SMITH'S

PLANETARY 1895 ALMANAC

AND

WEATHER GUIDE

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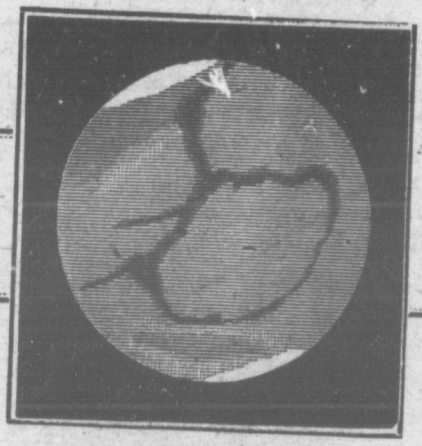
1895



1895

CONTAINING A GENERAL FORECAST FOR THE YEAR; AN OUTLINE SKETCH OF THE WEATHER BY MONTHS; THE

WEATHER FOR EACH WEEK;

A PLANETARY EPHEMERIS CALCULATED TO MONTREAL MEAN TIME; THE STARS IN THEIR SEASONS;

LUNAR INFLUENCE ON VEGETATION,

WITH TABLES FOR SOWING ACCORDING TO IT IN ALL LATITUDES; A LIST OF MOONLIGHT EVENINGS; THE STAR OF BETHLEHEM; COPIOUS ASTRONOMICAL AND METEOROLOGICAL NOTES, ETC.

BY

WALTER H. SMITH.

MONTREAL:
215 PINE AVENUE,
1894.

EIGHTEENTH ANNUAL ADDRESS.

THE faculty of retrospection is as necessary, on occasion, as that of foreknowledge. Believing this, suppose I look backward in this Annual Address. My old friends, are, I know, acquainted with the past life of SMITH'S PLANETARY ALMANAC, but they will, I do not doubt, excuse my talkativeness for the sake of those who have followed after; those who are not familiar with its initial chapter.

It was in 1877 that the predecessor of this publication made its first appearance as *Vennor's Almanac*. That was essentially a weather almanac. Even as such the "probabilities" were far from extensive. No attempt was made to marshal the weather by weeks; and as for the months only a general outline of the first six—January to June—was vouchsafed. The price was twenty cents. It was not until 1882 that the present style of forecasting by weeks (still only for six months) was introduced. A forecast for the whole twelve months was first attempted in 1883.

The writer appeared upon the scene in the 1884 issue, as Associate Editor and general compiler. Additional articles on Astronomy were inserted, but the chief improvement was my "tables for sowing," since extended. These cannot be found in any other work published on this Continent.

On the death of Prof. Vennor in 1884 the work passed into my hands. The issue for 1885 was the last of the *Vennor Almanacs*—eight in all, none published in 1880.

SMITH'S PLANETARY ALMANAC was first issued for 1886, at half-price, ten cents. In it the twelve pages of "Planetary Constellations," facing the Calendar pages, were commenced, since enlarged and improved. The special tabulated Astro-meteorological records and illustrated Astronomical articles began in 1889 with "A Saturnian Solar Record," and "Glimpses of Jupiter"; those notes on the Planets and Satellites, which precede the "General Forecast," began in 1890; and the "Monthly Notes on the Stars" in 1891.

While no new features—for want of space and money—(give me the increased circulation and I will give you the increased attractions) have been added since, care has been taken each year to add to the value and accuracy of the information in each department.

WALTER H. SMITH.

215 PINE AVENUE, MONTREAL.

ASTRONOMICAL AND OTHER NOTES.

[The Calculations in this Almanac are in "Montreal Mean Time," which is 5 min. 43 sec. fast of "Eastern Standard Time."]

FIXED AND MOVABLE FESTIVALS, 1895.

Being the third after Bissextile, or Leap Year, and the 58th-59th of Queen Victoria's Reign, as well as the latter part of the 28th, and the beginning of the 29th year of the Confederation of the Provinces composing the Dominion of Canada.

New Year's Day Circumcision	Jan.	1	Birth of Duke of York, 1865	June	3
Epiphany, Russian New Year	"	6	Trinity Sunday	"	9
Septuagesima Sunday	Feb.	10	Corpus Christi	"	13
Washington's Birthday	"	22	Accession of Queen Victoria, 1837	"	20
Quinquagesima Shrove Sunday	"	24	St John Baptist, Midsummer Day	"	24
Ash Wednesday	"	27	Coronation of Queen Victoria, 1838	"	28
St. David	Mar.	1	St. Peter and St. Paul	"	29
First Sunday in Lent	"	3	Dominion Day	July	1
St. Patrick	"	17	Independence Day	"	4
Mid Lent Sunday	"	24	Labor Day	Sept.	2
Annunciation	"	25	Michaelmas	"	29
Palm Sunday	Apr.	7	Hallowe'en	Oct.	31
Maundy Thursday	"	11	All Saints Day	Nov.	1
Good Friday	"	12	Birth of Prince of Wales, 1841	"	9
Easter Sunday	"	14	St. Andrew	"	30
Low Sunday	"	21	Advent Sunday	Dec.	1
St. George	"	23	Birth of Princess of Wales, 1844	"	1
Rogation Sunday	May	19	Conception B.V.M.	"	8
Ascension Day— Holy Thursday	"	23	St. Thomas	"	21
Birth of Queen Victoria, 1819	"	24	Christmas Day (Wed.)	"	25
Pentecost—Whit-Sunday	June	2			

PRINCIPAL ARTICLES OF THE CALENDAR.

Lunar Cycle or Golden Number	15	Dominical Letter	F
Epact	4	Roman Indiction	8
Solar Cycle	28	Julian Period	6608

LUNAR CYCLE.—Is 235 synodical revolutions of the Moon, =19 years, after which the "New" and "Full" Moons fall again on the same days of the year.

EPACT.—Denotes the age of the Moon on January 1st.

SOLAR CYCLE.—Embraces a period of 28 years, after which the same days of the week recur on the same days of the year.

DOMINICAL LETTER—Is one of the first seven letters in the alphabet, used to represent Sunday.

ROMAN INDICTION.—A cycle of 15 years, said to have been instituted by Constantine in place of the Olympiads.

JULIAN PERIOD—A cycle of 7980 years, dating from 4713, B.C.

CHRONOLOGICAL ERAS.

The first day of January of the year 1895 is the 2,413,195th day since the commencement of, and the 6608th year of the Julian Period.

The year 1895 is the 7403–7404 of the Byzantine Era, the year 7404 commencing on September 1st.

The year 5655–56 of the Jewish Era, the year 5656 commencing on September 19th, or more exactly, at sunset on September 18th.

The year 2648 since the Foundation of Rome, according to VARRO.

The year 2642 since the beginning of the Era of NABONASSAR, which has been assigned to Wednesday, the 26th of February of the 3967th year of the Julian Period; corresponding, in the notation of chronologists. to the 747th; and in the notation of astronomers, to the 746th year before the birth of CHRIST.

The year 2671 of the Olympiads, or the third year of the 668th Olympiad, commencing in July, 1895, if we fix the Era of the Olympiads at 755½ years before CHRIST, or near the beginning of July of the year 3938 of the Julian Period.

The year 2207 of the Grecian Era, or the Era of the Seleucidæ.

The year 1611 of the Era of Diocletian, and the year 2555 of the Japanese Era.

The year 1313 of the Mahommedan Era, or the Era of the Hegira, commences on June 24th, 1895.

The 120th year of the Independence of the United States of America begins on July 4th, 1895.

The 29th year of the Confederation of the Provinces of the Dominion of Canada begins on July 1st, 1895.

The year 1895 is the 403rd–4th since the discovery of America by Columbus, October 12th, 1492.

The 287th–8th since the foundation of Quebec by Champlain in 1608.

The 253rd–4th since the foundation of Montreal by Maisonneuve on May 17th, 1642.

The 129th–30th since the Treaty which confirmed the possession of Canada to the British in 1766.

Commencement of the Seasons.

Montreal Mean Time.

The Sun enters ♈ (0° Longitude) and Spring begins March 20th, at 4h. evening.

The Sun enters ♋ (90° Longitude) and Summer begins June 21st, at 0h. evening.

The Sun enters ♎ (180° Longitude) and Autumn begins September 23rd, at 2h. morning.

The Sun enters ♑ (270° Longitude) and Winter begins December 21st, at 8h. evening.

The Equinoxes happen when Spring and Autumn begin, and the Solstices at the commencement of Summer and Winter.

The Earth is in Perihelion—nearest the Sun—at 7h. 13m. evening on January 2nd, 1895, and in Aphelion—farthest from the Sun—at 11h. evening, on July 1st, 1895.

Signs of the Zodiac.

These are twelve, and given for mean moon at Montreal, in "the Moon" column of each calendar page. They are as follows: ♈ Aries (Head and Face), the Ram; ♉ Taurus (Neck), the Bull; ♊ Gemini (Arms and Shoulders), the Twins; ♋ Cancer (Breast), the Crab; ♌ Leo (Heart), the Lion; ♍ Virgo (Bowels), the Virgin; ♎ Libra (Kidneys and Back), the Balance; ♏ Scorpio (Secrets), the Scorpion; ♐ Sagittarius (Thighs), the Archer; ♑ Capricornus (Knees), the Goat; ♒ Aquarius (Legs), the Water Bearer; and ♓ Pisces (Feet), the Fishes.

ASTRONOMICAL SYMBOLS.

PLANETS.—☉ Sun, ☿ Mercury, ♀ Venus, ⊕ Earth, ☾ Moon, ♂ Mars, ♃ Jupiter, ♄ Saturn, ♅ Uranus, ♆ Neptune.

ECLIPSES.

In the year 1895 there will be five eclipses, three of the Sun (☉) and two of the Moon (☾).

1.—A total Eclipse of the Moon (☾), March 10-11, visible at Montreal. The beginning visible generally in the west of Asia, in Europe, Africa, North and South America; the ending visible in the western portions of Europe and Africa, North and South America, and the Pacific Ocean. Moon enters penumbra, Montreal mean time, 8h. 03m. eve.; enters shadow (beginning of eclipse) 9h. 00m. eve.; total eclipse begins, 9h.57m. eve.; middle of eclipse, 10h.45m. eve.; total eclipse ends, 11h. 33m. eve.; leaves shadow (end of eclipse), 0h. 30m. morn.; leaves penumbra, 1h. 27m. morn. Magnitude of the eclipse, = 1.627 (Moon's diameter, = 1).

2.—A partial Eclipse of the Sun ( ), March 26th, invisible at Montreal. Partially visible in Nova Scotia, New Brunswick, Newfoundland, Iceland, and the British Isles. Greenwich mean time of the Conjunction in Right Ascension, 11h. 36m. 49s. morn. (6h. 42m. morn., Montreal mean time).

3.—A partial Eclipse of the Sun (☉), August 20, invisible at Montreal. Visible in Central and Northern Asia and over the adjacent Arctic Ocean. Greenwich mean time of the Conjunction in Right Ascension, 0h. 1m. 12s.

4.—A total Eclipse of the Moon (☾), September 3-4, visible at Montreal. The beginning visible in the western portions of Europe and Africa, over the Atlantic Ocean, North and South America, and the eastern Pacific Ocean, the ending over the west Atlantic, North and South America, and the Pacific. Moon enters penumbra, Montreal mean time, 9h. 54m. eve.; enters shadow (beginning of eclipse), 11h. 05m. eve.; total eclipse begins, 11h. 12m. eve.; middle of eclipse, 1h. 03m. morn.; total eclipse ends, 1h. 43m. morn.; leaves shadow (end of eclipse), 3h. 0m. morn.; leaves penumbra, 4h. 12m. morn. Magnitude of the eclipse, = 1.557 (Moon's diameter, = 1).

5.—A partial Eclipse of the Sun (⊙) September 18, invisible at Montreal. Visible over New Zealand, Eastern Australia, and Tasmania. Greenwich mean time of the Conjunction in Right Ascension, 9h. 49m. 19s.

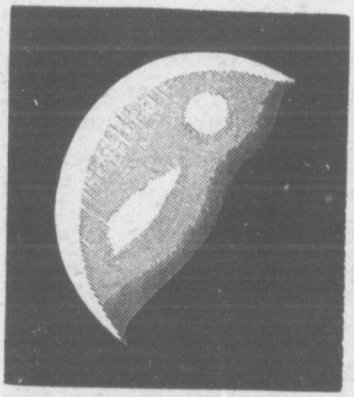
MERCURY (☿) 1895.

Those who wish to see this sparkling little gem of a Planet should look for him about the time of his "elongagations." As a "Morning Star," when elongated west of the Sun, as an "Evening Star," when elongated east of the Sun, as follows :—

"MORNING STAR."			"EVENING STAR."		
Mar. 24,	Elongated West,	27° 48′	Feb. 9,	Elongated East,	18° 11′
July 22,	,, ,,	20° 01′	June 4,	,, ,,	23° 45′
Nov. 10,	,, ,,	19° 10′	Oct. 1,	,, ,,	25° 44′

The next transit of Mercury over the disc of the Sun will occur on November 4th, 1901.

VENUS (♀) 1895.



Venus, February 15th, 1889, at 7h. 10m., Montreal time. (Drawn by the Author.)

This planet, at the beginning of 1895, is an "Evening Star." She reaches greatest Elongation East of the Sun of 45° 31′ on July 11th. On September 19th she passes Inferior Conjunction (between the Earth and Sun), becoming a "Morning Star." On November 29th she reaches her farthest point West of the Sun in the Morning Sky, when elongated 46° 47′ West. She draws near the Sun as the year closes.

[For descriptive illustrated article, see "Views of Venus," in SMITH'S PLANETARY ALMANAC for 1890, price 12 cents, post-paid.]

MOONLIGHT EVENINGS OF 1895.

January.—From the 4th to the 11th.
February.—From the 2nd up to the 10th.
March.—Beginning on the 4th and lasting until the 12th.
April.—Between the 2nd and the 10th.

May.—From the 1st until the 9th.

June.—Beginning on the 1st and ending on the 8th; also from the 28th to the end of the month.

July.—From the 1st to the 7th and from the 28th to the close.

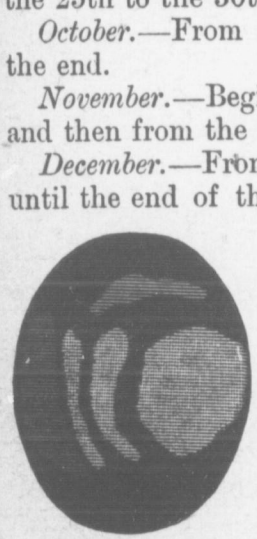
August.—Beginning on the 1st and lasting until the 6th; again from the 26th to the 31st.

September.—From the beginning until the 5th and from the 25th to the 30th.

October.—From the 1st to the 5th and from the 24th to the end.

November.—Beginning on the 1st, lasting until the 4th, and then from the 23rd to the close.

December.—From the 1st to the 3rd and from the 23rd until the end of the year.



Mars, July 27, 1888, drawn by Prof. Holden, at the Lick Observatory, with the Great Telescope. (Reproduced from *The Astronomical Journal*, Vol. VIII., No. 13.)

MARS (♂), 1895.

This planet will not be conspicuous during the year. He is an "Evening Star" until October 11th, losing lustre from the beginning of the year. Becoming a "Morning Star" on that date he will not be noticeable during the closing months of 1895. His apparent disc will vary from 0.888 in January to 1.000 in October.

[For descriptive illustrated article, see "Markings on Mars," in SMITH'S PLANETARY ALMANAC for 1892, price 12 cents, post-paid.]

THE ASTEROIDS.

The little Asteroid VICTORIA (12) has been made use of to further determine the mean distance of the earth from the Sun. The work was begun in 1889, and has been very thorough; involving the co-operation of twenty-one observatories in the determination, with the aid of Meridian circles and reference stars, of the track of the little "Queen" planet. Observers at the Cape of Good Hope; New Haven, Conn.; Gottingen, Germany; and Bamberg, also proceeded to obtain measurements with heliometers, said measurements ranking amongst the most accurate in astronomical annals.

The reductions occupied nearly three years, Dr. Gill finally reporting the Solar parallax 8″.809, corresponding to a distance of 92,800,000 miles from the Sun to the Earth.

JUPITER'S (4) SATELLITES, 1895.

The innermost Satellite of Jupiter in the Lick telescope has been a perplexing study. When seen with the sky as a back-ground it appears round. In transit over the primary, between Jupiter and the Earth, the Satellite looked as if it was formed of two bodies, with a perceptible inter-space. Sometimes it became a single object, egg-shaped, elongated in a direction perpendicular to that in which the two bodies had been seen separately.

Careful observation has revealed the cause. The Satellite is a globe, but around its polar regions there exists caps of dark color, in contradistinction to the bright poles of the Earth and Mars. Between these polar tracts Prof. Barnard reports an equatorial zone of bright white. Now the dark poles of the Satellite are the same color as the dark parts of Jupiter, the bright parts of the Satellite the same as the bright parts of Jupiter. Consequently, when the Satellite

Jupiter, August 5th, 1888, at 8h. 45m., Montreal time. (Drawn by the Author.)

crosses a bright part of its primary, its brilliant zone is not seen, it being projected upon a background of the same luminosity, while the two dark polar regions are seen plainly —dark blotches, like a double Satellite.

On the other hand, when the Satellite is crossing a dark portion of Jupiter its polar regions become invisible, the bright equatorial belt growing conspicuous, thus giving the Satellite its elongated appearance. When the Satellite

passes over its own shadow on the planet it assumes its normal appearance.

The four larger Satellites are invisible in the smallest telescopes from January 1st to June 11th and from August 8th to the end of the year.

The Satellites' mean synodic periods, or times of revolution:

Satellite.	*Time of Revolution.*
Barnard's (V)	0d. 11h. 59m. 00s.
Io (I)	1d. 18h. 28m. 36s.
Europa (II)	3d. 13h. 17m. 53s.
Ganymede (III)	7d. 3h. 59m. 36s.
Calisto (IV)	16d. 18h. 5m. 7s.

[For descriptive illustrated article, see "Glimpses of Jupiter," in Smith's Planetary Almanac for 1889, price 12 cents post-paid].

SATURN'S (♄) SATELLITES, 1895.

These will be in position for observation from January 1st to about August 10th. Their mean synodic periods are:

Satellite.	*Time of Revolution.*
Mimas (I)	0d. 22.6h.
Enceladus (II)	1d. 8.9h.
Tethys (III)	1d. 21.3h.
Dione (IV)	2d. 17.7h.
Rhea (V)	4d. 12.4h.
Titan (VI)	15d. 23.3h.
Hyperion (VII)	21d. 7.8h.
Japetus (VIII)	79d. 22.0h.

