

culate-dotted macrospores. It grows in damp springy soil, not in water, in the Willamette Valley, maturing in August and September.

694. *SELAGINELLA RUPESTRIS* Spring, var. *TROPICA* Spring. *S. struthioloides* Presl.

695. *EQUISETUM LÆVIGATUM* A. Braun; Gray, Man. p. 655.

696. *EQUISETUM LIMOSUM* L.

697. *MARSILIA VESTITA* Hook. & Grev. Ic. Fil. t. 159.

698. *AZOLLA CAROLINIANA* Willd. *A. microphylla* Kaulf.

699-701. *NITELLÆ* species, not determined.

The *Musci*, *Hepaticæ*, and *Lichenes* are under examination, and will be separately published.

Six hundred and forty-second Meeting.

March 12, 1872. — MONTHLY MEETING.

The CORRESPONDING SECRETARY in the Chair.

Mr. C. S. Pierce made a communication on the photometric measurement of the stars, and exhibited an instrument for this purpose devised by Zöllner.

Mr. Lewis H. Morgan presented the following paper on Australian Kinship; with Appendices, by Rev. Lorimer Fison.

There are five classes of facts, preserved in the institutions of savage and barbarous nations, which are now attracting increasing attention. In connection with inventions and discoveries, they have been the instrumentalities by means of which mankind traversed the successive stages of savagery, of barbarism, and of civilization. When these facts are fully ascertained and compared, and the logical deductions are gathered into definite propositions, the most instructive portion of the ancient experience of mankind will be recovered and utilized.

It seems probable that the advancement of man through the successive stages of savagery and of barbarism was greater in degree than it has been since in the stages of civilization. When the savage had raised himself to a barbarian, and the latter had risen to the pastoral and agricultural conditions, this improved man, although still a barbarian, was further removed from the primitive savage than the philosopher of the present age is above this same barbarian. Be this as it may, the experiences of these several conditions are successive links of a common chain, each of which is necessary to the interpretation of

P

00064



CONTENTS

Astronomical and Statistical Matter.

CALENDARS	2, 6, 10, 14, 18, 22, 26, 30, 34, 38, 42, 46
ASTRONOMICAL	4
EXPLANATION OF THE CALENDAR	4
ECLIPSES	4
COURSE OF THE PLANETS	4
CHRONOLOGICAL CYCLES	4
SYMBOLS USED IN THIS ALMANAC	4
UNITED STATES AND STATE GOVERNMENTS	8
UNITED STATES SENATE	12
FOREIGN COINS	12
POST-OFFICE RATES	16
TABLE OF STAMP DUTIES	20
RULERS, ETC. OF THE PRINCIPAL NATIONS OF THE WORLD	24
METRICAL SYSTEM OF WEIGHTS AND MEASURES	24
NOTABLE EVENTS AND DEATHS FROM OCTOBER 1, 1870, TO NOVEMBER 1, 1871	60

Literary Articles.

THE TODDLEBS ON A TRAIN	J. T. TROWBRIDGE	23
OLD ALMANACS	J. S. BARRY, A. M.	35
A THUNDER-SHOWER . . . . .	. . . . .	40
HANDKERCHIEF CELEBRITY	BARNARD BARTON	40
AN IDYL IN CHALK	MATTHEW BROWNE	40
PICTURESQUE PLACES IN GERMANY.—THE MAIN AND THE LAHN . . . . .	. . . . .	41
ON THE SIGHT OF BOYS PLAYING . . . . .	. . . . .	47
COWSLIPS . . . . .	. . . . .	47
THE CHEST OF CIGARS	WILLIAM M. THACKERAY	49
LOCKED IN	FREDERICK LOCKER	50
LOCKED OUT	HENRY S. LEIGH	52
MEMOIR OF THE CATS OF GRETA HALL . . . . .	. . . . .	52
WHAT IS AN ALBUM?	ROBERT SOUTHEY	52
PANCAKES . . . . .	. . . . .	57
LOVE HAS NOT EYES	THOMAS HOOD	58
THE LITTLE ROMANCE . . . . .	. . . . .	58

BOSTON:

JAMES R. OSGOOD AND COMPANY,

LATE TICKNOR & FIELDS, AND FIELDS, OSGOOD, & CO.

OFFICE OF THE ATLANTIC MONTHLY.

ASTRONOMICAL

EXPLANATION OF THE CALENDAR.

THE SUN. The time of sunrise or sunset is the time when the uppermost point of the sun reaches the true horizon.

