	.....
83. <i>Melospiza fasciata</i> (North)	85	83. <i>Melospiza fasciata</i> (North)	.....
84. <i>Turdus migratorius</i> (North)	86	84. <i>Turdus migratorius</i> (North)	.....
85. <i>Turdus hiemalis</i> (North)	87	85. <i>Turdus hiemalis</i> (North)	.....
86. <i>Actitis macularia</i> (North)	88	86. <i>Actitis macularia</i> (North)	.....
87. <i>Sturnella magna</i> (North)	89	87. <i>Sturnella magna</i> (North)	.....
88. <i>Ceryle alcyon</i> (North)	90	88. <i>Ceryle alcyon</i> (North)	.....
89. <i>Dendroica coronata</i> (North)	91	89. <i>Dendroica coronata</i> (North)	.....
90. <i>Dendroica aestiva</i> (North)	92	90. <i>Dendroica aestiva</i> (North)	.....
91. <i>Zonotrichia alba</i> (North)	93	91. <i>Zonotrichia alba</i> (North)	.....
92. <i>Trochilus colubris</i> (North)	94	92. <i>Trochilus colubris</i> (North)	.....
93. <i>Tyrannus carolinensis</i> (North)	95	93. <i>Tyrannus carolinensis</i> (North)	.....
94. <i>Dolichonyx oryzivorus</i> (North)	96	94. <i>Dolichonyx oryzivorus</i> (North)	.....
95. <i>Sturnus tristis</i> (North)	97	95. <i>Sturnus tristis</i> (North)	.....
96. <i>Sceloporus ruticella</i> (North)	98	96. <i>Sceloporus ruticella</i> (North)	.....
97. <i>Ampelis cedrorum</i> (North)	99	97. <i>Ampelis cedrorum</i> (North)	.....
98. <i>Chordeiles virginianus</i> (North)	100	98. <i>Chordeiles virginianus</i> (North)	.....
99. First pinging of frogs	.....	99. First pinging of frogs	.....
100. First appearance of snakes	.....	100. First appearance of snakes	.....
Day of the year corresponding to the last day of each month.			
Jan.	31	July	212
Feb.	59	Aug.	243
March	90	Sept.	273
April	120	Oct.	304
May	151	Nov.	334
June	181	Dec.	365
For leap year add one to each except January.			

THUNDERSTORMS—PHENOLOGICAL OBSERVATIONS, NOVA SCOTIA, 1917.

The indices indicate the number of stations from which the Thunderstorms were reported on the day of the year specified.

OBSERVATION REGIONS.

1. Yarmouth and Digby.	2. Shelburne, Queens and Lunenburg.	3. Annapolis and Kings.	4. Hants and Colchester	5. Halifax and Guysboro	6a. Chig. and Cobequid Slope	6b. Chig. and Cobequid Slope.	7. Northumb. Straits Slope.	8. Richmond and Cape Breton.	9 & 10. Bras d'Or and Inv. Slope.	Total 1917.
							41 ²		39	39
	57 ⁴									41 ²
58										57 ⁴
			89				85			58
93 ⁵										85
										89
										93 ⁵
			106						99	99
		108								106
111 ³	111 ³	111 ¹⁷	111 ¹²	111 ²	111 ²	111 ⁷	111 ⁴			108
112			112 ²	112				112	112 ⁴	111 ⁷⁰
								114	114	112 ⁹
118				118			118			114 ²
			119							118 ³
		121								119
			122							121
			129	129				122		122 ²
		135					129 ⁸	129		129 ¹¹
				141	141					135
143 ⁷	143 ²	143 ³	147				143 ³			141 ²
										143 ¹⁶
154 ⁴	154 ⁵	154 ²²	154 ³	154 ²	154 ³	154 ⁷	153 ¹¹	153 ⁶	153	147
			155 ²		155	155 ²	154 ¹⁷	154		153 ¹⁸
		160	160				155 ⁴		155 ³	154 ⁶⁴
										155 ¹¹
163	163								161	160 ²
	170									161
	171 ³	171 ⁶	171							163 ²
172			173						171	170
										171 ¹¹
		174					174	174	174 ³	172
175 ³	175 ³			175						173
										174 ⁶
						177				175 ⁷
			178			177				177
			179 ²			178 ²	178 ¹¹			178 ¹⁴
						179	179 ⁹		179	179 ³
						180	180			180 ²