URANUS' (♅) SATELLITES, 1895.

The planet of Herschel is at Opposition, May 8th. The Satellites may be seen in powerful telescopes during April and May. Their apparent distances from the Planet on May 8th are: Ariel, 15.″0; Umbriel, 20.″8; Titania, 34.″2; and Oberon, 45.″7.

Satellite.	*Time of Revolution.*
Ariel (I)	2d. 12.48h.
Umbriel (II)	4d. 3.46h.
Titania (III)	8d. 16.94h.
Oberon (IV)	13d. 11.11h.

[For a description of Uranus and Satellites see Smith's Planetary Almanac for 1894; price, 12 cents, post-paid.]

NEPTUNE'S (♆) SATELLITE, 1895.

The planet of Adams and Le Verrier reaches Opposition on December 8th. Its Satellite has a period of 5d. 21.04h. The Satellites apparent distance from the Planet, on December 8th, 1895, is 17″

GENERAL FORECAST, 1895.

"In the Spring and the autumn, statistics teach us to expect suicide epidemics—the change is unsettling. Of course, some people are much more susceptible to atmospheric changes than others; but more people are susceptible than would themselves suppose it to be the case."—*Black and White*, Sept. 19th, 1894.

Of course, those who disbelieve in atmospheric and other outside influences will take no stock in the above remark. They will prefer to remain wise in their own conceit. The remark is, however, perfectly true. The changes of the atmosphere are intimately related to not only suicide, but nearly everything that happens. All who have watched the sick must have noticed the effects of the weather upon critical cases. More than one medical man has called my attention to this, one even suggesting that I print a "Doctor's Page" giving days on which the weather is expected to be more or less favorable to sick persons, and operations. I may in future issues.

But to my forecast. Since writing the last, it has been my aim to keep foot and eye firmly and calmly upon the "arduous and rough" but still "ineffable and sublime" path of predictive science. I have tried to keep company with nature, to make the stars of midnight dearer and dearer, as well as to study with an increasing confidence and insight the influences of Sun, planets and constellations. Such pursuits have, I trust, kept me watchful and humble.

The theory of the physical action of Sun and planets upon the earth and its atmosphere has not wanted abundant confirmation the past year. Hurricanes have swept across the disk of the Sun and Jupiter—the least of which would have levelled every city on this Continent, and wrecked all the navies of the Earth beside. Their answering effects have been felt here in storms of great severity and extreme drought. Even from within the Arctic Circle have come reports of an unusual season—one of the severest for years. Who among us but will always remember the awful forest fires of 1894 in Minnesota? The West India hurricane season has also been severe, while the diminution of our

water supply—owing to continued drought—has been a cause for care. This diminution is no small question, now that so much of the surplus water of the earth has been absorbed into its interior. A far more serious matter to us, than to those aboriginal inhabitants who saw the Great Slave Lake connected with Lake Superior and the Great Salt Lakes of the far West still fresh and sparkling with river outlets to the ocean. For surface water means evaporation, evaporation rain and snow, while upon rain and snow depends agriculture, and upon that—the whole community.

From general features we descend to particulars. What have been the characteristics of 1894—especially at Montreal and within say a radius of five hundred miles? A January with a temperature a little above the mean and a light snow fall; a dry, cold February; a halcyon March, more like April or early May; an April, warm, advanced, but dry; a balmy May, with copious showers; a hot, rainy June; a hot and dry July; a cool, dry August; followed by a warm, dry September ushering in an October which promises plenty of rain.

Now let us turn to the records of similar years. Perhaps they will indicate by what followed, the weather which is in store for us. In 1887 and 1894 we had had a warm May, in 1887, 1892, and 1894 a warm June, a hot, very dry July; and a cool August (very dry also in 1887 and 1894), and a dry, average temperature September.

The winters that followed (of 1888 and 1893) gave us an excessively cold January, with less than an average snow-fall; a cold February with an average snow-fall and an average March, but on the dry side, especially in 1893. The Aprils were cold and dry; the Mays cool and backward; the weather leaping suddenly from April into June in the latter month, which in both years was much more like July than June, in fact, June '93 was hotter than July. August in 1888 and 1893 was excessively wet, with about twice the usual precipitation in this section. Both Septembers were cool, more like October than September, with some severe frosts.

While it would be ridiculous for me to assert that a simple knowledge of the characteristics of a few past seasons is sufficient stock in trade for successful weather prognosti-

vation, it is still a fact worth remembering that a knowledge of past weather is one of the essentials towards successful forecasting. Unless we know what weather followed this conjunction or that position in the past, it is impossible to tell what is likely to happen when such recur. It is also a valuable asset to have two strings to one's bow. In fact, I usually test my forecasts by several systems. If they disagree, I modify, to suit, accepting only the most certain. But when they agree, I have no hesitation in putting them forth in detail. They agree this time.

First, then, I look for a considerable amount of rain, sleet and snow before Winter actually sets in. The extended drought has to be broken, and broken it will be. Something akin to saturation has to occur to compensate for the dry time through which we have passed. But about the time the Sun reaches the Southern Solstice Winter will finally assert its sway. The storm tracks will by that time have got well to the Southward and cold weather will prevail. Will it then be very cold? Read on.

JANUARY.

A cold, stormy month. Piercing winds, disastrous gales, heavy drifts, snow blockades. I have in my mind's eye as I write the Januaries of 1888 and 1893. The first gave us a mean temperature at Montreal, the lowest for over twenty years, the second came very near doing the same. The inevitable "mild spells" or "January thaws" will be emphasized by the disagreeable accompaniment of rain and fog. Fog will be prevalent on the Atlantic Coast during the month. Tornadoes are likely to occur in the Southern States and disastrous storms over the Atlantic Ocean.

FEBRUARY.

This month will give us more "weather"—if that be possible—than its predecessor. Its mild spells will be productive of abundant snows and rains, conducing to floods. Its cold terms will yield some wild storms. Contrary to its usual "dry cold" character, February will prove an essentially stormy month. A round dozen "general storm periods," are likely to traverse the Lake region and the St. Lawrence

Valley within its twenty-eight days, or, say a fresh storm about every third day. Of thirteen major aspects occurring within the twenty-eight days, twelve are storm producers.

MARCH.

A month of contrasts. Not the halcyon March of 1894, but an ordinary March as far as storms go; with heavy snowfalls in the fore part and some mild, balmy Spring weather in the latter part, intermixed with a good deal of precipitation. Tornadoes in South Western sections.

APRIL.

A stormy, cool, dry, unsettled, backward April. Heavy fogs on Atlantic seaboard. An occasional tornado South.

MAY.

Windy, cool and backward. Bleak air, rapid changes from heat to cold, from thunder storms (tornadoes south) to frosts.

JUNE.

A Summer-like, advanced month. A jump into hot weather all at once. Warm and moist with strong winds. A very favorable June. Temperature above the average in Northern sections.

JULY.

A showery July. Temperature above the average. Plenty of electrical disturbances with a couple of the inevitable cool reactions.

AUGUST.

A rainy, steamy month, with severe thunder and an excess of tornadic action. Precipitation above the average in Canada and the Northern States. Frosts should be watched for in the North West, where "smudges" are likely to be needed, if the wheat-crop, (a plentiful one) is to be harvested uninjured.

SEPTEMBER.

Rainy, windy and cold, for September. Early frosts. Considerable small rain and fog on the Atlantic Coast, Gulf, and Lakes. Severe storms in proximity to the equinox.

OCTOBER.

Considerable precipitation. More than the usual amount of rain, wind and snow for October, with early and killing frosts. Some brief periods of balmy "Indian Summer."

NOVEMBER.

A very stormy November. Early snows, severe and heavy rains, and probably an early setting in of Winter in Canada and the Northern States. At least one marked spell of "Indian Summer" with warm air and perhaps a thunder storm.

DECEMBER.

A stormy month. Some heavy snowfalls and relapses from cold to rainy weather with thick fogs (especially on Atlantic Coast). Spells of very low temperature intermixed are probable.

WALTER H. SMITH.

MONTREAL, *October* 11th, 1894.

EXTREMES OF TEMPERATURE.

DOMINION OF CANADA, 1893.

The highest temperature of the year 1893 for the whole Dominion was recorded at Chaplin, N.W.T.: 109° on August 6th.

The lowest temperature of the year 1893 for the whole Dominion was recorded at Prince Albert, Saskatchewan :— 70°.4 (below zero) on February 1st.

Absolute range for the Dominion for the year 1893 : 179°.4.

[It is noticeable that the same place and date (Prince Albert, February 1st) gave the lowest readings of 1893 and 1891.]

UNITED STATES, 1892.

The highest temperature of the year 1892 for the whole United States was recorded at Volcano Springs, California: 124°.

The lowest temperature of the year 1892 for the whole United States was recorded at Willow City, North Dakota:— 52° (below zero).

[Absolute range for the United States for 1892:—176°.]

[United States returns for 1893 have not reached me yet.]

1st Month, 1895.
31 Days.

JANUARY.

☉ enters ♒
20d. 2h. mo.

Moon's Phases	Day.	BOSTON.	MONTREAL.	WASHINGTON	CHICAGO.	WINNIPEG.
☽ F.Q.	4	3.11 mo.	2.57 mo.	2.44 mo.	2.02 mo.	1.24 mo.
☻ F.M.	10	2.09 ev.	1.55 ev.	1.42 ev.	1.00 ev.	0.22 ev.
☾ L.Q.	17	6.14 ev.	6.00 ev.	5.47 ev.	5.05 ev.	4.27 ev.
● N.M.	25	4.45 ev.	4.31 ev.	4.18 ev.	3.36 ev.	2.58 ev.

DAYS. M.	DAYS. W.	WEATHER FORECAST.	MONTREAL. THE SUN Slow.	Rises.	Sets.	THE MOON Zod.	Souths.
			M.	H. M.	H. M.		H. M.
1	Tu.	**NEW YEAR'S DAY.** Opens	4	7 42	4 27	♓	Eve.
2	We.	moderate, changing to snow in Northern	4	7 41	4 28	♓	4 58
3	Th.	and Eastern sections, sleet and rain S.—	5	7 41	4 29	♈	5 38
4	Fr.	Considerable wind and bluster—Cold at	5	7 41	4 30	♈	6 20
5	Sat.	end of week (very cold in North-West).	6	7 40	4 31	♈	7 06
		(1) Epiphany. (Day's length, 8h. 52m.) ☿ in ♑					
6	Su.	Fine and cold, extreme weather in N.W.;	6	7 40	4 32	♉	7 56
7	Mo.	a "dip" general about 6th and 7th—Mod-	6	7 40	4 33	♉	8 52
8	Tu.	erating to mild, with snows and rains in	7	7 39	4 34	♊	9 54
9	We.	Canada, N. Y. and New England—Foggy	7	7 39	4 35	♊	11 00
10	Th.	on Atlantic coast; unseasonable mild	8	7 39	4 36	♋	Morn
11	Fr.	weather—Fine—Windy and unsettled, with	8	7 38	4 37	♌	0 07
12	Sat.	snows or rains.	9	7 38	4 38	♌	1 10
		(2) 1st Sunday after Epiphany. (Day's length, 9h. 03m.) ♀ in ♑					
13	Su.	Drifts and cold weather, a severe "dip,"	9	7 37	4 40	♍	2 09
14	Mo.	some very low temperatures recorded;	9	7 37	4 41	♍	3 03
15	Tu.	brilliant winter weather—Rising tempera-	10	7 36	4 42	♍	3 52
16	We.	tures and generally heavy snowfalls, with	10	7 36	4 43	♎	4 40
17	Th.	drifts and bluster; a "mild" storm period	10	7 35	4 44	♎	5 27
18	Fr.	—Cloudy and squally E., cold weather W.	11	7 35	4 46	♏	6 13
19	Sat.		11	7 34	4 48	♏	7 02
		(3) 2nd Sunday after Epiphany. (Day's length, 9h. 16m.) ♂ in ♈					
20	Su.	Very cold in N. W. sections, with snow	11	7 33	4 49	♐	7 52
21	Mo.	blockades; cold weather extending E.,	12	7 32	4 51	♐	8 44
22	Tu.	a "dip" general, some low thermometer	12	7 31	4 52	♐	9 37
23	We.	readings—Moderating to snow, some severe	12	7 30	4 54	♑	10 29
24	Th.	storms, bluster and drifts, with heavy	12	7 29	4 55	♑	11 20
25	Fr.	**Conversion of St. Paul.**	13	7 28	4 56	♒	Eve.
26	Sat.	gales on Atlantic seaboard.	13	7 27	4 57	♒	0 54
		(4) 3rd Sunday after Epiphany. (Day's length, 9h. 32m.) ♃ in ♓					
27	Su.	Storms continue—Fine and cold, a brief	13	7 26	4 58	♓	1 36
28	Mo.	"dip"—Moderating, with snows, rains and	13	7 25	4 59	♓	2 17
29	Tu.	fogs (Very foggy on Atlantic coast); a	13	7 24	5 01	♓	2 57
30	We.	general thaw in E. sections.	14	7 23	5 03	♈	3 36
31	Th.		14	7 22	5 04	♈	4 16

In this month the Mornings increase 20 min. and the Afternoons 37 min.

PLANETS IN JANUARY, 1895.

MONTREAL MEAN TIME.

*ON MERIDIAN (SOUTH).	Jan. 1st.	Jan. 8th.	Jan. 16th.	Jan. 24th.
Mercury .... ☿	11 42 mo.	0 04 ev.	0 30 ev.	0 54 ev.
Venus ..... ♀	0 37 ev.	0 47 ev.	0 58 ev.	1 07 ev.
Mars ..... ♂	7 09 ev.	6 50 ev.	6 32 ev.	6 16 ev.
Jupiter ..... ♃	11 13 ev.	10 42 ev.	10 06 ev.	9 32 ev.
Saturn ..... ♄	7 34 mo.	7 07 mo.	6 38 mo.	6 08 mo.
Uranus ..... ♅	8 22 mo.	7 56 mo.	7 26 mo.	6 55 mo.
Neptune .... ♆	10 03 ev.	9 35 ev.	9 03 ev.	8 31 ev.

[* Planets "Southing" between noon and midnight are "Evening stars"; planets "Southing" between midnight and noon are "Morning stars." The time of "Southing" is the time at which a heavenly body passes the meridian, and is so called because it is then due South. It is then also at its greatest altitude above the horizon.]

THE PLANETS.—MERCURY is in Conjunction with the Sun (Superior) on the 9th at 10h. ev. VENUS is in Aphelion (farthest from the Sun) on the 8th at 5h. mo. SATURN is in Quadrature (90° from the Sun and overhead at 6h. mo.) on the 26th at 9h. ev.

THE MOON.—Is near Mars on the 5th at 3h. 09m. ev.; passes Neptune on the 8th at 3h. 18m. ev.; close to Jupiter on the 9th at 3h. 15m. ev.; in Conjunction with Saturn on the 18th at 2h. 15m, ev.; near the place of Uranus on the 19th at 0h. 40m. ev.; is 1½° S. of Mercury on the 26th at 4h. 58m. ev.; and 1° 21′ S. of Venus the same evening at 10h. 03m.

PERIGEE: 11th, 7h. 15m. ev.; APOGEE: 26th, 0h. 13m. ev.

THE STARS.—[Commenced in 1891 issue. Under this head, it is my intention to continue each year, until the whole visible star sphere has been briefly described. In no case will a Constellation, Group, Cluster, or Star be twice dealt with. Students should, therefore, preserve back numbers.]

Auriga, or "the Charioteer," is situated between *Perseus* and *Lynx*, above *Taurus* and *Orion*. Its mean Declination being 45° N, it is directly overhead at Montreal when on the Meridian. It contains 66 visible stars, one of the 1st (*Capella*) and one of the 2nd (*Menkalina*) magnitude. *Capella* is a fine Star with two companions; *Menkalina* a bright Star with one companion.

2nd Month, 1895. 28 Days.

FEBRUARY.

☉ enters ♓ 18d. 4h. ev.

Moon's Phases	Day.	BOSTON.	MONTREAL.	WASHINGTON	CHICAGO.	WINNIPEG.
☽ F.Q.	2	7.35 ev.	7.21 ev.	7.08 ev.	6.26 ev.	5.48 ev.
○ F.M.	9	0.42 ev.	0.28 ev.	0.15 ev.	11.33 mo.	10.55 mo.
☾ L.Q.	16	8.27 mo.	8.13 mo.	8.00 mo.	7.18 mo.	6.40 mo.
● N.M.	24	0.02 ev.	11.48 mo.	11.35 mo.	10.53 mo.	10.15 mo.

DAYS. M.	DAYS. W.	WEATHER FORECAST.	MONTREAL. THE SUN Sh w. Rises.	Sets.	THE MOON Zod. Souths.
			M. H. M.	H. M.	H. M.
1	Fr.	Rains continue in E. sections; floods prob-	14 7 21	5 06	♈ Eve.
2	Sat.	**CANDLEMAS.** able; colder in W.	14 7 20	5 08	♉ 5 46
		(5) 4th Sunday after Epiphany. (Day's length, 9h. 50m.) ♄ in ♒			
3	Su.		14 7 19	5 09	♉ 6 38
4	Mo.	Cold again, a general freeze up—Moder-	14 7 18	5 11	♊ 7 35
5	Tu.	ating, with mild to warm weather, sleet	14 7 17	5 12	♊ 8 37
6	We.	N., rain S., and strong wind—Fine and	14 7 16	5 14	♋ 9 42
7	Th.	cold—Stormy and unsettled in Canada and	14 7 14	5 15	♋ 10 47
8	Fr.	N. States, with snows and rains.	14 7 13	5 17	♌ 11 49
9	Sat.		14 7 12	5 18	♌ Morn
		(6) Septuagesima Sunday. (Day's length, 10h. 09m.) ♅ in ♎			
10	Su.	Mild for the season, with some heavy	14 7 10	5 19	♍ 0 46
11	Mo.	snow and rain (floods probable), tornadoes	14 7 09	5 21	♍ 1 39
12	Tu.	in February tornado sections (S. and S.W.)	14 7 07	5 22	♎ 2 29
13	We.	—Fine, cold weather—Stormy, unsettled,	14 7 06	5 24	♎ 3 18
14	Th.	**ST. VALENTINE.**	14 7 04	5 25	♏ 4 06
15	Fr.	drifts and bluster, cold, dark weather	14 7 02	5 27	♏ 4 56
16	Sat.	(very cold in N.W.)	14 7 01	5 28	♏ 5 47
		(7) Sexagesima Sunday. (Day's length, 10h. 31m.) ♆ in ♐			
17	Su.	Cold wave from W. to E., a February	14 6 59	5 30	♐ 6 39
18	Mo.	"dip," with extreme temperatures about	14 6 58	5 31	♐ 7 32
19	Tu.	17th-19th—Milder, especially in E., with	14 6 56	5 33	♑ 8 25
20	We.	rains (fogs on Atlantic coast) about 20th-	14 6 54	5 34	♑ 9 17
21	Th.	21st—Stormy, drifts, bluster and cold	14 6 53	5 36	♒ 10 05
22	Fr.	**Washington born, 1732.**	14 6 51	5 37	♒ 10 52
23	Sat.	weather.	13 6 50	5 39	♒ 11 35
		(8) Quinquagesima Sunday. (Day's length, 10h. 52m.) ☿ in ♓			
24	Su.	Cold and storms continue, with some	13 6 48	5 40	♓ Eve.
25	Mo.	heavy snowfalls in Northern sections and	13 6 47	5 41	♓ 0 56
26	Tu.	**SHROVE TUESDAY.**	13 6 45	5 43	♈ 1 36
27	We.	**ASH WEDNESDAY.**	13 6 44	5 45	♈ 2 16
28	Th.	cold rains south—Month ends fine.	13 6 43	5 46	♈ 2 58

In this month the Mornings increase 38 min. and the Afternoons 40 min.