The columns headed latitude of Boston are good for New England, New York, the shores of Lakes Erie and Michigan, Michigan, Wisconsin, Iowa, Minnesota, Dakota, Montana, Washington, and Oregon.

The columns headed latitude of New York are good for Long Island, and the shore of the Sound, New York City, New Jersey, Pennsylvania, Ohio, Indiana, Illinois, Nebraska, and Wyoming.

The columns headed latitude of Washington are good for Delaware, Maryland, Virginia, West Virginia, Kentucky, Missouri, Kansas, Colorado, Utah, Nevada, California, and will serve for all the Southern States.

THE MOON. The time of Moon's rising and setting are defined like the sun's, but the uppermost point of the moon at those times is not illuminated.

The column headed San Francisco should be used for all points west of the Rocky Mountains; but for any other State use the column headed with the name of the same place that appears above those entered for sunrise and sunset.

THE TIDES. Boston is so situated with reference to the tidal wave that from the tides at this port those at any other can be readily calculated. The following table shows how to obtain the time of high water from any other port from that for Boston:—

For Eastport subtract 19 minutes from time for Boston.	
"Hallowell's Pt. " 12 " " " " "	
"Portland " 2 " " " " "	
"Portsmouth " 4 " " " " "	
"Newburyport " 5 " " " " "	
"Rockport " 30 " " " " "	
"Salem " 14 " " " " "	
"Boston Light " 15 " " " " "	
"Plymouth " 8 " " " " "	
"Wellfleet " 22 " " " " "	
"Provincetown " 5 " " " " "	
"Monomoy add 81 " " " " "	
"Nantucket " 57 " " " " "	
"Hyannis " 55 " " " " "	
"Edgartown " 49 " " " " "	
"Holmes' Hole " 16 " " " " "	
"New York subtract 8h 14 " " " " "	
"Philadelphia add 2h 17 " " " " "	

Our predictions for Boston have been obtained from the office of the U. S. Coast Survey. The above table is made from data given in the Coast Survey Report for 1864.

PHENOMENA, ETC. The holidays marked in this column are those of the Calendar of the English Book of Common Prayer, with certain exceptions and additions. It is a mistake to suppose that the English Church calendar has an exclusively religious significance. On the contrary, many Saints' days are there set down which clergymen are forbidden to observe. "The reasons why the names of these Saints' days and holidays were resumed into the Calendar are various. Some of them being retained upon account of our Courts of Justice, which usually make their returns on these days, or else upon the days before or after them, which are called in the writs *Vigil. Fest. or Crast.*, as in *Vigil. Martin, Fest. Martin, Crast. Martin*, and the like. Others are probably kept in the calendar for the sake of such tradesmen, handicraftsmen, and others as are wont to celebrate the memory of their tutelary saints; the *Welshmen* do of *St. David*, the shoemakers of *St. Crispin*, etc. And again, churches being in several places dedicated to some or other of these Saints, it has been the usual custom in such places to have *wakes* or *fairs* kept upon these days. . . . Besides, the histories which were writ before the Reformation do frequently speak of transactions happening upon such a holiday, or about such a time, without mentioning the month; relating one thing to be done at *Lammas-tide*, and another about *Martinnas*, etc., so that were these names left out of the calendar, we might be at a loss to know when several of these transactions happened."

The predictions in this column are adapted to the meridian of Washington, and are brought to any other by simply applying the correction of time. To obtain from Washington time, time in

New York subtract 12 minutes.	Bangor subtract 33 minutes.
Boston " 24 " "	Buffalo add 8 " "
Philadelphia " 8 " "	Pittsburg " 18 " "
Chicago add 42 " "	Cincinnati " 30 " "
Albany subtract 18 " "	Springfield " 61 " "
New Orleans add 53 " "	Detroit " 44 " "
Louisville " 35 " "	Salt Lake " 2h 20 " "
St. Louis " 52 " "	San Francisco " 3h 2 " "
Portland subtract 27 " "	

ECLIPSES.

There will be four eclipses. I. A partial eclipse of the sun, June 5th. This will be visible throughout the Atlantic States, as a partial eclipse or faint shade upon the moon

from the time of its rising till 8h 10m p.m., Washington time. It will be more apparent the farther east the observer is.

II. An annular eclipse of the sun, June 5th. This will be visible in Alaska, as a small partial eclipse, a little before sunset.

III. A very small partial eclipse of the moon, November 14th. Visible throughout the country, but very insignificant.

Moon enters penumbra Nov. 14th, 9 h 53 m Washington time.	
" " shadow " 11 51 " "	
Middle of eclipse Nov. 15th, 0 11 " "	
Moon leaves shadow " 0 32 " "	
" " penumbra " 2 30 " "	

One thirtieth of moon's diameter eclipsed.

