

*—Compass Plant.*—The fact that the leaves of the compass plant always turn their edges north and south has long been known to the hunters and settlers in the prairies of the Far West, who, when lost in a dark night, obtain their bearings by feeling the position of the leaves. Mr. Whitney, in the *American Naturalist*, demonstrates that Dr. Gray's theory "that both sides of the leaf are equally sensitive to light" is correct. The leaf has been examined under the microscope, and the result is that the number of the *stomata*, or breathing holes, in the leaves of the compass plant, are exactly the same on both surfaces, while those of other species varied considerably. The cellular structure of the leaf of *Silphium laciniatum* appears to be homogeneous throughout, and these observations show "that the meridional position of the edges of the leaf is to be explained by the structure of the two surfaces, which being identical, at least in the important respect of the number of the *stomata*, seek an equal exposure, in northern latitudes, being that in which the edges are presented north and south, the latter obtaining the maximum, the former the minimum of illumination."

### WANTS.

Wanted three Female Teachers, holding first Class Elementary School Diplomas, for Districts, Nos. 1, 2, and 3, (for the last immediately and for the other two by first July) in the Municipality of St. Jean Chrysostome de Châteauguay, No. 1.—Address A. Seever, St. Jean Chrysostome, F. O., for No. 1; and W. Dunnigan, Norton Creek, P. O. for Nos. 2 and 3.

A teacher holding the Academy Diploma 1st Class is open to an engagement. The best references and testimonials will be furnished. Apply to the Education Office, Quebec, care of Dr. Miles.

### Meteorology.

From the Records of the Montreal Observatory, Lat.  $45^{\circ} 31'$  North; Long.  $4h. 54m. 11s.$  West of Greenwich; height above the level of the sea, 182 feet; for the month of June, 1871. By CHARLES SMALLWOOD, M.D., LL.D., D.C.L.

DAYS.	Barometer corrected at $32^{\circ}$			Temperature of the Air.			Direction of Wind.			Miles in 24 hours.
	7 a.m.	2 p.m.	9 p.m.	7 a.m.	2 p.m.	9 p.m.	7 a.m.	2 p.m.	9 p.m.	
1	30.070	30.073	30.001	61.6	85.3	73.1	N E	W	W	187.11
2	.032	.030	.025	70.4	91.0	73.0	W	W	W	210.15
3	.600	29.976	29.962	67.0	91.7	70.1	W	N E	S W	67.11
4	29.973	.955	.950	72.2	91.3	72.1	N E	N E	N E	86.20
5	30.043	30.002	.951	60.2	81.9	66.2	N E	N E	N E	174.12
6	29.900	29.881	.750	61.6	83.8	67.3	N E	S	N E	201.10
7	.601	.568	.562	65.2	72.0	71.7	S W	S W	W S W	87.14
8	.698	.725	.821	64.6	78.2	66.3	W	W	W	104.17
9	.976	30.075	30.060	57.0	67.7	60.5	wbys	wbys	w	112.15
10	30.133	62.4	29.823	56.4	76.2	61.2	W	S	S	217.00
11	29.672	29.511	.547	63.2	71.1	64.2	W	W	W	224.17
12	.550	.564	.500	58.4	65.7	52.0	W	W	W	181.10
13	.520	.402	.531	56.0	52.2	54.3	W	S W	W	120.11
14	.677	.749	.823	52.2	64.0	56.1	W	N E	W	100.41
15	.924	.900	.900	52.4	64.2	48.0	W	S W	W	67.25
16	30.022	30.029	30.060	53.7	65.0	51.2	W	N E	W N E	81.11
17	.149	.112	.049	53.0	71.4	62.6	N E	S W	W	66.24
18	29.934	29.900	29.876	63.3	65.7	61.0	S W	S W	S W	104.10
29	.851	.821	.800	60.5	71.5	66.2	W	W	W	78.21
20	.764	.684	.826	67.1	68.4	60.0	W	W	W	197.15
21	30.047	30.064	30.100	54.6	69.7	59.4	W	W	W	94.11
22	.100	29.976	29.825	53.4	72.6	64.2	W	S W	S W	204.11
23	29.850	.946	.984	57.3	70.2	59.7	W	N E	W	101.14
24	30.000	.960	.998	58.0	72.6	65.0	N E	N E	N E	97.10
25	.110	30.076	30.026	62.2	83.1	69.1	W	W	W	184.21
26	.051	.001	.000	63.7	87.2	71.1	S W	W	W	91.12
27	29.862	29.772	29.670	69.0	89.4	78.3	W	W	W	104.12
28	.632	.607	.623	66.2	75.1	64.2	W	W	W	200.17
29	.711	.805	.924	59.0	69.4	59.2	W	N E	N b y e	187.14
30	30.041	30.052	30.077	55.4	73.1	60.0	wbys	W	W	244.13