The Moon's place is given in the Zodiac "Sign" for the convenience of farmers and gardeners. The places of the planets refer to the Zodiacal "Constellations."

PLANETS IN FEBRUARY, 1895.

MONTREAL MEAN TIME.

ON MERIDIAN (SOUTH).	Feb. 1st.	Feb. 8th.	Feb. 16th.	Feb. 24th.
Mercury ..... ☿	1 15 ev.	1 23 ev.	1 05 ev.	0 12 ev.
Venus ..... ♀	1 15 ev.	1 21 ev.	1 26 ev.	1 31 ev.
Mars ..... ♂	6 00 ev.	5 47 ev.	5 33 ev.	5 20 ev.
Jupiter ..... ♃	8 58 ev.	8 29 ev.	7 56 ev.	7 25 ev.
Saturn ..... ♄	5 37 mo.	5 09 mo.	4 38 mo.	4 06 mo.
Uranus ..... ♅	6 24 mo.	5 56 mo.	5 25 mo.	4 54 mo.
Neptune ..... ♆	7 59 ev.	7 31 ev.	7 02 ev.	6 28 ev.

THE PLANETS.—MERCURY is in Conjunction (35′ N.) with Venus on the 1st at 8h. mo.; at Greatest Elongation East (18° 11′) on the 9th at 1h. ev., when he is visible after sunset in the West; in Conjunction with Venus once more at 8h. mo., on the 10th; in Perihelion at 10h. ev. on that day; Stationary on the 15th at 10h. mo.; and in Inferior Conjunction with the Sun on the 25th at 2h. mo. MARS is 90° from the Sun (Quadrature) on the 5th at 7h. ev. when he is overhead at 6h. ev. JUPITER is Stationary on the 20th at 0h. mo. SATURN is Stationary on the 15th at 0h. mo. URANUS, 90° from the Sun (overhead at 6h. mo.) on the 8th at 3h. ev., and Stationary on the 22nd at 9h. ev.

THE MOON.—Is near Mars on the 2nd at 11h. 54m. ev.; Neptune on the 5th at 0h. 36m. mo.; Jupiter the same day at 10h. 12m. ev.; Saturn on the 14th at 10h. 49m. ev.; Uranus on the 15th at 8h. 22m. ev.; Mercury on the 24th at 10h. 15m. mo.; and Venus on the 26th at 11h. 32m. mo.

PERIGEE: 9th, 8h. 19m. mo.; APOGEE: 22nd, 1h. 55m. ev.

THE STARS.—The insignificant looking Constellation of *Monoceros*, "the Unicorn," is favorably placed in February. It is between *Canis Major* and *Canis Minor*, contains 31 small Stars, 7 being of the fourth magnitude. It is rich in Groups and Clusters. A triple Star discovered by Herschel in 1781, will be found in R.A. 6h. 23m., Dec. 6° 57′ S. It is one of the most beautiful sights in the heavens. "B" is supposed to circulate around "A" in 17,000, and "C" around "B" in 1,000 years. "A" is white, "B" and "C" are pale white.

3rd Month, 1895.
31 Days.

MARCH.

☉ enters ♈
20d. 4h. ev.

Moon's Phases	Day.	BOSTON.	MONTREAL.	WASHINGTON	CHICAGO.	WINNIPEG.
☽ F.Q.	4	7.47 mo.	7.33 mo.	7.20 mo.	6.38 mo.	6.00 mo.
○ F.M.	10	10.57 ev.	10.43 ev.	10.30 ev.	9.48 ev.	9.10 ev.
☾ L.Q.	17-18	0.50 mo.	0.36 mo.	0.23 mo.	11.41 ev.	11.03 ev.
● N.M.	26	5.43 mo.	5.29 mo.	5.16 mo.	4.34 mo.	3.56 mo.

DAYS. M.	DAYS. W.	WEATHER FORECAST.	MONTREAL. THE SUN Slow.	Rises.	Sets.	THE MOON Zod.	Souths.
			M.	H. M.	H. M.		H. M.
1	Fr.	**ST. DAVID.** Enters fine—Indica-	12	6 41	5 48	♉	Eve.
2	Sat.	tions of stormy weather.	12	6 39	5 49	♉	4 32
		(9) Quadragesima Sunday. (Day's length, 11h. 13m.) ♀ in ♓					
3	Su.	Stormy, unsettled, with snow N.W. and E.	12	6 37	5 50	♊	5 26
4	Mo.	and rain S.—Fine; a March cold spell, with	12	6 35	5 51	♊	6 24
5	Tu.	zero readings in Canada, the Northern and	12	6 33	5 53	♋	7 26
6	We.	North-western States — Moderating to	11	6 31	5 54	♋	8 28
7	Th.	mild, with snow N., rain S., and high wind.	11	6 29	5 55	♌	9 30
8	Fr.		11	6 27	5 57	♌	10 28
9	Sat.		11	6 25	5 58	♍	11 22
		(10) 2nd Sunday in Lent. (Day's length, 11h. 37m.) ♂ in ♉					
10	Su.	Quite mild for the season; a general	10	6 23	6 00	♍	Morn
11	Mo.	break-up in many sections, with rain and	10	6 21	6 01	♍	0 14
12	Tu.	sleet—Colder, with snow N. and E., and	10	6 19	6 02	♎	1 04
13	We.	gales on Atlantic seaboard—Fine weather	10	6 17	6 03	♎	1 54
14	Th.	generally—Cloudy and squally, scattered	9	6 15	6 04	♏	2 44
15	Fr.	storms.	9	6 13	6 06	♏	3 36
16	Sat.		9	6 11	6 07	♐	4 30
		(11) 3rd Sunday in Lent. (Day's length, 11h. 59m.) ♃ in ♉					
17	Su.	**ST. PATRICK.** Fine, milder,	8	6 09	6 08	♐	5 24
18	Mo.	quite a Spring-like change, with pleasant	8	6 07	6 10	♑	6 18
19	Tu.	breezes, perhaps thunder-showers in sec-	8	6 06	6 11	♑	7 11
20	We.	tions—Colder, with drifts and bluster in	8	6 04	6 13	♒	8 01
21	Th.	N. sections, rains in S.—Unsettled and	7	6 02	6 14	♒	8 49
22	Fr.	very cold in Canada and Northern States.	7	6 00	6 15	♒	9 33
23	Sat.		7	5 58	6 16	♓	10 14
		(12) 4th Sunday in Lent. (Day's length, 12h. 22m.) ♄ in ♍					
24	Su.	Snow, sleet or rain, according to lati-	6	5 56	6 18	♓	10 55
25	Mo.	**ANNUNCIATION.**	6	5 54	6 19	♓	11 35
26	Tu.	tude—A mild change to Spring-like; a	6	5 52	6 20	♈	Eve.
27	We.	spell of very fine weather—Stormy again,	5	5 50	6 21	♈	0 57
28	Th.	with rain and strong wind.	5	5 48	6 23	♉	1 41
29	Fr.		5	5 47	6 24	♉	2 29
30	Sat.		4	5 45	6 26	♉	3 21
		(13) 5th Sunday in Lent. (Day's length, 12h. 44m.) ♅ in ♎					
31	Su.	Ends mild and "lamb-like."	4	5 43	6 27	♊	4 18

In this month the Mornings increase 38 min. and the Afternoons 39 min.

PLANETS IN MARCH, 1895.

MONTREAL MEAN TIME.

ON MERIDIAN (SOUTH).	Mar. 1st.	Mar. 8th.	Mar. 16th.	Mar. 24th.
Mercury ..... ☿	11 34 mo.	10 53 mo.	10 30 mo.	10 25 mo.
Venus ..... ♀	1 34 ev.	1 38 ev.	1 42 ev.	1 47 ev.
Mars ..... ♂	5 12 ev.	5 01 ev.	4 49 ev.	4 38 ev.
Jupiter ..... ♃	7 06 ev.	6 40 ev.	6 11 ev.	5 42 ev.
Saturn ..... ♄	3 46 mo.	3 18 mo.	2 45 mo.	2 12 mo.
Uranus ..... ♅	4 34 mo.	4 06 mo.	3 34 mo.	3 02 mo.
Neptune ..... ♆	6 09 ev.	5 42 ev.	5 11 ev.	4 40 ev.

THE PLANETS.—MERCURY is Stationary on the 9th at 9h. mo.; at Greatest Elongation West (27° 48′) on the 24th at 4h. mo.; and in Aphelion on the 26th at 9h. ev. MARS and Neptune are in Conjunction (Mars passing 3° N.) on the 25th at 2h. mo. JUPITER is 90° from the Sun (Quadrature) and overhead at 6h. ev.; on the 18th at 0h. mo. NEPTUNE is 90° from the Sun (and overhead at 6h. ev.); on the 3rd at 3h. ev.

THE MOON.—Is near Mars on the 3rd at 10h. 16m. mo.; Neptune on the 4th at 8h. 02m. mo.; Jupiter on the 5th at 6h. 25m. mo.; Saturn on the 14th at 7h. 15m. mo.; Uranus on the 15th at 4h. 53m. mo.; Mercury on the 23rd 4h. 57m. ev.; Venus on the 28th at 6h. 43m. ev.; Neptune on the 31st at 2h. 17m. ev.; and Mars at 8h. 40m. on the same evening.

PERIGEE: 9th, 7h. 30m. ev.; APOGEE: 22nd, 1h. 40m. mo.; ECLIPSED: 10-11th (see page 11).

THE STARS.—*Argo Navis*, now well-placed, has some interesting Clusters and Nebulæ. In R.A. 7h. 31m., Dec. S. 14° 12′, is a grand broad group, visible to the unaided eye, with some 5th or 6th magnitude Stars. A fiery 5th magnitude star leads the region. In R.A. 7h. 36m., Dec. S. 14° 32′, is a beautiful circular cloud of small stars; well seen with low powers and a wide field. A feeble nebulæ, on its north verge, becomes under high powers an astonishing and very interesting object. The Earl of Rosse has seen it annular or ring-shaped, so also has Buffham, even with a nine-inch reflector.

4th Month, 1895. 30 Days.

APRIL.

● ☉ enters ♉ 20d. 3h. mo.

Moon's Phases	Day.	BOSTON.	MONTREAL.	WASHINGTON	CHICAGO.	WINNIPEG.
☽ F.Q.	2	4.47 ev.	4.33 ev.	4.20 ev.	3.28 ev.	3.00 ev.
☻ F.M.	9	9.02 mo.	8.48 mo.	8.35 mo.	7.53 mo.	7.15 mo.
☾ L.Q.	16	6.41 ev.	6.27 ev.	6.14 ev.	5.32 ev.	4.54 ev.
● N.M.	24	8.30 ev.	8.16 ev.	8.03 ev.	7.21 ev.	6.43 ev.

DAYS. M.	DAYS. W.	WEATHER FORECAST.	MONTREAL. THE SUN Slow.	Rises.	Sets.	THE MOON Zod.	Souths.
			M.	H. M.	H. M.		H. M.
1	Mo.	Opens cloudy and mild—Fine, colder,	4	5 41	6 28	♊	Eve.
2	Tu.	with frosts in Northern and Eastern sec-	4	5 40	6 29	♋	6 19
3	We.	tions, cool weather in South—Generally	3	5 38	6 31	♋	7 19
4	Th.	warm, fine weather, interspersed with	3	5 36	6 32	♌	8 16
5	Fr.	April showers.	3	5 34	6 33	♌	9 10
6	Sat.		2	5 32	6 34	♍	10 01
(14)		**Palm Sunday.** (Day's length, 13h. 05m.) ☿ in ♓					
7	Su.	Warm, perhaps quite hot for the season;	2	5 30	6 35	♍	10 50
8	Mo.	fine growing weather, with showers—	2	5 28	6 37	♎	11 40
9	Tu.	Colder, rain and wind, quite changeable,	2	5 26	6 38	♎	Morn
10	We.	with some sudden squalls—Fine weather	1	5 24	6 39	♏	0 30
11	Th.	**GOOD FRIDAY.**	1	5 22	6 40	♏	1 22
12	Fr.	at end of week.	1	5 20	6 42	♐	2 16
13	Sat.		0	5 19	6 43	♐	3 11
(15)		**Easter Sunday.** (Day's length, 13h. 28m.) ♀ in ♉					
14	Su.	Fine April weather—Windy, cool and	fast	5 17	6 45	♐	4 07
15	Mo.	unsettled, showery, some snow and sleet	0	5 15	6 46	♑	5 02
16	Tu.	in Northern sections—A cool to cold term	0	5 13	6 47	♑	5 54
17	We.	about 18th-19th, with sharp frosts—	1	5 11	6 48	♒	6 43
18	Th.	Milder, with scattered showers.	1	5 10	6 50	♒	7 28
19	Fr.		1	5 08	6 51	♓	8 11
20	Sat.		1	5 07	6 52	♓	8 52
(16)		**Low Sunday.** (Day's length, 13h. 48m.) ♂ in □					
21	Su.	Warm, favorable Spring weather about	1	5 05	6 53	♓	9 32
22	Mo.	21st-23rd—A general cold storm period,	2	5 03	6 54	♈	10 12
23	Tu.	**ST. GEORGE.**	2	5 02	6 56	♈	10 53
24	We.	with rain or sleet, according to latitude;	2	5 00	6 57	♈	11 37
25	Th.	**ST. MARK.**	2	4 59	6 58	♉	Eve.
26	Fr.	thick clouds and turbulent air, with thun-	2	4 57	6 59	♉	1 16
27	Sat.	der-storms S. and S.W.—Showery and mild.	2	4 56	7 01	♊	2 12
(17)		**2nd Sunday after Easter.** (Day's length, 14h. 08m.) ♃ in □					
28	Su.	Fine, warm weather—Close of month	3	4 54	7 02	♊	3 12
29	Mo.	stormy, with rain (tornadoes probable).	3	4 52	7 04	♋	4 13
30	Tu.		3	4 50	7 05	♋	5 13

In this month the Mornings increase 51 min. and the Afternoons 37 min.

PLANETS IN APRIL, 1895.

MONTREAL MEAN TIME.

ON MERIDIAN (SOUTH).	April 1st.	April 8th.	April 16th.	April 24th.
Mercury..... ☿	10 30 mo.	10 40 mo.	10 55 mo.	11 17 mo.
Venus..... ♀	1 53 ev.	1 59 ev.	2 07 ev.	2 15 ev.
Mars..... ♂	4 27 ev.	4 17 ev.	4 07 ev.	3 56 ev.
Jupiter ..... ♃	5 14 ev.	4 52 ev.	4 25 ev.	3 59 ev.
Saturn ..... ♄	1 39 mo.	1 10 mo.	0 36 mo.	0 02 mo.
Uranus..... ♅	2 30 mo.	1 59 mo.	1 29 mo.	0 56 mo.
Neptune..... ♆	4 09 ev.	3 43 ev.	3 12 ev.	2 42 ev.

THE PLANETS.—VENUS is 3° N. of NEPTUNE on the 29th at 6h. ev, and in Perihelion on the 30th at 1h. ev. MARS and JUPITER are in Conjunction (Mars 1° 27′ N.) on the 25th at 9h. ev. SATURN is at Opposition to the Sun (overhead at Midnight) on the 24th at 4h. mo.

THE MOON.—Is near Jupiter on the 1st at 4h. 15m. ev.; Saturn on the 10th at 2h. 47m. ev.; Uranus on the 11th at 1h. 32m. ev.; Mercury on the 23rd at 11h. 53m. ev.; Venus on the 27th at 5h. 05m. ev.; Neptune on the 27th at 9h. 10m. ev.; Jupiter on the 29th at 4h. 32m. mo.; and Mars the same morning at 7h. 01m.

PERIGEE: 6th, 11h. 37m. ev.; APOGEE: 18th, 7h. 50m. ev.

THE STARS.—In *Leo Major*, R.A. 9h. 41m, Dec. 11° 59′ N., is a variable double Star, which changes from the 5th and 6th to the 9th and 10th magnitudes every 312 days. It is a fiery star, very red in all its stages of brightness, is a fine telescopic object on nights when the Moon is absent, and forms a very striking contrast with a white 6th magnitude Star a little to the North. In R.A. 11h. 14m., Dec. 13° 39′ N. (same Constellation), are two faint Nebulæ elongated in different directions and well seen in a low power telescope, along with several stars. Also, in R.A. 10h. 42m., Dec. 13° 16′ N., are two additional faint Nebulæ. Herschel describes a third, making with the other two a right-angled triangle. In R.A. 10h. 59m., Dec. 0° 37′ N., is a large elongated Nebulæ with a stellar nucleus.

5th Month, 1895.
31 Days.

MAY.

☉ enters ♉
21d. 2h. mo.