IV. An annular eclipse of the sun, Nov. 30. Visible only at Cape Horn and the southern part of South America.

COURSE OF THE PLANETS.

[For the conjunctions of ♄ & ♃ and ♃ with ♄ see Calendar.]

Mercury is always so nearly in the direction of the sun that it can seldom be seen. The evening of the 5th of April will be the most favorable opportunity during the year, when it must not be confounded with Mars, which will be still nearer the sun. Mercury may also be seen on January 24th and September 16th, before sunrise. On the former occasion it will be very near Saturn, which will be southeast of it.

Venus will be visible in the morning, in the first part of the year, and will be apparently approaching the sun from the beginning of the year till on July 16th at 0h 57m a.m., it will reach its superior conjunction. For the rest of the year it will be evening star, and will be apparently getting farther from the sun, and at the same time brighter, till 1873.

On the first of January, Mars will set about two hours and a half later than the sun, and will be a little south of a 4th-magnitude star (♄) in the mane of Capricornus. On the 15th it will be in a line between ♄ and ♃ Capricorn. In the next four weeks it will traverse Aquarius (crossing close to ♄ on February 11th); thence it will pass to Pisces, then to Aries, and then to Taurus, where it will be overtaken by the sun on the 17th of May, at 10h 44m a.m. For the rest of the year it will be a morning star. On the 17th of June it will come into conjunction with Venus. On August 13th, Castor, Pollux, and Mars will be in a straight line. On September 21st it will overtake and pass Jupiter. On October 1st it will pass close to Regulus, and at the end of the year it will be north of another brilliant star, *Spica Virginis*. It will then rise about an hour and a quarter after midnight.

On the 1st of January Jupiter will be conspicuous all night in a line continued from Castor through Pollux. On January 15th, at 10h 22m a.m., it will be in opposition to the sun, and will therefore have its greatest brilliancy about that date, and will cross the meridian about midnight. From the beginning of the year it will be retrograding (or moving westward) towards ♄ Gemini, (a 3d-magnitude star in the wrist of the following twin). It will never reach this star, however, but on March 15th, at 11h 17m a.m., will begin to retrace its way. On the 25th of May it will be in nearly the same place in the heavens as on the 1st of January, but greatly diminished in splendor. It will now set about three quarters of an hour before midnight. On July 16th, it will pass near ♄ Cancer (4th mag.). On July 25th, it will come into conjunction with Venus, and soon after will be lost in the light of the sun. It will reach conjunction August 2d, 10h 57m p.m., and for the rest of the year will be a morning star. On September 21st it will be in conjunction with Mars, and will pass Regulus October 29th.

Saturn, the slowest moving of all the visible planets, will, at the beginning of the year, follow close after the sun. It will come into conjunction on the 3d of January, at 1h 35m a.m., and will then be morning star until July. On the 17th of January it will be a little south of the 2d-magnitude star, *♄ Sagittarii*, and will be advancing slowly towards the eastern stars. On the 29th January it will come into conjunction with Mercury, and on the 14th of February with Venus. On the 30th April, at 0h 53m a.m., being about 7° from *♄ Sagittarii*, it will begin to turn back towards that star. Its brightness will at the same time (slightly) increase until July 8th, when at 6h 16m p.m. it will be in opposition with the sun, having then performed half its journey back to *♄ Sagittarii*. On September 18th, at 10h 46m a.m., having nearly reached that star, it will again commence its usual eastward course, and on the 23d of December will reach the point where it began to retrograde. It will then set just after the sun. On the 4th of December it will be in conjunction with Venus.

The rings of Saturn will be well situated for observation, especially in July and August.

CHRONOLOGICAL CYCLES.

Dominical Letters, G F	Golden Number, 11
Epact, 20	Roman Indiction, 15
Solar Cycle, 5	Julian Period, 6585

SYMBOLS USED IN THIS ALMANAC.

+ North,	☉ Sun,	♀ Venus,	♄ Saturn.
— South,	☾ Moon,	♂ Mars,	° Degrees.
♄ Conjunction,	♄ Mercury,	♃ Jupiter,	/ Minutes.

I. A partial eclipse of the sun, June 5th. This will be visible throughout the Atlantic States as a partial eclipse or faint shade upon the moon

ASTRONOMICAL.

EXPLANATION OF THE CALENDAR.

THE SUN. The time of sunrise or sunset is the time when the uppermost point of the sun reaches the true horizon.