The highest reading of the Barometer was at 6 a.m. on the 17th day, and was 30.149 inches; the lowest at 2 p.m. on the 13th day, and was 29.402 inches. The monthly mean was 29.875 inches.

The highest temperature was on the 4th day, and indicated  $92^{\circ} 2$  ;

the lowest reading was at 3 p.m. on the morning of the 30th day, and was  $48^{\circ} 1$ . Slight frost occurred.

Rain fell on 13 days, amounting to 1 298 inches, and was accompanied by Thunder on 3 days.

Observations taken at Halifax, Nova Scotia, during the month of June, 1871; Lat.  $44^{\circ} 39'$  North; Long.  $63^{\circ} 36'$  West; height above the Sea 175 feet; by Sergt. John Thurling, A. H. Corps, Halifax.

Barometer, highest reading was on the 10th..... 30.011 inches.

" lowest " 13th..... 29.522

" range of pressure ..... 0.489

" mean for month (reduced to  $32^{\circ}$ ) ..... 29.704

Thermometer, highest in shade was on the 14th..... 79.4 degrees

" lowest 1st..... 34.8

" range in month ..... 44.6

" mean of highest ..... 71.5

" mean of lowest ..... 44.7

" mean daily range ..... 26.8

" mean for month ..... 58.1

" maximum reading in sun's rays ..... 129.6

" minimum reading on grass ..... 24.1

Hygrometer, mean of dry bulb..... 61.4

" wet bulb ..... 56.0

" dew point ..... 51.4

" elastic force of vapour ..... 379 inches.

" weight of vapour in a cubic foot of air ..... 4.2 grains.

" required to saturate do ..... 1.8

" the figure of humidity (Sat. 100) ..... 69

" average weight of a cubic foot of air ..... 527.4

Cloud, mean amount of, (0-10) ..... 6.4

Ozone, " (0-10) ..... 3.3

Wind, mean direction of North ..... 4.75 days.

" East ..... 0.50

" South ..... 8.00

" West ..... 16.75

" daily horizontal movement ..... 263.9 miles.

" daily force ..... 2.7

Rain, No. of days it fell ..... 13

Amount of rain collected ..... 3.59 inches.

Fog, No. of days it prevailed ..... 7

### OFFICIAL DOCUMENT.

#### Superannuated Teachers' Pension List for 1870.

NAME.	No. of Years Teaching.	\$ cts.
Allan, Thomas.....	18	45 00
Allard, F. X.....	10½	26 00
Aniyot, Claire.....		15 00
Annet, Jean-Marie.....	15	37 00
Bouchard, Adèle.....	11	27 00
Beers, Jonathan.....	7½	18 00
Bouchard, Alexis.....	G4	16 00
Bernard, H. P.....	2	5 00
Béthir, G. P.....	G1	16 00
Badeaux, Delle. E.....	4½	11 00
Beaubien, Reine.....	34	8 00
Butler, Delle. A.....	10½	26 00
Boucher, Louis.....	10½	26 00
Bouffard, Ursule.....	11½	28 00
Buteau, Virginie.....	12½	31 00
Bérubé, Victoire.....	13	32 00
Brisset, Pierre.....	13	32 00
Blanger, Pierre.....	12	30 00
Beaudoin, Ursule.....	14	35 00
Baril, Odile.....	14	35 00
Bonin, Joseph.....	14	35 00
Béliveau, Marguerite.....	14	35 00
Boucher, P.....	4½	11 00
Bernier, Joseph.....	15	37 00
Bourgois, Joseph.....	18	45 00
Bourassa, Pierre.....	18	45 00
Blais, Olivine.....	16	40 00
Blais, Elmire.....	2	5 00
Beauchemin, H. A.....	13	32 00