Moon's Phases	Day.	BOSTON.	MONTREAL.	WASHINGTON	CHICAGO.	WINNIPEG.
☽ F.Q.	1	11.03 ev.	10.49 ev.	10.36 ev.	9.54 ev.	9.16 ev.
○ F.M.	8	7.17 ev.	7.03 ev.	6.50 ev.	6.08 ev.	5.30 ev.
☾ L.Q.	16	1.03 ev.	0.49 ev.	0.36 ev.	11.54 mo.	11.16 mo.
● N.M.	24	8.05 mo.	7.51 mo.	7.38 mo.	6.56 mo.	6.18 mo.
☽ F.Q.	31	4.07 mo.	3.53 mo.	3.40 mo.	2.58 mo.	2.20 mo.

DAYS. M.	DAYS. W.	WEATHER FORECAST.	MONTREAL. THE SUN Fast. M.	Rises. H. M.	Sets. H. M.	THE MOON Zod.	Souths. H. M.
1	We.	**MAY DAY.** Opens cloudy and	3	4 49	7 06	♌	Eve.
2	Th.	showery—Fine and Spring-like, quite	3	4 47	7 07	♌	7 04
3	Fr.	warm for the season in N. sections, hot	3	4 46	7 09	♍	7 55
4	Sat.	weather in S. and S.W.	3	4 44	7 10	♍	8 43
		(18) 3rd Sunday after Easter. (Day's length, 14h. 28m.) ♄ in ♍					
5	Su.	Cool, with rain and high wind; an un-	3	4 43	7 11	♎	9 30
6	Mo.	settled period—Fine and warmer, quite	4	4 42	7 12	♎	10 19
7	Tu.	hot again—Rapid changes (tornadoes	4	4 40	7 13	♎	11 09
8	We.	probable), a cold storm period, with rain	4	4 39	7 14	♏	Morn
9	Th.	and sharp night frosts, especially in N.	4	4 37	7 16	♏	0 02
10	Fr.	sections—Fine weather.	4	4 36	7 17	♐	0 57
11	Sat.		4	4 35	7 18	♐	1 53
		(19) 4th Sunday after Easter. (Day's length, 14h. 45m.) ♅ in ♎					
12	Su.	Fine, warm and Summer-like; smoky	4	4 34	7 19	♑	2 50
13	Mo.	and hot, with bush fires—A rainy	4	4 33	7 21	♑	3 44
14	Tu.	spell, quite cool for the season (frosts	4	4 31	7 22	♒	4 35
15	We.	probable about 16th-17th—Fine growing	4	4 30	7 23	♒	5 22
16	Th.	**Montreal founded, 1642.**	4	4 29	7 24	♒	6 06
17	Fr.	weather at end of week.	4	4 28	7 25	♓	6 48
18	Sat.		4	4 27	7 26	♓	7 27
		(20) Rogation Sunday. (Day's length, 15h. 01m.) ☿ in ♉					
19	Su.	Windy, variable and unsettled, a cool to	4	4 26	7 27	♈	8 07
20	Mo.	cold rainy spell—Fine, warm and Summer-	4	4 25	7 28	♈	8 47
21	Tu.	like weather—Cooler, with rains at end	4	4 24	7 29	♈	9 30
22	We.	**ASCENSION DAY.**	4	4 23	7 30	♉	10 16
23	Th.	**Queen Victoria born, 1819.**	3	4 22	7 31	♉	11 07
24	Fr.	of week.	3	4 21	7 32	♊	Eve.
25	Sat.		3	4 20	7 33	♊	1 02
		(21) Sunday after Ascension. (Day's length, 15h. 15m.) ♀ in ♊					
26	Su.	Cloudy and rainy, some thunder and	3	4 19	7 34	♋	2 05
27	Mo.	hail storms—Fine and warm; a hot spell;	3	4 19	7 35	♋	3 07
28	Tu.	extreme temperatures for May; very warm	3	4 18	7 36	♌	4 06
29	We.	**DECORATION DAY.**	3	4 18	7 37	♌	5 01
30	Th.	and unsettled, with damaging storms.	3	4 17	7 38	♍	5 52
31	Fr.		3	4 16	7 39	♍	6 40

In this month the Mornings increase 33 min. and the Afternoons 33 min.

PLANETS IN MAY, 1895.

MONTREAL MEAN TIME.

ON MERIDIAN (SOUTH).	May 1st.	May 8th.	May 16th.	May 24th.
Mercury .... ☿	11 42 mo.	0 13 ev.	0 51 ev.	1 22 ev.
Venus ..... ♀	2 23 ev.	2 32 ev.	2 42 ev.	2 51 ev.
Mars ..... ♂	3 47 ev.	3 38 ev.	3 28 ev.	3 17 ev.
Jupiter ..... ♃	3 37 ev.	3 15 ev.	2 50 ev.	2 26 ev.
Saturn ..... ♄	11 29 ev.	10 59 ev.	10 25 ev.	9 52 ev.
Uranus ..... ♅	0 27 mo.	11 55 ev.	11 22 ev.	10 49 ev.
Neptune .... ♆	2 15 ev.	1 48 ev.	1 18 ev.	0 48 ev.

THE PLANETS.—MERCURY is in Superior Conjunction with the Sun on the 4th at 7h. ev.; in Perihelion on the 9th at 9h. ev.; and in Conjunction with Neptune on the 19th at 7h. ev. VENUS is 2° 5′ N. of Jupiter on the 18th at 11h. mo. URANUS reaches Opposition to the Sun on the 8th at 1h. ev., when he is overhead at midnight.

THE MOON.—Is near Saturn on the 7th at 8h. 40m. ev.. Uranus at 9h. 09m. ev. on the 8th; Neptune on the 25th at 5h. 58m. mo.; Mercury at 10h. 49m. ev., the same day; Jupiter on the 26th at 7h. 47m. ev.; Venus on the 27th at 10h. 04m. mo,; and Mars the same evening at 6h. 05m.

PERIGEE: 4th, 4h. 55m. mo.; APOGEE: 16th, 2h. 55m. ev.; PERIGEE: 29th, 5h. 35m. mo.

THE STARS.—*Corvus*, "the Crow," is a small Constellation East of *Hydra*, on the same Meridian as *Coma Berenices* and consequently well seen on May evenings. It contains several conspicuous Stars. It is readily distinguished by means of three Stars of the 3rd magnitude and one of the 4th, forming an irregular square, the two upper ones about $3\frac{1}{2}°$ apart, the two lower about 6° apart. *Beta* is a fine ruddy yellow Star between two distant companions. It has no Arabic name, but is actually the brightest Star of the Constellation. *Delta* is also a double Star, its components being light yellow and purple. Gould says that both *Beta* and *Delta* are variable, and expresses his belief that a very large proportion of the fixed Stars (at least one-half above the seventh magnitude) fluctuate in brightness. Change, and that ceaseless, is evidently the rule throughout the Universe.

6th Month, 1895.
30 Days.

JUNE.

☉ enters ♋
21d. 0h. ev.

Moon's Phases	Day.	BOSTON.	MONTREAL.	WASHINGTON	CHICAGO.	WINNIPEG.
☺ F.M.	7	6.19 mo.	6.05 mo.	5.52 mo.	5.10 mo.	4.32 mo.
☾ L.Q.	15	6.46 mo.	6.32 mo.	6.19 mo.	5.37 mo.	4.59 mo.
● N.M.	22	5.09 ev.	4.55 ev.	4.42 ev.	4.00 ev.	3.22 ev.
☽ F.Q.	29	9.19 mo.	9.05 mo.	8.52 mo.	8.10 mo.	7.32 mo.

DAYS. M.	DAYS. W.	WEATHER FORECAST.	MONTREAL. THE SUN Fast.	Rises.	Sets.	THE MOON Zod.	Souths.
			M.	H. M.	H. M.		H. M.
1	Sat.	Fine, warm and windy weather.	2	4 16	7 40	♍	Eve.
(22) Whit Sunday (Pentecost). (Day's length, 15h. 26m.) ♂ in □							
2	Su.	Warm and windy, with local showers	2	4 15	7 41	♎	8 14
3	Mo.	and thunder (hot in Mar. and N.W.)—A	2	4 14	7 42	♎	9 03
4	Tu.	general storm period, rainy and windy,	2	4 14	7 43	♏	9 54
5	We.	with some sudden squalls and disastrous	2	4 13	7 44	♏	10 47
6	Th.	thunder showers (tornadoes and hail	2	4 13	7 45	♐	11 42
7	Fr.	probable).	1	4 12	7 45	♐	Morn
8	Sat.	Henry G. Vennor died, 1884.	1	4 12	7 46	♑	0 38
(23) Trinity Sunday. (Day's length, 15h. 34m.) ♃ in □							
9	Su.	Fine Summer weather, crops advancing	1	4 12	7 46	♑	1 34
10	Mo.	rapidly; quite hot—Changeable, with rain	1	4 11	7 47	♒	2 26
11	Tu.	ST. BARNABAS.	1	4 11	7 47	♒	3 15
12	We.	and wind, especially in Eastern sections—	0	4 11	7 48	♒	4 00
13	Th.	CORPUS CHRISTI.	0	4 11	7 48	♓	4 43
14	Fr.	Quite cool about 13th; frosts probable in	slo'	4 11	7 49	♓	5 23
15	Sat.	Summer frost sections—Fine weather.	0	4 11	7 49	♓	6 02
(24) 1st Sunday after Trinity. (Day's length, 15h. 39m.) ♄ in ♍							
16	Su.	Fine Summer weather—Some wind and	0	4 11	7 50	♈	6 42
17	Mo.	rain—Warm to hot; a heated term; very	1	4 11	7 50	♈	7 23
18	Tu.	high temperatures, ending in heavy thun-	1	4 11	7 51	♉	8 07
19	We.	der (tornadoes probable), high winds, rain	1	4 11	7 51	♉	8 55
20	Th.	Accession Queen Victoria.	1	4 11	7 51	♉	9 48
21	Fr.	and hail storms.	2	4 11	7 51	♊	10 47
22	Sat.		2	4 12	7 52	♊	11 49
(25) 2nd Sunday after Trinity. (Day's length, 15h. 40m.) ♅ in ♎							
23	Su.	A cool to very cool period for June	2	4 12	7 52	♋	Eve.
24	Mo.	ST. JOHN BAPTIST.—MID-	2	4 12	7 52	♌	1 55
25	Tu.	(frosts probable in Summer [SUMMER DAY.	2	4 13	7 52	♌	2 53
26	We.	frost sections)—Fine and warm—Hot to	3	4 13	7 52	♌	3 47
27	Th.	sultry, with strong winds, thunder and	3	4 14	7 52	♍	4 37
28	Fr.	hail—Fine Summer weather.	3	4 14	7 52	♍	5 25
29	Sat.	ST. PETER and ST. PAUL.	3	4 15	7 52	♎	6 12
(26) 3rd Sunday after Trinity. (Day's length, 15h. 36m.) ♆ in ♐							
30	Su.	Fine Summer weather.	3	4 15	7 51	♎	7 00

In this month the Mornings decrease 1 min. and the Afternoons increase 11 min.

PLANETS IN JUNE, 1895.

MONTREAL MEAN TIME.

ON MERIDIAN (SOUTH).	June 1st.	June 8th.	June 16th.	June 24th.
Mercury ..... ☿	1 39 ev.	1 40 ev.	1 23 ev.	0 45 ev.
Venus ..... ♀	2 59 ev.	3 05 ev.	3 09 ev.	3 11 ev.
Mars ..... ♂	3 07 ev.	2 57 ev.	2 46 ev.	2 35 ev.
Jupiter ..... ♃	2 01 ev.	1 40 ev.	1 16 ev.	0 52 ev.
Saturn ..... ♄	9 19 ev.	8 50 ev.	8 18 ev.	7 45 ev.
Uranus ..... ♅	10 16 ev.	9 48 ev.	9 15 ev.	8 43 ev.
Neptune ..... ♆	0 18 ev.	11 52 mo.	11 21 mo.	10 51 mo.

THE PLANETS.—MERCURY reaches Greatest Elongation E. of the Sun of 23° 45′ on the 4th at 5h. ev., when he is visible for a few evenings as an Evening Star in the West; is only 47′ N. of Jupiter on the 8th at 10h. mo.; is Stationary on the 18th at 1h. mo.; in Conjunction with Jupiter for the second time on the 21st at 9h. ev., when he is 2° 34′ S. of his giant brother; and in Aphelion on the 22nd at 9h. ev. VENUS is only 58′ N. of Mars on the 5th at 5h. mo. NEPTUNE is in Conjunction with the Sun on the 6th at 7h. mo., when he becomes a "Morning Star."

THE MOON.—Is near Saturn on the 4th at 1h. 03m. mo.; Uranus at 3h. 01m. mo. on the 5th; Neptune on the 21st at 4h. 38m. ev.; Mercury on the 23rd at 0h. 19m. ev.; Jupiter the same day at 1h. 48m. ev.; Mars on the 25th at 6h. 22m. mo.; and Venus the same day at 11h. 16m. ev.

APOGEE: 13th, 9h. 15m. mo.; PERIGEE: 25th, 6h. 20m. mo.

THE STARS.—*Bootes*, "the Bear Driver," is well-placed during the evenings of June. Its brightest Star (*Arcturus*) has already been described (1893). *Bootes* is represented by the figure of a huntsman, running, grasping a club in one hand, a leash of greyhounds in the other, and ever pursuing the Great Bear (*Ursa Major*) around the Pole. The Constellation contains fifty-four visible Stars, including one of the 1st, seven of the 3rd and ten of the 4th magnitudes. It is situated between *Corona Borealis* on the East and *Cor Caroli* on the West.

7th Month, 1895. 31 Days.

JULY.

☉ enters ♌ 22d. 9h. ev.

Moon's Phases	Day.	BOSTON.	MONTREAL.	WASHINGTON	CHICAGO.	WINNIPEG.
☺ F. M.	6	6.47 ev.	6.33 ev.	6.20 ev.	5.38 ev.	5.00 ev.
☾ L.Q.	14	10.50 ev.	10.36 ev.	10.23 ev.	9.41 ev.	9.03 ev.
● N. M.	21-22	0.50 mo.	0.36 mo.	0.23 mo.	11.41 mo.	11.03 ev.
☽ F.Q.	23	3.54 ev.	3.40 ev.	3.27 ev.	2.45 ev.	2.07 ev.

DAYS. M.	DAYS. W.	WEATHER FORECAST.	MONTREAL. THE SUN Slow. Rises.	THE SUN Sets.	THE MOON Zod. Souths.
			M. H. M.	H. M.	H. M.
1	Mo.	**DOMINION DAY.** Changeable,	4	4 16	7 51	♍ Eve.
2	Tu.	windy and cool for the season, with local	4	4 16	7 51	♍ 8 41
3	We.	rains—Fine and hot to sultry weather,	4	4 17	7 51	♎ 9 35
4	Th.	**INDEPENDENCE DAY.**	4	4 17	7 50	♎ 10 30
5	Fr.	with thunder and hail storms—Cool, fine	4	4 18	7 50	♎ 11 26
6	Sat.	weather at close of week.	4	4 18	7 49	♏ Morn
(27) 4th Sunday after Trinity. (Day's length, 15h. 30m.) ☿ in □						
7	Su.	Fine Summer weather—A heated term;	5	4 19	7 49	♏ 0 19
8	Mo.	high temperatures recorded, with damaging	5	4 19	7 48	♒ 1 09
9	Tu.	electrical storms—A cool reaction about	5	4 20	7 48	♒ 1 56
10	We.	11th-12th, with some dashing rains (frosts	5	4 21	7 47	♓ 2 39
11	Th.	probable in Summer frost sections)—Cool	5	4 22	7 47	♓ 3 20
12	Fr.	and windy.	5	4 23	7 46	♓ 3 59
13	Sat.		5	4 24	7 46	♈ 4 38
(28) 5th Sunday after Trinity. (Day's length, 15h. 20m.) ♀ in ♌						
14	Su.	Fine, warm to hot Summer weather—	6	4 25	7 45	♈ 5 18
15	Mo.	**ST. SWITHIN.**	6	4 26	7 44	♈ 6 00
16	Tu.	Some showers and thunder about 17th-	6	4 27	7 43	♉ 6 45
17	We.	18th—Fine weather, but somewhat cool	6	4 28	7 42	♉ 7 35
18	Th.	for July.	6	4 29	7 41	♊ 8 30
19	Fr.		6	4 30	7 40	♊ 9 30
20	Sat.		6	4 31	7 39	♋ 10 34
(29) 6th Sunday after Trinity. (Day's length, 15h. 06m.) ♂ in ♌						
21	Su.	Fine Summer weather—A heated term,	6	4 32	7 38	♋ 11 37
22	Mo.	with dangerous winds, thunder and hail	6	4 33	7 37	♌ Eve.
23	Tu.		6	4 34	7 36	♌ 1 36
24	We.	**Canada visited by Cartier, 1534.**	6	4 35	7 35	♍ 2 29
25	Th.	**ST JAMES.**	6	4 36	7 34	♍ 3 20
26	Fr.	storms—Cool and showery (very cool for	6	4 37	7 33	♎ 4 08
27	Sat.	the season)—Fine weather.	6	4 38	7 32	♎ 4 57
(30) 7th Sunday after Trinity. (Day's length, 14h. 52m.) ♃ in □						
28	Su.	Fine, with some scattered showers and	6	4 39	7 31	♍ 5 46
29	Mo.	considerable cloudiness—Month ends fine	6	4 40	7 30	♍ 6 37
30	Tu.	and warm.	6	4 41	7 29	♍ 7 31
31	We.		6	4 42	7 28	♐ 8 25

In this month the Mornings decrease 26 min. and the Afternoons 23 min.

PLANETS IN JULY, 1895.

MONTREAL MEAN TIME.

ON MERIDIAN (SOUTH.)	July 1st.	July 8th.	July 16th.	July 24th.
Mercury .... ☿	0 01 ev.	11 19 mo.	10 48 mo.	10 41 mo.
Venus ..... ♀	3 12 ev.	3 10 ev.	3 06 ev.	2 59 ev.
Mars ..... ♂	2 25 ev.	2 15 ev.	2 03 ev.	1 50 ev.
Jupiter ..... ♃	0 32 ev.	0 11 ev.	11 47 mo.	11 23 mo.
Saturn ..... ♄	7 18 ev.	6 50 ev.	6 19 ev.	5 48 ev.
Uranus ..... ♅	8 15 ev.	7 47 ev.	7 15 ev.	6 44 ev.
Neptune .... ♆	10 24 mo.	9 58 mo.	9 27 mo.	8 57 mo.