The columns headed latitude of Boston are good for New England, New York, the shores of Lakes Erie and Michigan, Michigan, Wisconsin, Iowa, Minnesota, Dakota, Montana, Washington, and Oregon.

The columns headed latitude of New York are good for Long Island, and the shore of the Sound, New York City, New Jersey, Pennsylvania, Ohio, Indiana, Illinois, Nebraska, and Wyoming.

The columns headed latitude of Washington are good for Delaware, Maryland, Virginia, West Virginia, Kentucky, Missouri, Kansas, Colorado, Utah, Nevada, California, and will serve for all the Southern States.

THE MOON. The time of Moon's rising and setting are defined like the sun's, but the uppermost point of the moon at those times is not illuminated.

The column headed San Francisco should be used for all points west of the Rocky Mountains; but for any other State use the column headed with the name of the same place that appears above those entered for sunrise and sunset.

THE TIDES. Boston is so situated with reference to the tidal wave that from the tides at this port those at any other can be readily calculated. The following table shows how to obtain the time of high water from any other port from that for Boston:—

For	Eastport	subtract	19	minutes	from	time	for	Boston.
"	Hallowell's Pt.	"	12	"	"	"	"	"
"	Portland	"	2	"	"	"	"	"
"	Portsmouth	"	4	"	"	"	"	"
"	Newburyport	"	5	"	"	"	"	"
"	Rockport	"	30	"	"	"	"	"
"	Salem	"	14	"	"	"	"	"
"	Boston Light	"	15	"	"	"	"	"
"	Plymouth	"	8	"	"	"	"	"
"	Wellfleet	"	22	"	"	"	"	"
"	Provincetown	"	5	"	"	"	"	"
"	Monomoy	add	31	"	"	"	"	"
"	Nantucket	"	57	"	"	"	"	"
"	Hyannis	"	55	"	"	"	"	"
"	Edgartown	"	49	"	"	"	"	"
"	Holmes' Hole	"	16	"	"	"	"	"
"	New York	subtract	3h 14	"	"	"	"	"
"	Philadelphia	add	2h 17	"	"	"	"	"

Our predictions for Boston have been obtained from the office of the U. S. Coast Survey. The above table is made from data given in the Coast Survey Report for 1864.

PHENOMENA, ETC. The holidays marked in this column are those of the Calendar of the English Book of Common Prayer, with certain exceptions and additions. It is a mistake to suppose that the English Church calendar has an exclusively religious significance. On the contrary, many Saints' days are there set down which clergymen are forbidden to observe. "The reasons why the names of these Saints' days and holidays were resumed into the calendar are various. Some of them being retained upon account of our Courts of Justice, which usually make their returns on these days, or else upon the days before or after them, which are called in the writs *Vigil. Fest.* or *Crast.*, as in *Vigil. Martin, Fest. Martin, Crast. Martin*, and the like. Others are probably kept in the calendar for the sake of such tradesmen, handicraftsmen, and others as are wont to celebrate the memory of their tutelar saints; the *Welshmen* do of *St. David*, the shoemakers of *St. Crispin*, etc. And again, churches being in several places dedicated to some or other of these Saints, it has been the usual custom in such places to have *wakes* or *fairs* kept upon these days. . . . Besides, the histories which were writ before the Reformation do frequently speak of transactions happening upon such a holiday, or about such a time, without mentioning the month; relating one thing to be done at *Lammas-tide*, and another about *Martinmas*, etc., so that were these names left out of the calendar, we might be at a loss to know when several of these transactions happened."

The predictions in this column are adapted to the meridian of Washington, and are brought to any other by simply applying the correction of time. To obtain from Washington time, time in

New York	subtract	12	minutes.	Bangor	subtract	33	minutes.
Boston	"	24	"	Buffalo	add	8	"
Philadelphia	"	8	"	Pittsburg	"	13	"
Chicago	add	42	"	Cincinnati	"	30	"
Albany	subtract	13	"	Springfield	"	51	"
New Orleans	add	53	"	Detroit	"	44	"
Louisville	"	35	"	Salt Lake	"	2h 20	"
St. Louis	"	52	"	San Francisco	"	3h 2	"
Portland	subtract	27	"				

ECLIPSES.

There will be four eclipses.

I. A partial eclipse of the sun. This will be visible throughout the Atlantic States, as a partial eclipse or faint shadow upon the moon

from the time of its rising till 8h 19m P.M., Washington time. It will be more apparent the farther east the observer is.

II. An annular eclipse of the sun, June 5th. This will be visible in Alaska, as a small partial eclipse, a little before sunset.

