

# THE CANADIAN ALMANAC,

## FOR THE YEAR 1869.

### Chronological Cycles.

Golden Number.....	8	Dominical Letter .....	C
Epoct.....	17	Roman Indiction .....	12
Solar Cycle .....	2	Julian Period .....	6582

### Epochs.

The year 5630 of the Jewish Era begins Sept. 6 .....	1869	The 33rd of Queen Victoria's Reign begins June 20..	1869
The year 1286 of the Mahometan Era begins April 13	1869	The 94th of the Indep. of the U. S. begins July 4.....	1869

### Fixed and Moveable Festivals and Anniversaries.

Ash Wednesday.....	Feb. 10	Whitsunday.....	May 16
St. David.....	March 1	Birth of Queen Victoria .....	May 24
St. Patrick .....	March 17	Midsummer Day .....	June 24
Lady Day .....	March 25	Michaelmas Day .....	Sept. 29
Easter Sunday .....	March 28	Birth of Prince of Wales .....	Nov. 9
St. George .....	April 23	St. Andrew .....	Nov. 30
Holy Thursday .....	May 6	CHRISTMAS.....	Dec. 25

### Explanation of the Articles of the Calendar.

These pages are calculated for Toronto, Quebec, Fredericton and Halifax, and for ordinary purposes will serve with sufficient accuracy for every city in the Dominion of Canada.

**MOON'S PHASES.**—This Table gives the times for the four meridians when the moon passes the geocentric longitudes of 0°, 90°, 180° and 270° east of the sun. It gives also the times of her greatest and least distance from the earth.

**TWILIGHT.**—In this table are given the times at which twilight begins in the morning and ends in the evening, i. e., the time when the sun's centre is 18° below the horizon.

**GREATEST ELONGATION OF THE POLE STAR.**—This column gives the greatest azimuth of the Pole Star east or west from the meridian as observed at a place in latitude 45°. When the greatest elongation corresponding to any other latitude is required, the number given in the column should be corrected by means of the following table.

Degrees of Latitude.....	42°	43°	44°	45°	46°	47°	48°	49°	50°
1st Correction for Degrees.....	-5' 56"	-4' 5"	-2' 5"	0' 0"	+2' 12"	+4' 32"	+6' 59"	+9' 34"	+12' 18"
2nd Correction for each minute of latitude.....	+ 1.9"	+ 2.0"	+ 2.1"	+ 2.2"	+ 2.3"	+ 2.5"	+ 2.6"	+ 2.7"	

The 1st correction for the degrees of latitude is to be subtracted from the greatest elongation given in the calendar, or added to it, according as the degrees of latitude are less or greater than 45°.

The 2nd correction, which is always additive, is found by multiplying the number given in the third line of the table by the number of minutes in the latitude.

Thus for latitude 43° 20'...1st correction = - 4' 5"	2nd correction + 2.0 × 20 = + 40"
" " 47° 40'... " = + 4' 32"	" " + 2.5 × 40 = + 1' 40"
" " 45° 10'... " = 0' 0"	" " + 2.2 × 10 = + 0' 22"

**THE PLANETS.**—The times of rising and setting of the five chief planets are calculated for Toronto, and are corrected for refraction. The times of culmination, although computed for the meridian of Toronto, will serve approximately for the whole of Canada. The meridian zenith distances, being designed merely to aid in finding the planets, have been given only to the nearest tenth of a degree, as seen from the latitude of 45°.

When the planetary day is shorter than the mean solar day, and commences soon after the midnight of the preceding day, the planet will sometimes arrive a second time on the meridian before the expiration of the actual civil day. From analogous causes a planet will sometimes rise twice or set twice in the same civil day. When two culminations occur in the same day, or two risings or settings, the times of both are registered.

The times of the **SUN'S RISING AND SETTING** are given for the upper limb, and are corrected for refraction for Toronto, Quebec, Fredericton and Halifax.

The civil times both for the rising and setting of the Moon's centre are given for every day for Toronto, Quebec, Fredericton and Halifax.

The column **SUN ON MERIDIAN** gives the time that a watch should shew when the shadow of a sun dial is on the noon mark.

**MOON'S AGE.**—This column shews to the nearest tenth of a day the Moon's age at Toronto Noon.

The column, **MOON ON THE MERIDIAN**, gives the mean time at which the moon's centre passes the meridian of longitude 4 h. 46 m. W. When in the column headed Moon's rising or setting or Moon on meridian the letters A.M. occur, unaccompanied by any number, they denote that the numbers given for the succeeding days relate to the morning, and those for the preceding days to the afternoon, but that the Moon does not rise or set or cross the meridian (as the case may be) on that day.

The **MOON'S MERIDIAN ZENITH DISTANCES** are given to the nearest tenth of a degree for a point in latitude 45° and longitude 4 h. 46 m. W. They are not corrected for parallax or refraction.

The column, **UPPER TRANSIT OF POLE STAR** shews for every day the mean time at which the Pole Star makes its upper transit across the meridian of longitude 4 h. 46 m. W. It passes in the morning from April 9 to October 6, and in the afternoon for the rest of the year. On October 9 there will be a second transit, occurring at 11 h. 56 m. 52 s. p.m.

The six last columns will serve with sufficient accuracy for the whole of Canada.

The times at which the lower transit of the Pole Star occurs may be found by adding 11 h. 58 m. 2 s. to the time of its preceding upper transit.