THE PLANETS.—MERCURY is in Conjunction with the Sun (Inferior) on the 1st at 9h. mo.: is Stationary on the 12th at noon; and at Greatest Elongation W. of 20° 1′ on the 22nd at 5h. ev., about which date he is visible prior to Sunrise in the Morning Sky. VENUS, very beautiful, hangs her silver lamp 45° 31′ East of the Sun on the 10th, when she is radiant in the Evening Sky. MARS is in Aphelion on the 5th at 2h. mo. JUPITER reaches Conjunction with the Sun on the 10th at 8h. mo., when he becomes a "Morning Star." SATURN is Stationary on the 4th at 11h. ev.; and in Quadrature (90° from the Sun) on the 23rd at 8h. ev., when he is overhead at 6h. ev. URANUS is Stationary on the 24th at 11h. ev.

THE MOON.—Is near Saturn on the 1st at 5h. 28m. mo.; Uranus on the 2nd at 7h. 45m. mo.; Neptune on the 19th at 4h. 08m. mo.; Mercury on the 20th at 1h. 43m. ev.; Jupiter on the 21st at 9h. 39m. mo.; Mars on the 23rd at 8h. 47m. ev.: Venus on the 25th at 4h. 55m. mo.; Saturn on the 28th at 0h. 01m. ev.; and Uranus on the 29th at 0h. 59m. ev.

APOGEE: 11th, 2h. mo.; PERIGEE: 23rd, 7h. 30m. mo.

THE STARS.—*Antares* or *Alpha Scorpii*, the "Scorpion's Heart," is one of the finest Stars that grace our summer evening skies. R.A. 16h. 22m., Dec. 26° 10′ S. It is a grand telescopic object, is "double," its companion being of the 8th magnitude of a green hue. *Antares* itself is yellow, with flashes of deep crimson color. The companion is very close and difficult to see, owing to its being involved in the other's rays.

8th Month, 1895.
31 Days.

AUGUST.

☉ enters ♍
23d. 4h. mo.

Moon's Phases	Day.	BOSTON.	MONTREAL.	WASHINGTON	CHICAGO.	WINNIPEG.
○ F.M.	5	9.10 mo.	8.56 mo.	8.43 mo.	8.01 mo.	7.23 mo.
☾ L.Q.	13	0.37 ev.	0.23 ev.	0.10 ev.	11.28 mo.	10.50 mo.
● N.M.	20	8.14 mo.	8.00 mo.	7.47 mo.	7.05 mo.	6.27 mo.
☽ F.Q.	26-27	1.02 mo.	0.48 mo.	0.35 mo.	11.53 ev.	11.15 ev.

DAYS. M.	DAYS. W.	WEATHER FORECAST.	MONTREAL. THE SUN Slow.	Rises.	Sets.	THE MOON Zod.	Souths.
			M.	H. M.	H. M.		H. M.
1	Th.	**LAMMAS DAY.** Changeable,	6	4 43	7 27	♐	Eve.
2	Fr.	with wind—Hot weather, with thunder and	6	4 45	7 26	♑	10 14
3	Sat.	hail storms.	6	4 46	7 25	♑	11 05
(31) 8th Sunday after Trinity. (Day's length, 14h. 37m.) ♄ in ♍							
4	Su.	Fine, hot weather; very hot to sultry,	6	4 47	7 24	♒	11 53
5	Mo.	with damaging thunder storms (tornadoes	6	4 48	7 23	♒	Morn
6	Tu.	probable) about 5th-6th—A cool to "cold"	6	4 50	7 21	♒	0 37
7	We.	reaction about 7th-8th (an anxious time in	6	4 51	7 19	♓	1 18
8	Th.	N.W.) frosts probable—Cloudy and squally	5	4 52	7 18	♓	1 58
9	Fr.	—Fine.	5	4 53	7 16	♈	2 37
10	Sat.	**ST. LAWRENCE.**	5	4 54	7 14	♈	3 16
(32) 9th Sunday after Trinity. (Day's length, 14h. 17m.) ☿ in ♋							
11	Su.		5	4 56	7 13	♈	3 56
12	Mo.	Fine, warm to hot Summer weather, E.	5	4 57	7 11	♉	4 39
13	Tu.		5	4 58	7 09	♉	5 26
14	We.	and W.—Windy and unsettled, with rains	4	4 59	7 08	♊	6 17
15	Th.	**ASSUMPTION B.V.M.**	4	5 00	7 07	♊	7 14
16	Fr.		4	5 02	7 06	♋	8 14
17	Sat.	and cooler weather at close of week.	4	5 03	7 04	♋	9 17
(33) 10th Sunday after Trinity. (Day's length, 13h. 58m.) ♀ in ♍							
18	Su.	Fine and cool for season; auroras (and	4	5 04	7 02	♌	10 19
19	Mo.	frosts in N.W.) probable—Fine, hot, sultry	3	5 05	7 00	♌	11 19
20	Tu.	weather, with thunder (tornadoes prob-	3	5 06	6 58	♍	Eve.
21	We.	able) and rapid changes of temperature—	3	5 08	6 56	♍	1 07
22	Th.	Cool and windy—Week ends cool, with	3	5 09	6 54	♍	1 58
23	Fr.	scattered showers.	2	5 10	6 52	♎	2 49
24	Sat.	**ST. BARTHOLOMEW.**	2	5 11	6 51	♎	3 39
(34) 11th Sunday after Trinity. (Day's length, 13h. 37m.) ♂ in ♌							
25	Su.		2	5 12	6 49	♍	4 31
26	Mo.	Fine, but cloudy and cool—Warmer,	2	5 14	6 48	♏	5 25
27	Tu.		1	5 15	6 46	♐	6 21
28	We.	with thunder showers—Fine, warm Sum-	1	5 16	6 44	♐	7 16
29	Th.		1	5 17	6 42	♑	8 10
30	Fr.	mer weather.	0	5 18	6 41	♑	9 02
31	Sat.		0	5 20	6 40	♒	9 50

In this month the Mornings decrease 37 min. and the Afternoons 47 min.

PLANETS IN AUGUST, 1895.

MONTREAL MEAN TIME.

ON MERIDIAN (SOUTH).	Aug. 1st.	Aug. 8th.	Aug. 16th.	Aug. 24th.
Mercury ..... ☿	10 58 mo.	11 27 mo.	0 02 ev.	0 30 ev.
Venus ..... ♀	2 49 ev.	2 37 ev.	2 18 ev.	1 53 ev.
Mars ..... ♂	1 38 ev.	1 27 ev.	1 15 ev.	1 02 ev.
Jupiter ..... ♃	10 59 mo.	10 38 mo.	10 14 mo.	9 49 mo.
Saturn ..... ♄	5 18 ev.	4 52 ev.	4 22 ev.	3 53 ev.
Uranus ..... ♅	6 13 ev.	5 46 ev.	5 15 ev.	4 44 ev.
Neptune ..... ♆	8 26 mo.	8 00 mo.	7 29 mo.	6 58 mo.

THE PLANETS.—MERCURY opens the month with a Conjunction of JUPITER on the 1st at noon, when he is 9° S. of the five mooned Planet; he is in Perihelion on the 5th at 8h. ev.; and in Superior Conjunction with the Sun on the 17th at 2h. ev. VENUS is in Aphelion on the 21st at 11h. ev., and Stationary on the 26th at 7h. ev. URANUS is 90° from the Sun on the 8th at 2h. ev., when he is overhead at 6h. ev.

THE MOON.—Is near Neptune on the 15th at 2h. 42m. ev.; Jupiter on the 18th at 5h. 53m. mo.; Mercury on the 20th at 1h. 27m. ev.; Mars on the 21st at 0h. 49m. ev.; Venus on the 22nd at 2h. 45m. ev.; Saturn on the 24th at 10h. 05m. ev.; and Uranus on the 25th at 8h. 22m. ev.

APOGEE: 7th, 2h. 25m. ev.; PERIGEE: 20th, 3h. 50m. ev.

THE STARS.—*Lyra*, the "Harp," is well placed in the evenings of August, between the "Swan" and "Hercules." It is impossible to mistake it, owing to its chief Star *Vega* (described in the 1893 issue). *Lyra* is full of beautiful Star-fields. *Epsilon*, R.A. 18h. 40m., Dec. 39° 33′ N., is "double-double," that is, it has four components, each two a fine binary pair. One pair revolves in about 2,000 years, the other in half that time, and probably both pairs about a common centre of gravity in about 1,000,000 years. Between them are three smaller Stars, one of the 9th and two of the 13th magnitudes. There are also six other extremely faint Star-points in this group, which is one of the wonders of the heavens. It can be well seen in a three-inch telescope.

9th Month, 1895. 30 Days.

SEPTEMBER.

☉ enters ♎ 23d. 2h. mo.

Moon's Phases	Day.	BOSTON.	MONTREAL.	WASHINGTON	CHICAGO.	WINNIPEG.
☻ F.M.	3-4	1.14 mo.	1.00 mo.	0.47 mo.	0.05 mo.	11.27 ev.
☾ L.Q.	11-12	0.09 mo.	11.55 ev.	11.42 ev.	11.00 ev.	10.22 ev.
● N.M.	18	4.14 ev.	4.00 ev.	3.47 ev.	3.05 ev.	2.27 ev.
☽ F.Q.	25	1.41 ev.	1.27 ev.	1.14 ev.	0.32 ev.	11.54 mo

DAYS. M.	DAYS. W.	WEATHER FORECAST.	MONTREAL. THE SUN Fast.	THE SUN Rises.	THE SUN Sets.	THE MOON Zod.	THE MOON Souths.
(35) 12th Sunday after Trinity. (Day's length, 13h. 18m.) ♃ in ♎			M.	H. M.	H. M.		H. M.
1	Su.	Warm to hot weather, some thunder and	0	5 21	6 39	♒	Eve.
2	Mo.	**LABOR DAY.**	0	5 22	6 37	♒	11 17
3	Tu.	hail—A cool reaction about 3rd-4th (frosts	1	5 23	6 35	♓	11 58
4	We.	probable in N.W. and other Summer frost	1	5 24	6 33	♓	Morn
5	Th.	sections)—Cloudy and rainy, with fogs and	1	5 26	6 31	♓	0 37
6	Fr.	mists on Atlantic coast—Fine weather.	2	5 27	6 29	♈	1 15
7	Sat.		2	5 28	6 27	♈	1 55
(36) 13th Sunday after Trinity. (Day's length, 12h. 56m.) ♄ in ♍							
8	Su.		2	5 29	6 25	♉	2 37
9	Mo.	Showery and windy, considerable rain;	3	5 30	6 23	♉	3 22
10	Tu.	a generally unsettled period, with cool	3	5 32	6 22	♉	4 11
11	We.	rains (fogs on Atlantic seaboard)—Fine	3	5 33	6 20	♊	5 04
12	Th.	weather at close of week.	4	5 34	6 18	♊	6 01
13	Fr.		4	5 35	6 16	♋	7 02
14	Sat.		5	5 36	6 14	♋	8 02
(37) 14th Sunday after Trinity. (Day's length, 12h. 34m.) ♅ in ♎							
15	Su.	Fine, some clouds—A warm to hot spell	5	5 38	6 12	♌	9 01
16	Mo.	for September, with thunder and wind	5	5 39	6 10	♌	9 58
17	Tu.	storms—A cool to cold reactionary storm	6	5 40	6 08	♍	10 52
18	We.	period, with rain and wind storms and	6	5 41	6 06	♍	11 43
19	Th.	frosts.	6	5 42	6 04	♎	Eve.
20	Fr.		7	5 44	6 02	♎	1 26
21	Sat.	**ST. MATTHEW.**	7	5 45	6 00	♏	2 19
(38) 15th Sunday after Trinity. (Day's length, 12h. 12m.) ☿ in ♍							
22	Su.		7	5 46	5 58	♏	3 14
23	Mo.		8	5 47	5 56	♐	4 11
24	Tu.	Windy, unsettled—A fine spell—Gener-	8	5 48	5 54	♐	5 08
25	We.		8	5 50	5 53	♑	6 04
26	Th.	ally pleasant, mild, September weather.	9	5 51	5 51	♑	6 57
27	Fr.		9	5 52	5 49	♒	7 47
28	Sat.		9	5 53	5 47	♒	8 33
(39) 16th Sunday after Trinity. (Day's length, 11h. 50m.) ♀ in ♌							
29	Su.	**MICHAELMAS.** Fine weather.	10	5 55	5 45	♒	9 16
30	Mo.	Month ends cold, with rains.	10	5 56	5 43	♓	9 57

In this month the Mornings decrease 35 min. and the Afternoons 56 min.

PLANETS IN SEPTEMBER, 1895.

MONTREAL MEAN TIME.

ON MERIDIAN (SOUTH).	Sept. 1st.	Sept. 8th.	Sept. 16th.	Sept. 24th.
Mercury .... ☿	0 50 ev.	1 03 ev.	1 14 ev.	1 20 ev.
Venus ..... ♀	1 19 ev.	0 43 ev.	11 56 mo.	11 07 mo.
Mars ..... ♂	0 49 ev.	0 38 ev.	0 25 ev.	0 13 ev.
Jupiter ..... ♃	9 25 mo.	9 03 mo.	8 37 mo.	8 11 mo.
Saturn ..... ♄	3 24 ev.	2 59 ev.	2 30 ev.	2 02 ev.
Uranus ..... ♅	4 14 ev.	3 47 ev.	3 17 ev.	2 47 ev.
Neptune .... ♆	6 26 mo.	5 59 mo.	5 28 mo.	4 56 mo.

THE PLANETS.—MERCURY is only 1′ S. of MARS on the 1st at 6h. mo.; 9° 58′ N. of Venus on the 5th at 5h. ev.; and in Aphelion on the 18th at 8h. ev, VENUS and Mars are in Conjunction on the 9th at 6h. ev. (Venus 9° 59′ S.); Venus reaching Inferior Conjunction with the Sun on the 19th at 1h. mo. NEPTUNE is 90° from the Sun (and overhead at 6h. mo.) on the 10th at 8h. ev. He is Stationary on the 21st at 3h. mo.

THE MOON.—Is near Neptune on the 11th at 11h. ev; Jupiter on the 15th at 0h. 35m. mo.; Venus on the 18th at 11h. 53m. mo.; Mars on the 19th at 6h. 10m. mo.; Mercury on the 20th at 9h. 19m. mo.; Saturn on the 21st at 11h. 36m. mo.; and Uranus on the 22nd at 6h. 47m. mo.

APOGEE: 3rd, 4h. 30m. ev.; PERIGEE: 18th, 2h. mo.; APOGEE: 30th, 9h. 20m. ev.; ECLIPSED: 3rd—4th (see page 11).

THE STARS.—The binary Star, 61 *Cygni*, can now be well observed in the evenings. Its R.A. is 21h. 1m., Dec. 38° 9′ N. Components yellow and deep yellow of the 5½ and 6th magnitudes. Close beside is a purple Star of the 10th magnitude. A very interesting study. These Suns revealed to Bessel, in 1838, the secret of stellar distances, measured by the time taken for the transmission of light. They are probably 366,400 times the distance of the Sun from the earth, a space so immense that light, reaching it across the vast space, employs nearly six years in the journey! We consequently see these stars as they were six years ago, and of their present condition or existence can have no information.

10th Month, 1895.
31 Days.

OCTOBER.

☉ enters ♎
23d. 11h. mo.

Moon's Phases	Day.	BOSTON.	MONTREAL.	WASHINGTON	CHICAGO.	WINNIPEG.
○ F.M.	3	6.06 ev.	5.52 ev.	5.39 ev.	4.57 ev.	4.19 ev.
☾ L.Q.	11	9.54 mo.	9.10 mo.	9.27 mo.	8.45 mo.	8.07 mo.
● N.M.	17-18	1.28 mo.	1.14 mo.	1.01 mo.	0.19 mo.	11.41 ev.
☽ F.Q.	25	6.24 mo.	6.10 mo.	5.57 mo.	5.15 mo.	4.37 mo

DAYS. M.	DAYS. W.	WEATHER FORECAST.	MONTREAL. THE SUN Fast.	THE SUN Rises.	THE SUN Sets.	THE MOON Zod.	THE MOON Souths.
			M.	H. M.	H. M.		H. M.
1	Tu.	Stormy, cool to cold weather, with wind, rain (sleet probable) and frosts—Fine, cool weather.	10	5 57	5 41	♓	Eve.
2	We.		11	5 59	5 39	♓	11 16
3	Th.		11	6 00	5 37	♈	11 55
4	Fr.		11	6 01	5 35	♈	Morn
5	Sat.		12	6 03	5 34	♈	0 37
		(40) 17th Sunday after Trinity. (Day's length, 11h. 28m.) ♂ in ♍					
6	Su.	Fine, pleasant Autumnal weather (fogs on Atlantic coast)—Rainy, cool and windy	12	6 04	5 32	♉	1 21
7	Mo.		12	6 05	5 30	♉	2 08
8	Tu.		12	6 06	5 28	♊	3 00
9	We.	**ST. DENIS.**	13	6 08	5 26	♊	3 56
10	Th.	—A warm spell, with thunder showers.	13	6 09	5 25	♋	4 53
11	Fr.		13	6 11	5 23	♋	5 52
12	Sat.	**Columbus discov'd America, 1492.**	14	6 12	5 21	♌	6 50
		(41) 18th Sunday after Trinity. (Day's length, 11h. 06m.) ♃ in ♑					
13	Su.	Fine weather—Rainy and windy—A warm to hot "Indian Summer" spell; very fine weather in N.W.—Stormy, cloudy and rainy at end of week.	14	6 13	5 19	♌	7 45
14	Mo.		14	6 15	5 17	♍	8 38
15	Tu.		14	6 16	5 16	♍	9 29
16	We.		14	6 18	5 14	♎	10 20
17	Th.		15	6 19	5 12	♎	11 11
18	Fr.	**ST. LUKE.**	15	6 20	5 10	♎	Eve.
19	Sat.		15	6 21	5 08	♏	0 58
		(42) 19th Sunday after Trinity. (Day's length, 10h. 44m.) ♄ in ♍					
20	Su.	Unsettled weather—Fine to very fine October weather—Gales on Lakes and Atlantic coast about 25th, and very cool weather (snow probable).	15	6 23	5 07	♏	1 56
21	Mo.		15	6 24	5 05	♐	2 54
22	Tu.		15	6 25	5 03	♐	3 53
23	We.		16	6 26	5 01	♑	4 48
24	Th.		16	6 28	5 00	♑	5 40
25	Fr.		16	6 29	4 58	♒	6 29
26	Sat.		16	6 31	4 57	♒	7 13
		(43) 20th Sunday after Trinity. (Day's length, 10h. 23m.) ☿ in ♍					
27	Su.	Cold, windy and unsettled, with frosts (rain or snow according to latitude)—Fine and warmer, with wind at close of month.	16	6 32	4 55	♓	7 54
28	Mo.		16	6 33	4 53	♓	8 34
29	Tu.		16	6 35	4 52	♓	9 13
30	We.		16	6 36	4 50	♈	9 53
31	Th.	**All Hallow's Eve.**	16	6 38	4 49	♈	10 34

In this month the Mornings decrease 41 min. and the Afternoons 52 min.