III. A very small partial eclipse of the moon, November 14th. Visible throughout the country, but very insignificant.

Moon enters penumbra	Nov. 14th,	9 h	53 m	Washington time.
" " shadow	"	11	51	"
Middle of eclipse	Nov. 15th,	0	11	"
Moon leaves shadow	"	0	32	"
" " penumbra	"	2	30	"

One thirtieth of moon's diameter eclipsed.

IV. An annular eclipse of the sun, Nov. 30. Visible only at Cape Horn and the southern part of South America.

COURSE OF THE PLANETS.

[For the conjunctions of ♀ ♂ ♄ and ♀ with ☾ see Calendar.]

♂

Mercury is always so nearly in the direction of the sun that it can seldom be seen. The evening of the 5th of April will be the most favorable opportunity during the year, when it must not be confounded with Mars, which will be still nearer the sun. Mercury may also be seen on January 24th and September 16th, before sunrise. On the former occasion it will be very near Saturn, which will be southeast of it.

♀

Venus will be visible in the morning, in the first part of the year, and will be apparently approaching the sun from the beginning of the year till on July 16th at 0h 37m A.M., it will reach its superior conjunction. For the rest of the year it will be evening star, and will be apparently getting farther from the sun, and at the same time brighter, till 1873.

♂

On the first of January, Mars will set about two hours and a half later than the sun, and will be a little south of a 4th-magnitude star (♄) in the mane of Capricornus. On the 15th it will be in a line between ♄ and ♀ Capricorn. In the next four weeks it will traverse Aquarius (crossing close to ♄ on February 11th); thence it will pass to Pisces, then to Aries, and then to Taurus, where it will be overtaken by the sun on the 17th of May, at 10h 44m A.M. For the rest of the year it will be a morning star. On the 17th of June it will come into conjunction with Venus. On August 13th, Castor, Pollux, and Mars will be in a straight line. On September 21st it will overtake and pass Jupiter. On October 1st it will pass close to Regulus, and at the end of the year it will be north of another brilliant star, *Spica Virginis*. It will then rise about an hour and a quarter after midnight.

♄

On the 1st of January Jupiter will be conspicuous all night in a line continued from Castor through Pollux. On January 15th, at 10h 22m A.M., it will be in opposition to the sun, and will therefore have its greatest brilliancy about that date, and will cross the meridian about midnight. From the beginning of the year it will be retrograding (or moving westward) towards ♄ Geminorum (a 3d-magnitude star in the wrist of the following twin). It will never reach this star, however, but on March 15th, at 11h 17m A.M., will begin to retrace its way. On the 25th of May it will be in nearly the same place in the heavens as on the 1st of January, but greatly diminished in splendor. It will now set about three quarters of an hour before midnight. On July 16th, it will pass near ♄ Cancri (4th mag.). On July 28th, it will come into conjunction with Venus, and soon after will be lost in the light of the sun. It will reach conjunction August 2d, 10h 57m P.M., and for the rest of the year will be a morning star. On September 21st it will be in conjunction with Mars, and will pass Regulus October 29th.

♄

Saturn, the slowest moving of all the visible planets, will, at the beginning of the year, follow close after the sun. It will come into conjunction on the 3d of January, at 1h 35m A.M., and will then be morning star until July. On the 17th of January it will be a little south of the 2d-magnitude star, ♄ Sagittarii, and will be advancing slowly towards the eastern stars. On the 29th January it will come into conjunction with Mercury, and on the 14th of February with Venus. On the 30th April, at 0h 53m A.M., being about 7° from ♄ Sagittarii, it will begin to turn back towards that star. Its brightness will at the same time (slightly) increase until July 9th, when at 6h 15m P.M. it will be in opposition with the sun, having then performed half its journey back to ♄ Sagittarii. On September 18th, at 10h 46m A.M., having nearly reached that star, it will again commence its usual eastward course, and on the 23d of December will reach the point where it began to retrograde. It will then set just after the sun. On the 4th of December it will be in conjunction with Venus.

The rings of Saturn will be well situated for observation, especially in July and August.

CHRONOLOGICAL CYCLES.

Dominical Letters, G F	Golden Number, 11
Epact, 20	Roman Indiction, 15
Solar Cycle, 5	Julian Period, 6585

SYMBOLS USED IN THIS ALMANAC.

+ North,	☉ Sun,	♀ Venus,	♄ Saturn.
— South,	☾ Moon,	♂ Mars,	° Degrees.
♄ Conjunction,	♂ Mercury,	♄ Jupiter,	/ Minutes.

I. A partial eclipse /illegible/. This will be visible through-
out the Atlantic States as a /illegible/.