PLANETS IN OCTOBER, 1895.

MONTREAL MEAN TIME.

ON MERIDIAN (SOUTH).	Oct. 1st.	Oct. 8th.	Oct. 16th.	Oct. 24th.
Mercury .... ☿	1 22 ev.	1 15 ev.	0 49 ev.	11 53 mo.
Venus ..... ♀	10 30 mo.	9 59 mo.	9 32 mo.	9 14 mo.
Mars ..... ♂	0 26 ev.	11 52 mo.	11 40 mo.	11 28 mo.
Jupiter ..... ♃	7 48 mo.	7 24 mo.	6 57 mo.	6 29 mo.
Saturn ..... ♄	1 37 ev.	1 13 ev.	0 45 ev.	0 17 ev.
Uranus ..... ♅	2 21 ev.	1 54 ev.	1 25 ev.	0 55 ev.
Neptune .... ♆	4 29 mo.	4 01 mo.	3 29 mo.	2 57 mo.

THE PLANETS.—MERCURY reaches Greatest Elongation East of the Sun on the 1st at 6h. ev., when he is an "Evening Star." He is Stationary on the 14th at 5h. mo.; at Inferior Conjunction (between Sun and Earth) on the 25th at 5h. ev.; and only half-a-degree S. of Mars on the 28th at 3h. mo. VENUS is Stationary on the 8th at 1h. mo. MARS in Conjunction with the Sun on the 11th at 4h. mo. JUPITER is 90° from the Sun (and overhead at 6h mo.) on the 31st.

THE MOON.—Is near Neptune on the 9th at 4h. 47m. mo.; Jupiter on the 12th at 3h. 49m. ev.; Venus on the 15th at 0h. 25m. ev.; Mars on the 18th at 0h. 07m. mo.; Mercury on the 19th at 2h. 19m. mo.; Saturn the same day at 3h. 13m. mo.; and Uranus the same day at 7h. 26m. ev.

PERIGEE: 16th, 11h. 20m. mo.; APOGEE: 28th, 10h. 50m. mo.

THE STARS.—The small and somewhat obscure Constellation of *Lacerta*, the "Lizard," may be observed in the October evenings. It lies between the tail of *Cygnus* and the head of *Andromeda*. It has one Star of the 4th, eight of the 5th, and several of less magnitudes. The Star 2,922 in Struves' Catalogue is in this Constellation. It is in R.A. 22h. 31m., Dec. 39° 1′ N. The brightest pair are white of 6½ magnitude, the lesser of the 10th and 11th magnitudes, and are blue and green. Between *Lacerta* and *Andromeda* Bode, in 1787, inserted a "new Constellation," which he termed "*Gloria Frederica*," or "Frederick's Glory," consisting of a crown, laurel, sword, and pen; but this constellation, like several others, was not recognised by other Astronomers, and is not now on the Star Maps.

11th Month, 1895. 30 Days.

NOVEMBER.

☉ enters ♐ 22d. 7h. mo.

Moon's Phases	Day.	BOSTON.	MONTREAL.	WASHINGTON	CHICAGO.	WINNIPEG.
○ F. M.	2	10.37 mo.	10.23 mo.	10.10 mo.	9.28 mo.	8.50 mo.
☾ L. Q.	9	6.25 ev.	6.11 ev.	5.58 ev.	5.16 ev.	4.38 ev.
● N. M.	16	0.30 ev.	0.16 ev.	0.03 ev.	11.21 mo.	10.43 mo.
☽ F. Q.	24	2.37 mo.	2.23 mo.	2.10 mo.	1.28 mo.	0.50 mo.

DAYS. M.	DAYS. W.	WEATHER FORECAST.	MONTREAL. THE SUN — Fast.	Rises.	Sets.	THE MOON Zod.	Souths.
			M.	H. M.	H. M.		H. M.
1	Fr.	**ALL SAINTS.** A general storm	16	6 39	4 47	♈	11 17
2	Sat.	period, with rain and snow.	16	6 41	4 46	♉	Morn
(44) 21st Sunday after Trinity. (Day's length, 10h. 02m.) ♀ in ♍							
3	Su.		16	6 42	4 44	♉	0 04
4	Mo.	Cold, dark, stormy weather; rough on	16	6 44	4 43	♊	0 56
5	Tu.	Lakes and Atlantic — Milder; a fine,	16	6 45	4 41	♊	1 51
6	We.	pleasant period — Rainy, cool and cloudy,	16	6 47	4 40	♋	2 48
7	Th.	with fogs on Atlantic coast.	16	6 48	4 39	♋	3 47
8	Fr.		16	6 50	4 38	♌	4 45
9	Sat.	**Prince of Wales born, 1841.**	16	6 51	4 37	♌	5 40
(45) 22nd Sunday after Trinity. (Day's length, 9h. 42m.) ♂ in ♍							
10	Su.	A brief storm period; some rain or snow	16	6 53	4 35	♍	6 32
11	Mo.	**MARTINMAS.**	16	6 54	4 34	♍	7 22
12	Tu.	— Fine weather, warm for season — A general	16	6 55	4 33	♍	8 10
13	We.	storm period about 12th-13th, with rain	16	6 57	4 31	♎	8 59
14	Th.	(snow) and high wind — Unsettled and	15	6 58	4 30	♎	9 49
15	Fr.	stormy, some severe squalls of wind; cold	15	7 00	4 29	♏	10 43
16	Sat.	in N. W.	15	7 01	4 28	♏	11 38
(46) 23rd Sunday after Trinity. (Day's length, 9h. 25m.) ☿ in ♏							
17	Su.		15	7 02	4 27	♐	Eve.
18	Mo.	Opens unsettled — Fine weather for	15	7 03	4 26	♐	1 36
19	Tu.	November; more "Indian Summer" —	14	7 04	4 25	♑	2 35
20	We.		14	7 06	4 24	♑	3 30
21	Th.	Wind and snow (or rain) — Fine weather —	14	7 08	4 23	♒	4 20
22	Fr.	Snow (or rain) and wind at end of week.	14	7 09	4 22	♒	5 07
23	Sat.		13	7 10	4 22	♒	5 50
(47) 24th Sunday after Trinity. (Day's length, 9h. 09m.) ♄ in ♎							
24	Su.	Fine weather, but very cold for season —	13	7 12	4 21	♓	6 31
25	Mo.	**ST. CATHERINE.**	13	7 13	4 21	♓	7 10
26	Tu.	A general storm period, with high winds	13	7 14	4 20	♈	7 49
27	We.	and precipitation — Fine weather, but cold;	12	7 15	4 20	♈	8 29
28	Th.	below zero in N. W. — Stormy, with rain	12	7 16	4 19	♈	9 12
29	Fr.	(or snow): fog on Atlantic coast.	11	7 18	4 19	♉	9 57
30	Sat.	**ST. ANDREW.**	11	7 19	4 18	♉	10 47

In this month the Mornings decrease 40 min. and the Afternoons 29 min.

PLANETS IN NOVEMBER, 1895.

MONTREAL MEAN TIME.

ON MERIDIAN (SOUTH).	Nov. 1st.	Nov. 8th.	Nov. 16th.	Nov. 24th.
Mercury .... ☿	10 54 mo.	10 34 mo.	10 36 mo.	10 50 mo.
Venus ..... ♀	9 01 mo.	8 54 mo.	8 49 mo.	8 46 mo.
Mars ..... ♂	11 17 mo.	11 08 mo.	10 58 mo.	10 48 mo.
Jupiter ..... ♃	6 01 mo.	5 35 mo.	5 05 mo.	4 34 mo.
Saturn ..... ♄	11 50 mo.	11 26 mo.	10 58 mo.	10 30 mo.
Uranus ..... ♅	0 26 ev.	0 01 ev.	11 31 mo.	11 02 mo.
Neptune .... ♆	2 25 mo.	1 57 mo.	1 24 mo.	0 52 mo.

THE PLANETS.—MERCURY is in Perihelion on the 1st at 7h. ev.; Stationary on the 3rd at 7h. mo.; at Greatest Elongation W. of 19° 10′ on the 10th at 5h. ev.; in Conjunction with Saturn on the 20th at 5h. ev.; with Mars on the 23rd at 7h. ev.; and with Uranus on the 26th at 8h. mo. VENUS is at Greatest Elongation West of 46° 47′ and brilliant as a Morning Star in the East before Sunrise on the 29th. MARS is 1° 59′ S. of Saturn on the 16th at noon; in close Conjunction (6′ S.) with *Alpha Libræ* on the 18th at noon; and only 9′ S. of Uranus on the 29th at 2h. ev. JUPITER is Stationary on the 25th at 7h. ev. SATURN is in Conjunction with the Sun on the 2nd at 11h. mo. URANUS reaches Conjunction with the Sun on the 12th at 4h. ev., and after that date becomes a Morning Star.

THE MOON.—Is near Neptune on the 5th at 9h. 32m. mo.; Jupiter on the 9th at 2h. 15m. mo.; Venus on the 13th at 4h. 52m. mo.; Mercury on the 15th at 7h. 26m. mo.; Mars the same day at 6h. 10m. ev.; Saturn the same evening at 6h. 47m.; and Uranus on the 16th at 8h. 27m. mo.

PERIGEE: 13th, 10h. 50m. mo.; APOGEE: 25th, 6h. mo.

THE STARS.—In R.A. 23h. 51m. Dec. 56° 3′ N. (Constellation *Cassiopeia*) is a beautiful cluster of minute Stars ranging from the 11th to the 18th magnitudes. It is a condensed patch, in a region of inexpressible splendor. It somewhat resembles a crab, with spangled rays of Stars spreading over many fields extent.

12th Month, 1895. 31 Days.

DECEMBER.

☉ enters ♑ 21d. 8h. ev.

Moon's Phases	Day.	BOSTON.	MONTREAL.	WASHINGTON	CHICAGO.	WINNIPEG.
☺ F.M.	2	1.57 mo.	1.43 mo.	1.30 mo.	0.48 mo.	0.10 mo.
☾ L.Q.	9	2.28 mo.	2.14 mo.	2.01 mo.	1.19 mo.	0.41 mo.
● N.M.	16	1.48 mo.	1.34 mo.	1.21 mo.	0.39 mo.	0.01 mo.
☽ F.Q.	23-24	0.40 mo.	0.26 mo.	0.13 mo.	11.31 ev.	10.53 ev.
☺ F.M.	31	3.49 ev.	3.35 ev.	3.22 ev.	2.40 ev.	2.02 ev.

DAYS. M.	DAYS. W.	WEATHER FORECAST.	MONTREAL. —THE SUN— Fast.	Rises.	Sets.	THE MOON Zod.	Souths.
		(48) 1st Sunday in Advent. (Day's length, 8h. 58m.) ♅ in ♎					
1	Su.		M. 11	H. M. 7 20	H. M. 4 18	♊	H. M. 11 42
2	Mo.	Opens fine and cold—Milder—Stormy,	10	7 21	4 18	♊	Morn
3	Tu.		10	7 22	4 17	♋	0 49
4	We.	snowy and unsettled; very cold in N.W.	9	7 23	4 17	♋	1 40
5	Th.		9	7 24	4 16	♌	2 39
6	Fr.	—Fine December weather.	9	7 26	4 16	♌	3 36
7	Sat.		8	7 27	4 15	♌	4 29
		(49) 2nd Sunday in Advent. (Day's length, 8h. 47m.) ♆ in ♐					
8	Su.	**CONCEPTION B.V.M**	8	7 28	4 15	♍	5 19
9	Mo.	Stormy, with snows and rains; a mild,	7	7 29	4 14	♍	6 07
10	Tu.	storm period; unseasonable weather, with	7	7 30	4 14	♎	6 55
11	We.	rains and fogs (considerable rain in East-	7	7 31	4 15	♎	7 43
12	Th.	ern sections)—Colder, with wind and snow,	6	7 33	4 15	♏	8 33
13	Fr.	drifts and bluster.	6	7 34	4 16	♏	9 26
14	Sat.		5	7 35	4 16	♐	10 23
		(50) 3rd Sunday in Advent. (Day's length, 8h. 41m.) ☿ in ♐					
15	Su.		5	7 36	4 17	♐	11 21
16	Mo.	High winds, snows and drifts—Very	4	7 37	4 17	♑	Eve.
17	Tu.	cold weather; "a dip," with piercing	4	7 38	4 18	♑	1 17
18	We.	winds; below zero in N., N.W. and E.	3	7 39	4 18	♑	2 10
19	Th.	sections—Moderating, with snow and rain.	3	7 40	4 19	♒	3 00
20	Fr.		2	7 40	4 19	♒	3 44
21	Sat.	**ST. THOMAS.**	2	7 41	4 20	♓	4 26
		(51) 4th Sunday in Advent. (Day's length, 8h. 39m.) ♀ in ♎					
22	Su.	Snow, sleet (or rain), mild weather, with	1	7 41	4 20	♓	5 05
23	Mo.	fogs on coast—Cold to very cold; a general	1	7 42	4 21	♓	5 44
24	Tu.	"freeze-up," with low thermometer read-	0	7 42	4 21	♈	6 23
25	We.	**CHRISTMAS.** ings and brilliant	slo'	7 43	4 22	♈	7 04
26	Th.	**ST. STEPHEN.** Winter weather—	1	7 43	4 23	♈	7 48
27	Fr.	**ST. JOHN EVANGELIST.**	1	7 43	4 24	♉	8 35
28	Sat.	Moderating to snow and rain.	2	7 43	4 24	♉	9 28
		(52) 1st Sunday after Christmas. (Day's length, 8h. 43m.) ♂ in ♏					
29	Su.	Mild, with snow (or rain); fogs on coast	2	7 42	4 25	♊	10 25
30	Mo.	**Henry G. Vennor born, 1840.**	3	7 42	4 26	♊	11 25
31	Tu.	—Fine, cold, winter weather at end of year.	3	7 42	4 26	♋	Morn

In this month the Mornings decrease 22 min. and the Afternoons increase 8 min.

PLANETS IN DECEMBER, 1895.

MONTREAL MEAN TIME.

ON MERIDIAN (SOUTH).	Dec. 1st.	Dec. 8th.	Dec. 16th.	Dec. 24th.
Mercury .... ☿	10 05 mo.	11 23 mo.	11 40 mo.	0 10 ev.
Venus ..... ♀	8 45 mo.	8 46 mo.	8 48 mo.	8 51 mo.
Mars ..... ♂	10 40 mo.	10 32 mo.	10 24 mo.	10 16 mo.
Jupiter ..... ♃	4 06 mo.	3 38 mo.	3 05 mo.	2 31 mo.
Saturn ..... ♄	10 06 mo.	9 41 mo.	9 13 mo.	8 45 mo.
Uranus ..... ♅	10 36 mo.	10 09 mo.	9 40 mo.	9 10 mo.
Neptune .... ♆	0 24 mo.	11 51 ev.	11 19 ev.	10 47 ev.

THE PLANETS.—MERCURY is in Aphelion on the 15th at 7h. ev., and in Conjunction with the Sun (Superior) on the 20th at noon. VENUS is in Perihelion on the 11th at 11h. mo.; in Conjunction (0° 33' N.) with Saturn on the 22nd at 4h. ev.; and in similar place with Uranus (2° 29' N.) on the 28th at 3h. ev. NEPTUNE is in Opposition to the Sun on the 8th at 6h. ev. (overhead at Midnight).

THE MOON.—Is near Neptune on the 2nd at 3h. 21m. ev; Jupiter on the 6th at 8h. 16m. mo.; Venus on the 12th at 3h. 09m. ev.; Saturn on the 13th at 8h. 16m. mo; Uranus the same day at 7h. 49m. ev.; Mars on the 14th at 11h. 57m. mo.; and Mercury on the 15th at 9h. 02m. ev.

PERIGEE: 9th, 11h. mo.; APOGEE: 23rd, 3h. 15m. mo.

THE STARS.—The Constellation *Perseus* is situated directly North of the *Pleiades* between *Andromeda* on the West and *Auriga* on the East, with a mean Declination North of 46°, and is consequently well placed in the evenings of December. It contains one of the most splendid portions of the Galaxy, with its magnificent hosts of Star-Suns, many of them beautiful pairs. *Beta Persei* is also called "Algol," (the Demon). Its R.A. is 3h. 0m., Dec. 40° 30' N. It is a variable Star of remarkable short period, changing from the 2nd to the 4th magnitude in 2d. 20h. 48m. 56s., the increase and decrease together occupying not more than 7h., the minimum only 18m. This Star has a companion which varies from the 10th to below the 14th magnitude.

LUNAR INFLUENCE ON VEGETATION.

"What makes a plenteous harvest, when to turn
The fruitful soil, and when to sow the corn."
—*Georgics, Book I.*

That is just it. When to sow the corn. Ninety-nine farmers out of a hundred at present sow in the old haphazard way. Why? Either because they do not know any better, or else because they are too prejudiced to learn. To the latter I have nothing to say. Let them go on. It will not be their own faults if they do not get into the hands of the money-lender, perhaps into the poor-house in the end; but because beneficent Nature is wiser and kinder to them than they are to themselves. They disencourage her, but she still smiles.

Suppose, however, those who previously did not know that there is a time to sow and a time to plant (which time, every month, can be calculated); take heed this year to the information contained in the following pages. Suppose they plant, sow and cultivate (at the times suggested) just as much of their crops as they possibly can. The work has to be done some time, why not at the times calculated?

But some will say, "this is superstition." Not so, it is advanced science. Was it superstition that led Watt to tinker with the tea-kettle and so devise the steam-engine? Was it superstition that led Edison to dabble all his spare hours with electricity? Was it superstition that bade Galileo arrange lenses into a telescope and so prove the earth a planet circling the Sun the same as Venus, Mars, Jupiter, and the rest? If so, then it is superstition to investigate the forces of those planets; to search into the hidden things of the science which is able to move the juices of herbs and plants, as well as the waters of the ocean. Perhaps some will say: "One ounce of proof is worth a pound of theory. Give us proof." That is easy; from many, I select the following. It should be sufficiently convincing:

WALTER H. SMITH, ESQ.

DEAR SIR,—I must tell you of a little incident that happened last summer in regard to your ALMANAC.

I have a summer cottage at Narragansett Bay, where with about one hundred other cottagers we go for the summer. Quite a number have a little garden, where we plant small stuff. There is quite a rivalry among us which will do the best. So last spring we commenced to plant, and among other things, cucumbers, in which we take great pride. So most of us planted cucumbers in April. My next neighbor

planted five weeks before I did. Well, I waited for the time in your ALMANAC. On May 19th I planted cucumbers, and on July 19th I picked one cucumber of good size (just sixty days from time of planting) and I never saw better looking vines than they were all summer, and I picked during the season over two hundred cucumbers.

Now the point comes in. My neighbor's cucumber vines came up very fair, but they withered and died, and some did not get so much as one cucumber. Even my next door neighbor, within fifty feet of my vines. They did not see the reason. But as they came in I showed them your ALMANAC and told them what I had planted them by. I have had it now for three years, and I find it of great value.

What bothers us some here is the time. For instance, if you say the 19th May from 2.15 to 4.45 aft., is that Eastern time? P.

"Sun" time, corrected to "Local" time, is what is meant, not the "Standard" or "Railway" time in present use, but the old "Local" time of the place, which obtained prior to the change to "Standard" time. For instance, Montreal local time is six minutes ahead or "fast," of the present "Standard" time. Therefore, a clock set to "Standard" time, as all clocks now are, is six minutes slow of the "Mean" or "Local" time which used to obtain here. If at Montreal I wish to sow or plant by the PLANETARY ALMANAC, all I have to do is to begin and end six minutes before the time indicated by a clock. If my time for sowing is 10.00 morn., I may begin at 9.54 morn. by the clock; if 3.15 aft., I may begin at 3.09 aft. "Standard" time does not differ from "Mean" or "Local" time at any place more than thirty minutes. Persons using these tables should ascertain just how much their "Standard" time does differ from true "Local" time, and govern themselves accordingly. Perhaps it is as well to reiterate that sowing and transplanting is always best done between "new" and "full" Moon (at the times named), but that ploughing, manuring, burning brush, etc., should be accomplished from after the "last quarter" of the Moon until she becomes "new"; this is also the best time to destroy weeds. Things requiring a level growth and yield are best set or sown, with Libra rising, in the Spring. In the Fall, the most productive sign seems to be Pisces, which rises in the afternoon. Nothing can exceed the productiveness of all kinds of running plants, sown or set, with Libra rising, during the afternoons of Spring.

A good many write to me for "special times for special things." These I am glad to answer, but would remind them that a *stamp should always be enclosed for reply.*

*SEED SOWING—1895.

LATITUDE 35°.

Favorable times for sowing and transplanting in Virginia, West Virginia, North and South Carolina, Georgia, Kentucky, Tennessee, Arkansas, Southern Missouri, Northern Texas, Arizona, Indian Territory, New Mexico, California, and all places in North America at or near Latitude 35° N.

JANUARY.—The 1st and 2nd have ☾ in ♓ rising between 10.05 a.m., and 11.15 morn., good for root crops; ♉ rising, from 1.15 to 2.50 aft., good for things which fruit above ground. The 6th and 7th have ☾ in ♉ and ♓ rising from 9.45 to 11.00 a.m., good for crops of downward growth, as also the same days from 12.35 to 2.10 aft. when ♉ rises. The 10th has ☾ in ♋ with ♓ rising between 9.30 and 10.40 a.m.; and ♉ rising from 12.00 noon to 1.25 aft., both of which times are good for roots and potatoes. The 27th, 28th and 29th have ☾ in ♓ rising from 8.15 to 9.30 morn.; when roots and potatoes should be planted. The same days from 10.50 morn. to 12.15 noon ♉ rises good for grain, vines, tomatoes, etc., as well as from 2.15 to 4.25 aft. when ♋ rises.

FEBRUARY.—The 2nd and 3rd has ☾ in ♉ with ♓ rising from 7.55 to 9.10 a.m., when root crops should be sown; also (♉ rising) from 10.35 a.m. to 11.55 noon, and (♋ rising) 1.50 to 4.00 aft., good for grain, vines and things which fruit above ground. On the 6th and 7th ☾ is in ♋ with ♓ rising from 7.30 to 8.40 a.m., and (♉ rising) from 10.05 to 11.25 morn., good for roots, early potatoes, etc., all other things when ♋ rises from 1.40 to 3.50 aft. On the 25th ☾ is in ♓ rising from 6.25 to 7.40 a.m., good for roots; ♉ rising from 9.00 to 10.35 a.m., and ♋ from 12 20 noon to 2.30 aft., good for all other things.

MARCH.—The 1st and 2nd, with ☾ in ♉ and ♓ rising from 6.00 to 7.15 morn., and (♉ rising) 8.35 to 10.00 morn., are good for roots. Other things, 11.55 morn. to 2.05 aft. (♋ rising.) The 5th and 6th when ☾ is in ♋, and ♉ rising (good for roots) from 8.25 to 9.50 morn., other things when ♋ rises from 11.45 morn. to 1.55 aft. The 28th, 29th and 30th, when ☾ is in ♉ are good. For roots,

* The local time, at the place mentioned, is meant in every case.

potatoes, etc., 6.55 to 8.20 morn. When ♉ rises: grain, vines, and similar things, from 10.20 morn., to 12.30 noon, (♋ rising) and 5.35 to 8.00 eve., (♎ rising.)

APRIL.—The 2nd and 3rd, for roots, from 6.55 to 8.25 morn., with ☾ in ♋ and ♉ rising. All other things, grain, etc., 10.40 morn. to 12.55 noon, (♋ rising) and 5.20 to 7.45 eve. (♎ rising.) The 8th and 9th have ☾ in ♎ with ♉ rising (good for roots) from 6.20 to 7.45 morn., and 9.45 to 11.55 morn. (♋ rising.) All other things, grain, vines, etc., 5.00 to 7.25 eve., (♎ rising.) The 25th and 26th have ☾ in ♉ rising, good for roots, 5.00 to 6.25 morn. Good for other crops on the same days from 8.40 morn. to 10.50 morn., when ♋ rises, and 4.00 to 6.20 aft. when ♎ rises. The 29th and 30th are good days, when ☾ is in ♋ and ♉ rises from 5.00 to 6.25 morn., excellent for roots; same days (♋ rising) from 8.30 to 10.40 morn., and (♎ rising) 3.40 to 6.05 eve., both of which are good for spring wheat, grain, vines and other things of top growth.

MAY.—The ☾ is in ♎ with ♋ rising on the 5th, 6th and 7th, between 8.05 and 10.05 morn., when things, such as potatoes, beets, etc., having their fruit below ground should be set or sown. The same days between 3.10 and 5.35 aft., when ♎ rises are excellent for grain, squash, tomatoes, and all things requiring top growth. The 26th and 27th have ☾ in ♌ rising from 6.45 to 8 55 morn., (good for roots) and ♎ rising (good for all other things) from 1.50 to 4.20 aft.

JUNE.—The 2nd and 3rd are excellent dates, when ☾ is in ♎, and ♌ rises from 6.00 to 8.10 morn., (good for roots); and (♎ rising) from 1.15 to 3.40 aft., (good for grain, vines, etc.) The 23rd with ☾ in ♌, and ♍ rising from 4.45 to 6.55 morn., and (♎ rising) from 12.00 noon to 2.25 aft., is an excellent date for all things requiring top growth. The 30th with ☾ in ♎ rising, is good for grain, vines, etc., from 11.20 morn., to 1.45 aft.

JULY.—The 26th and 27th have ☾ in ♎ rising, from 9.45 morn. to 12 10 noon.

AUGUST.—The 23rd and 24th are excellent dates for Fall grain, from 8.00 to 10.25 morn., when ☾ is in ♎ rising.

SEPTEMBER.—The ☾ is in ♓ with ♎ rising on the 3rd, 4th and 5th, 7.20 to 9.45 morn., and (♓ rising) from 5.55 to 7.10 aft. These are excellent times for sowing Fall

grain, especially in the afternoons. On the 19th and 20th, the ☾ is in ♎ rising from 6.15 to 8.40 morn., and (♓ rising) from 5.00 to 6.15 aft., (the latter is excellent for Fall grain.) On the 30th, the ☾ is in ♓ and ♎ from 5.30 to 7.50 morn, and (♓ rising) from 4.30 to 5.45 aft., the latter excellent for Fall grain.

OCTOBER.—As Sept. 30th, on 1st and 2nd. The 27th 28th and 29th, are excellent (☾ in ♓ rising) between 2.35 and 3.45 aft.

NOVEMBER.—The 2nd and 3rd are good, (☾ in ♉ and ♓ rising) from 2.15 to 3.30 aft. The 24th and 25th (☾ in ♓ rising) from 12 50 noon to 2.05 aft. Also, the 29th and 30th, when ☾ is in ♉ and ♓ rises, from 12.30 noon to 1.45 aft.

DECEMBER.—The 21st, 22nd and 23rd have ☾ in ♓ rising from 10.55 morn. to 12.10 noon. The 27th and 28th (☾ in ♉ and ♓ rising) are good from 10.25 to 11.40 morn. The 31st (☾ in ♋ and ♓ rising) from 10.10 to 11.20 morn.

LATITUDE 40°.

Favorable times for sowing in Maryland, District of Columbia, Pennsylvania, Delaware, New Jersey, Southern New York, Rhode Island, Connecticut, Ohio, Indiana, Southern Illinois, Northern Missouri, Iowa, Kansas, Nebraska, Utah Territory, Nevada, Colorado, and all places at or near Latitude 40° North. (For Moon's place in Zodiac at these times see Calendar pages or table for Latitude 35° N.)

MARCH.—The 1st and 2nd, from 6.10 to 7.15, and 8.35 to 10.00 morn., are good for roots; other things, 11.50 morn. to 2.00 aft. The 5th and 6th; 8.20 to 9.45 morn., for roots; other things, 11.35 morn. to 1.45 aft. The 28th, 29th and 30th, for roots, potatoes, etc, 6.45 to 8.15 morn., grain, vines, etc., 10.05 morn. to 12.10 noon, and 5.30 to 8.00 eve.

APRIL.—The 2nd and 3rd, for roots, from 6.30 to 8.00 morn., all other things, 10.00 morn. to 12.05 noon, and 5.20 to 7.50 aft. The 8th and 9th are good for roots, from 6.15 to 7.35, and 9.30 to 11.50 morn.; all other things, 5.00 to 7.30 aft. The 25th and 26th are good for roots, from 4.55 to 6.25 morn.; other crops, from 8 30 to 10.45 morn., and 3.55 to 6.15 aft. The 29th and 30th, also, from 4.55 to 6.15

morn., are excellent for roots, and all other things (grain, vines, tomatoes, squash, etc.) from 8.20 to 10.35 morn., and 3.40 to 6.10 aft.

MAY.—The 5th, 6th and 7th are good for things which fruit below ground, potatoes, beets, etc., from 8.00 to 10.00 morn. The same days between 3.15 and 5.45 are good for things of top growth, grain, vines, tomatoes, etc. The 26th and 27th are good for root crops, from 6.20 to 8.40 morn. ; all other things, from 1.45 to 4.15 aft.

JUNE.—The 2nd and 3rd are good for root crops, from 5.50 to 8.00 morn., and other things, from 1.15 to 3.45 aft. The 23rd is excellent for things requiring top growth, from 4.30 to 6.50 morn., and 12.00 noon to 2.30 aft. The 30th also is good for grain, vines, etc., from 11.15 morn. to 1.45 aft.

JULY.—The 26th and 27th are good from 9.35 morn. to 12.05 noon.

AUGUST.—The 23rd and 24th are excellent for Fall grain, from 7.50 to 10.20 morn.

SEPTEMBER.—The 3rd, 4th and 5th are excellent for Fall grain, from 7.15 to 9.45 morn., and 5.55 to 7.05 aft. (The latter especially.) The 19th and 20th, also from 6.15 to 8.40 morn.. and 5.00 to 6.15 aft. (Excellent for Fall grain.) The 30th also, from 5.30 to 7.45 morn., and 4.35 to 5.40 aft., are good for Fall grain.

OCTOBER.—As September 30th, on 1st and 2nd. The 27th, 28th and 29th are also excellent between 2.45 and 3.55 aft.

LATITUDE 45°.

Favorable times for sowing in Massachusetts, New Hampshire, Vermont, Maine, Nova Scotia, New Brunswick, Prince Edward Island, Quebec, Ontario, Northern New York, Michigan, Northern Illinois, Wisconsin, Southern Minnesota, South Dakota, Southern Idaho, Wyoming, Southern Montana, Oregon, Southern Washington Territory, and all places in North America at or near Lat. 45° N. (For Moon's place in Zodiac at these times, see Calendar pages, or table for Lat. 35° N.)

MARCH.—(*Calculated especially for greenhouse and framework.*) The 1st and 2nd, from 11.40 morn to 1.50 aft. The 5th and 6th, 11.30 morn. to 1.35 aft. The 28th, 29th

and 30th, 6.25 to 7.35 morn., 9.35 to 11.05 morn., and 5.25 to 8 00 eve.

APRIL.—The 2nd and 3rd, for root crops, from 6.20 to 7.50 morn.; all other things, grain, vines, spring salads, etc., 9.55 morn. to 12.00 noon, and 5.10 to 7.40 aft. The 8th and 9th, for things which fruit below ground, beets, parsnips, potatoes, etc., from 6.05 to 7.20 morn., and 9.15 to 11.30 morn.; all other things, 4.55 to 7.30 aft. The 25th and 26th, good for roots, from 4 55 to 6.05 morn., and other crops, spring wheat, corn, vines, grapes, squash, etc., from 8.10 to 10.25 morn., and 3.55 to 6.30 aft. The 29th and 30th, from 4.40 to 6.00 morn., for roots, potatoes, etc., and other things, grain, vines, tomatoes, squash, etc., from 8.00 to 10.20 morn., and 3.30 to 6.05 aft.

MAY.—The 5th, 6th and 7th are excellent for things which fruit below ground (potatoes, beets, carrots, etc.) from 7.40 to 9.45 morn. For the various kinds of grain, vines, squash, cucumbers, tomatoes, and all things which fruit above ground, from 3.10 to 5.50 aft. The 26th and 27th are good for root crops, beets, potatoes, carrots, etc., from 6.05 to 8.25 morn.; all other things, grain, vines, squash, peas, beans, etc., from 1.50 to 4.20 aft.

JUNE.—The 2nd and 3rd, good for root crops, from 5.50 to 8.10 morn.; other things, vines, squash, corn, grain, etc., 1.30 to 4.05 aft. The 23rd, for things requiring top growth, vines, tomatoes, squash, grapes, etc., from 4.20 to 6.40 morn., and 12.00 noon to 2.35 aft. The 30th also for grain, vines, etc., from 11 20 morn. to 1.55 aft.

JULY.—The 26th and 27th are good from 9.45 morn. to 12.20 noon.

AUGUST.—The 23rd and 24th are excellent for Fall grain, from 7.55 to 10 30 morn.

SEPTEMBER.—The 3rd, 4th and 5th are excellent for sowing Fall grain, from 7.15 to 9.55 morn., and 6.10 to 7.10 aft. (The latter especially.) The 19th and 20th, from 6.10 to 8.45 morn, and 5.10 to 6.10 aft., are also good dates. The 30th, from 5.25 to 7.40 morn., and 4.45 to 5.45 aft., is an excellent time for Fall grain.

OCTOBER.—As September 30th, on 1st and 2nd. The 27th, 28th and 29th are excellent dates for Fall grain sowing between 2.50 and 3.50 aft.

Latitude 50°.

Favorable times for sowing in Newfoundland, Manitoba, North-West Territories, North Dakota, Northern Montana, Northern Minnesota, Northern Washington Territory, Northern Idaho, British Columbia, and all places in North America, at or near Latitude 50° North. (For Moon's place in Zodiac at these times, see Calendar pages, or table for Lat. 35° N.)

April.—The 2nd and 3rd, for root crops, potatoes, etc., from 6.20 to 7.25 morn.; all other things, grain, vines, spring salads, etc., 9.25 morn. to 11.50 noon, and 5.10 to 7.40 aft. The 8th and 9th, for beets, parsnips, potatoes, and all things which fruit below ground, from 6.00 to 7.10 morn., and 9.05 to 11.15 morn.; all other things, spring wheat, corn, vines, etc., 4.50 to 7.20 aft. The 25th and 26th are good dates for sowing root crops, from 4.55 to 6.00 morn., and other crops, spring wheat, corn, vines, squash, etc., 8.05 to 10.25 morn., and 3.40 to 6.15 aft. The 29th and 30th also, from 4.35 to 5.55 morn., good for roots, potatoes, etc., and all other things, 7.50 to 10.10 morn, and 3.20 to 6.00 aft.

May.—The 5th, 6th and 7th are excellent for beets, potatoes and all kinds of root crops, from 7.20 to 9.25 morn. For all kinds of grain, vines, squash, cucumbers, tomatoes, etc.; the same days from 3.10 to 6.00 aft. The 26th and 27th are favorable for sowing root crops, from 5.30 to 8.00 morn., and all other things, grain, vines, squash, peas, beans, etc., from 1.40 to 4.30 aft.

June.—The 2nd and 3rd are good for roots, from 5.15 to 7.30 morn.; other things, 1.15 to 4.00 aft. The 23rd, for things requiring top growth, such as vines, squash, grapes, etc., from 4.05 to 6.15 morn., and 11.50 morn. to 2.10 aft. The 30th also, for grain, vines, etc., from 11.20 morn. to 1.40 aft.

July.—The 26th and 27th are good dates, from 9.35 morn. to 12.25 noon.

August.—The 23rd and 24th are excellent for sowing Fall grain, from 7.50 to 10.40 morn.

September.—The 3rd, 4th and 5th are excellent for putting in Fall grain, from 7.15 to 10.05 morn., and 6.15 to 7.05 aft. (The latter especially.) The 19th and 20th, from

6.05 to 8.55 morn., and 4.50 to 6.15 aft., are good dates also. The 30th, from 5.20 to 7.45 morn., and 4.10 to 5.40 aft., are excellent for Fall grain.

OCTOBER.—As September 30th, on 1st and 2nd. The 27th, 28th and 29th are good for Fall grain, sowing from 2.45 to 3.50 aft.

THE STAR OF BETHLEHEM.

IT MAY HAVE APPEARED MANY TIMES IN VARIOUS PORTIONS OF THE HEAVENS.

"Now when Jesus was born in Bethlehem of Judea, in the days of Herod the King, behold, there came wise men from the east to Jerusalem, saying, where is he that is born king of the Jews? For we have seen his star in the east and have come to worship him."—Matt. ii., 2-3 v.

"And lo, the star, which they saw in the east, went before them, till it came and stood over where the young child was. When they saw the star, they rejoiced with exceeding great joy."—Matt. ii., 9-10 v.

What was this star?

Can its appearance have been otherwise than miraculous?

Miraculous, that is, marvellous in our eyes, but no more miraculous than the facts we see around us daily upon this earth, whereon we live, move and have our being. No more miraculous than that the Sun should shine brightly, the Moon reflect his light, the planets thread their appointed paths, or that the stars—each star a sun itself—should send us greeting through illimitable space.

Nevertheless, it is in the unusual that man most readily admits interposition of the Infinite. In the appearance of this star man sees His finger as plainly as those who listened to Daniel's translation of the handwriting upon the wall. Man beholds in this starburst the finger of that Majesty, that glorious power and light insufferable, one of whose marvellous attributes has been declared to be that He telleth the number of the stars and calleth them all by name. Man has been at work for thousands of years charting the sky, cataloguing, naming and numbering, but he has not yet told their number, much less called them all by name. Are not the largest telescopes of the best equipped observatories over the whole civilized globe most diligently engaged

in this, the concluding years of the nineteenth century, in an attempt to photograph, chart and catalogue these same stars?

But what was this star? Was it a meteoric emanation; a will-o'-the-wisp; a conjunction of planets; a special creation; a blaze star at periodic return?

Virgo, from the Dendera Zodiac. The figure holds an ear of corn, typical of "the Bread of Life." The actual Star of Bethlehem is believed to have shown forth just above this constellation.

Much has been said and written about it—scattered here and there adown the ages—chiefly in religious controversy. Occasionally, science has dealt with this remarkable star. The mighty master Kepler calculated the remarkable conjunctions of that remarkable period, and came to the conclusion that a clustering of the planets Saturn, Jupiter and Mars, in the last portion of the sign Pisces, near the first point of Aries—from whence we date our astronomical year—might have been mistaken for a new star. When Tycho Brahe, in 1572, discovered a new star in Cassiopeia, the world believed that the solution had been attained. The Star of Bethlehem, said the wise ones, must have been a blaze star similar to this. Why not, it was asked, might not the Star of Bethlehem have been this identical star? Happy thought! So they set to work to calculate back. They found records of blaze stars, stars which had suddenly appeared and then disappeared again, in the annals of the years 1264 and 975. It was easy to bridge over the chasm, to calculate a periodic return about every 314 years, which brought them to about the time of the Nativity; then, looking forward, to predict the re-appearance of the same star in 1884 or 1885.

The star appeared in 1885.

Not the star in Cassiopeia. Man looked for a star in that constellation and was disappointed. True, some are still looking to Cassiopeia for that star, as our Hebrew friends are still looking for the appearance of Him whose harbinger the star was. But God's ways are not as man's ways. Just as high as are the heavens above the earth—who shall gauge that height?—so are God's thoughts higher than man's.

In the early ages of thought, when

> "The shepherds on the lawn,
> Or ere the point of dawn,
> Sat simply chatting in a rustic row,"

every person born into the world was believed to be guided by a star, to be under the special protection of one or other of the radiant orbs that illume the night skies. It was in an age when this belief prevailed almost universally that the Nativity happened. What if the Holy Child should be found to have been heralded, not by a single star, but by several, appearing at given epochs from the Creation to the Nativity and recorded ever since, right down to our day? Why seek to limit the Almighty? Why suppose that a single star must continually herald and afterwards record an event of universal importance? Why not admit that many stars as well as one have sung for joy over this event.

Therefore, I say the star appeared in 1885. Mind it was not the same star as that which appeared at the Nativity, not the same as that which appeared in Cassiopeia, in 1572. It was another star, a totally different creation, it appeared in Andromeda, a totally different constellation. For all this, it may have been part of one harmonious whole, each new star a letter, a distinct and separate portion, let us say, which put together will form the word "Messiah."

Scattered like radiant points across the great dial of the heavens, the star of Bethlehem, as many distinct stars, has appeared in many constellations, will scarcely have gone over them all before the end of time. The brightest appearance was undoubtedly that at the Nativity, when the prediction of Balaam: "There shall come a Star out of Jacob, and a Sceptre shall rise out of Israel," (Num. xxiv., 17) was doubly fulfilled. Messiah, the bright and morning star came out of Jacob, and a real star came forth over

Jacob's inheritance announcing in the most lustrous splendor the appearance of the Desire of the Nations.

Later than Balaam, Zoroaster—supposed pupil of Daniel—said to have taught astronomy to the Persian Magi, had told that when they saw such a star, they should go up to worship the great one, whose birth it announced. Zoroaster may have known Daniel's prophecy respecting the seventy weeks. He would also know, as an astronomer, the stars which had appeared and disappeared from time to time. He could trace back this star. So can we, for a much more extended period, as follows:

Table showing the dates at which star-bursts would occur at intervals of 314 years, since the star-burst in Andromeda in 1885, together with the remarkable events attending each appearance.

A.D.	
1885.	New star in Nebula of Andromeda, August 19th. Peace General. Queen Victoria's jubilee, 1887.
1570.	New star in Cassiopeia, August 6th, 1572. Reign of Queen Elizabeth. Massacre of St. Bartholomew, 1572. Shakespeare living.
1256.	New star said to have appeared in 1264. Reign of Henry III. of England. Alexander IV. Pope. Papal power at its height.
942.	New star seen at harvest time in England, 975. Reign of Constantine X. Martin III. Pope. Edmund I. King of England.
628.	Flight of Mahomet, June, 16th, 622. He died by poison, June, 632. Honorius I. Pope. Reign of Edwin the Great of England.
314.	Constantine, having embraced Christianity, collects the sacred books. St. Sylvestre Pope.
A.D.	The Saviour of the World born. New star seen by the wise men, who worship him.

"No war, or battle's sound,
Was heard the world around,
The idle spear and shield were high up hung;
The hooked chariot stood,
Unstained with hostile blood;
The trumpet spake not to the armed throng;
And kings sat still with awful eye,
As if they surely knew their sovereign lord was by."
—*Milton.*

B.C.	
314.	Alexander the Great, Universal Conqueror and monarch of the Eastern World.

"While he heaven and earth defied,
Changed his hand, and checked his pride."—*Dryden.*

628. King Josiah taketh care for the repair of the Temple at Jerusalem, 624 B.C. II. Kings, chap. xxii.

942. Asa's good reign. I. Kings, chap. xv. Homer living.

"Three poets in three distant ages born,
Greece, Italy and England did adorn.
The first, in loftiness of thought surpassed.—*Dryden.*

1256. Israel delivered into the hands of the Midianites. Gideon (in 1249 B.C.) destroys Baal's altar. Judges vi., 1-2-5, etc.

1570. Moses born, 1571 B.C. (The greatest of mortals.)

1884. Abraham sojourns in Beersheba, after the birth of Isaac. He plants a grove and calls upon the name of the everlasting God. Gen. xxi., 33-34.

2198. The flood over, a new era begins on the earth.

2512. Noah found grace in the eyes of the Lord. Gen. vi., 8.

2826. The age of the Patriarchs.

3140. Lamech, father of Noah, born 3130 B.C.

3454. * * * * * * * *

3768. Enos, Son of Seth, born, 3769 B.C. "Then began men to call upon the name of the Lord." Gen. iv., 26.

4082. (?) "He made the stars also." Let them be for signs and for seasons, and for days and for years. Gen. i., 14-16.

Thus may this remarkable series of stars have caused Seth himself to prophesy that a star should herald the birth of the Messiah (even as is affirmed by Rolleston and others), may have beheld the early years of Lamech; watched Noah amidst that corrupt ante-deluvian world; seen the purified earth after the flood; shone in surpassing splendor upon Abraham at the door of his tent, when rejoicing after the birth of Isaac; heralded the birth of Moses, the most wonderful mortal of all time; predicted the destruction of Baal's altar by Gideon; cheered the holy Asa and encouraged the faithful Josiah to repair the Temple.

In journeying from Jerusalem toward Bethlehem, it is said that the Magi, who had lost sight of the star, sat down beside a well to refresh themselves, when one of them saw the reflection of the star in the clear waters of the well. He cried out to his companions, and thus: "When they saw the star they rejoiced with exceeding joy."

"But see the Virgin blest,
Hath laid her babe to rest;
Time is, our tedious song should here have ending;
Heaven's youngest teemed star
Hath fixed her polish'd car,
Her sleeping Lord, with handmaid lamp attending;
And all about the courtly stable
Bright-harness'd angels sit in order serviceable."

ASTRONOMY WITH A FIELD LENS.

OBSERVATIONS ON SUN, MOON AND PLANETS.

Those who commence the study of the heavens have usually very inadequate means at their disposal. Some are obliged to rely entirely upon their eyesight, others are in possession of an aid in the shape of an opera glass; others, of a field lens; others, of an astronomical telescope of moderate size and power. The last named have been already supplied with all the information that they need, by Capt. Noble in his "Hours with a three-inch telescope," and Rev. T. W. Webb, in his admirable "Celestial Objects for Common Telescopes," while the former have Mr. Garrett P. Serviss' "Astronomy with an Opera Glass."

Consequently I now seek to assist the still much larger class of students provided only with common field lenses—hand telescopes of all sizes, from three-quarters of an inch to two and a half inches in aperture. Some of these are really fine aids to observation, if by a good maker, and properly steadied upon a stand. They are capable of showing a very great deal if skilfully used; are really very much better and more powerful instruments than those used by Galileo and several others whose names will "shine like the sun in the firmament for ever and ever," in the annals of telescopic discovery. However, they had a virgin field to work upon, we have very much browsed over pastures. For all this, there is no reason why careful and persistent work should not result in our doing famously. The hope of astronomy to-day is not so much in its great seats of applied science as in its numerous bands of persistent workers, eagerly scanning the sky at every opportunity.

Of course I do not mean to say that a small field lens can compete—in picking up details—with the great telescopes of the century. Neither will they permit their possessors to make critical examinations of minute objects that can only be seen for a few hours, perhaps minutes, in several years, and that only with the largest telescopes.

For all this, I hold it true that the best part of every telescope is the man at the eye lens, who errs if he misses his opportunity to use a small telescope when it is within his reach, in anticipation of later on becoming the possessor

of a larger. His eyes may fail before the long looked for time arrives, so that he may not then see an object any better in a powerful telescope than he could now in one of small power.

Another thing, a small telescope acts as an educator and stimulator. It tells us what to expect to see when the time comes for us to purchase a large instrument; it whets our appetite for celestial glories to such an extent that we are finally constrained, obliged to increase the range of our vision by "more power." A little glass is a source of constant pleasure in ordinarily intelligent hands. I have a small "Brougham" glass, which cost I think, $5.50. This little glass, of $1\frac{3}{8}$ inch aperture and 21 inches focal length, will, when mounted on a stand to steady it, show the spots on the sun, the lunar mountains, the crescent form of Venus, the Satellites of Jupiter, Saturn's ring, and separate a few of the easiest of the double stars.

THE MOON.—In commencing operations I would recommend the beginner to commence with the moon, but not the full moon, lest he be disappointed at the start, for Luna is then little better than a mass of blotches of light of different intensities. Find out first when the moon is "new": the calendar pages of SMITH'S PLANETARY ALMANAC will tell this; then, with telescope all ready, two or three nights after—I have had delightful observations of the moon when but some 36 hours old—as soon as the deepening twilight permits, focus the moon and watch her till she sets. The narrow strip of golden light will be seen full of inequalities on the eastern side, owing to the unequal height of the Lunar mountains on which the sun is rising, and the earth-shine (reflected sunlight from our earth) will be quite noticeable on the rest of the disc, the earth being then "full" to the moon. Three or four nights of successive observation will bring the student to the "first quarter," at which time the western half of the moon will be illuminated and the student will have seen the sun rise in succession over the Crisium Sea, (visible to the unaided eye) the Atlas Amphitheatre, the Sea of Serenity, the Lunar Caucasus, Alps, Appenines, Triesenecker, Hipparchus, the Altai Mountains, Theophilus, Cyrillus and Catharina, etc. Ten or twelve days later, the student should go to bed

early and rise before dawn for about a week, so as to examine and watch the moon from near her "last quarter" until she finally rises too near the sun for visibility. Here he will find the imperfect crater Schroeter——darkest when the moon is full;—and one of the grandest of the Lunar Craters, the magnificent Copernicus, with its crater ranges hard by. Here he will also notice the Imbrium Sea, Plato, the great crater Tycho, (seen by the unaided eye) the beautiful mountain Gassendi, the great Walled Plain Schickard, the Libnitz mountains, etc. The above mentioned are all prominent features of the lunar surface, and readily found in a small telescope. How is the student to locate them? By purchasing a map of the moon, to be had by ordering through any bookseller.

JUPITER and his four elder satellites will prove an unending source of delight, the latter changing their positions every night. A telescope of only $\frac{3}{4}$ inch aperture will show them just as plain as Galileo discovered them, now on this, now on that side of their primary. Ganymede, the third from Jupiter, is brightest at first sight, Calisto, the outer, goes farther away from the primary; but to keep proper track of them, the Washington *Nautical Almanac*, price $1.00, should be obtained, which shows by a simple diagram their positions nightly. Although their brightness varies somewhat, (III) Ganymede is usually brightest; Io (I) second, Europa (II) third, and Calisto (IV) last. I retain the old figures, such being still retained in the *Nautical* and other astronomical publications. In large instruments Jupiter's disc is found crossed by belts. These are invisible in the smallest telescopes, but are glimpsed in those of two inches or more aperture, sometimes as a single central band, sometimes as a parallel streak, separated by a bright equatorial belt.

SATURN will show his ring to the student possessed of a $1\frac{1}{4}$ inch telescope or upwards, and the amateur will be delighted with the result of an examination of this wonderful planet, provided he does not expect too much. A small telescope will not divide the ring into three parts, neither will it reveal the beauties of the belts, or delineate the white equatorial region, the ruddy streaks, or the bluish grey of the poles. It will not show the retinue of satellites, but

Titan, the largest, will most surely be seen, generally a considerable distance from Saturn, shining like an 8th magnitude star. Its place will be found, with those of all the other satellites, in the Washington *Nautical*.

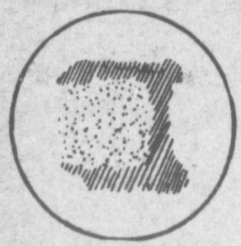
URANUS, whenever visible as a small star to the unaided eye, will show nothing more in a small lens except a steady disc of light.

To find NEPTUNE, the amateur will need not only the *Nautical*, but a star map, in order to know exactly where to point his telescope.

THE ASTEROIDS are not entirely beyond the range of a small telescope. Several of them, when at or near opposition, are to be picked up, shining as small planetary discs. Vesta, the largest, when at Opposition, is visible to the unaided eye as a star of the fifth or sixth magnitude. The difficulty is to locate these small bodies amongst the hosts of stars. It can only be done with the aid of an ephemeris, giving their exact places in Right Ascension and Declination. An ephemeris of the four best known: Ceres, Juno, Pallas and Vesta is to be found each year in the Greenwich *Nautical*.

VENUS will probably disappoint the amateur acquainted with her proximity to the earth. She scintillates so, and is so unsteady that very little can be done, even with the most powerful, much less the smallest telescopes. She is best seen when visible before sunrise in the morning sky, because the air is then purer, but this remark applies to all the planets, in fact generally to all observations. Five weeks before and after inferior conjunction with the sun, Venus is at "greatest brilliancy." About this time, a $1\frac{3}{8}$ inch lens will show her crescent form distinctly, and the amateur will have seen that which so charmed Galileo, proving to the world the truth of the Copernican theory, and that Venus is a planet moving at such times between the earth and sun. One very fine winter morning, I remember seeing, with a 2 inch Achromatic, that remarkable phenomena known as the "Phosphorescence of Venus," when what should have been the dark part of her disc was covered with a beautiful hazy light, similar to the "old moon in the new moon's arms."

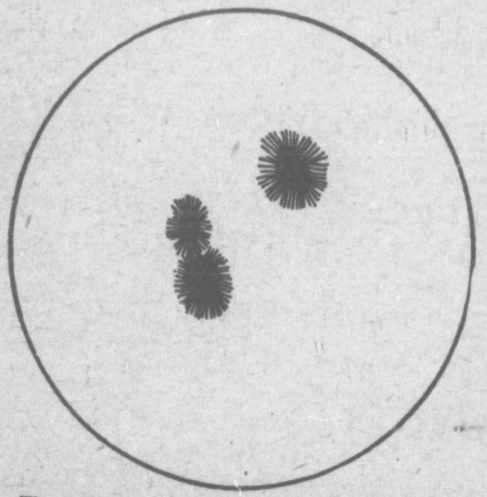
MARS, so far as my observations go, will remain a sealed book in a small lens. He is the most disappointing of all, owing to his small size, and naturally so, when we theorize so much on his probable conditions. I have only been able to note a sort of duskiness in his centre in a 2 inch lens, which, with the necessary increase of telescopic power, proved to be what is known as the "hour glass sea," a drawing of which is shown, as seen in a larger telescope. I could also "imagine" rather than "see" that one of his poles was brighter than the rest of his disc.



Mars. The "Hour Glass Sea." Drawn by Hooke.

MERCURY will reveal nothing. Perhaps if he were located in the daytime, when near inferior conjunction, a small lens, say of two inches, might show his crescent form.

THE SUN, grand as it is, must not be looked at first. If the amateur values his eyesight he will familiarize himself with planetery and stellar observation ere he turns his tube to the Sun. To avoid permanent injury to the eyes, several round discs of blue glass should be obtained (I used three). These discs should be placed in a temporary card or metal tube, and fixed on the telescope between the eye-piece and the eye, as described in my articles on the Transits of Mercury. By this means, views of solar spots will be readily obtained, even in the small telescope to which I refer. Much instruction can be gained by attempting to draw the spots as they appear.



The Sun, November 4th, 1894, in 1⅝ inch lens. (Drawn by the Author.)

[I hope to continue with descriptions of stars, star-clusters, Nebulæ, double stars, etc., in a future issue.]