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 Frels.

695. Equisetum levigatum A. Braun; Gray, Man. p. 655.
696. Equisetum limosum L.
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 Zollner.

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
THE ATLANIC ALMANAC FOR 1879.

ASTRONOMICAL EXPLANATION OF THE CALENDAR.

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


The time of sunset is the time when the uppermost point of the sun reaches the true horizon.

The column headed "Dakota, Minnesota, Wisconsin," etc. is for Dakota, Minnesota, Wisconsin, Illinois, Iowa, Nebraska, and Utah.

The time of sunrise is the time when the uppermost point of the sun reaches the true horizon.

The column headed "Southern States" is for Alabama, Mississippi, Louisiana, Texas, and Florida.

The time of sunset is the time when the uppermost point of the sun reaches the true horizon.

The column headed "Southern States" is for Alabama, Mississippi, Louisiana, Texas, and Florida.

The time of sunrise is the time when the uppermost point of the sun reaches the true horizon.

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JIM 60

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THE PRINCESS VISCOUNT, FROM A PAINTING BY FRA. BARTOLOMEO

BARTOLOMEO.

UNEXPECTED ASSISTANCE, FROM A PAINTING BY TANACOS.

CHAMBER PRACTICE.
THE FIFTH SWALLOWS.

AN AWKWARD ENCOUNTER.
MARY AND JOHN AT THE TOMB OF CHRIST.

MORNING IN THE DESERT, FROM A PAINTING BY CARL HAAG.

REYARD AT HOME,—BY BOEDEKER.
REYARD AWAY,—BY BOEDEKER.

THREE IN A BED.

THE MENGARENI.
FAUST AND MARGARET.

FAMILY JAMS.

THE BRIDGE AT FRANKFORT.

CHURCH AT ASCHAFENBURG.

WATER-TOWER AT WILHELM.

STREET OF ZELL.

THE QUAY, WURZBURG.

ZOBEL'S PILAR WURZBURG.

CASTLE OF KUNTH.

CASTLE OF HUMBOLDT.

CASTLE OF WIERS.

DIETRICHSEN.

SOUTH PRINCE, WITWIL CATHEDRAL.

LOCKED IN.

LOCKED OUT.

WAITING FOR DINNER.

ILLUSTRATION TO THE POEM "JIM" 59

BOSTON:
JAMES R. OSGOOD AND COMPANY, LATE YOSCO & Field, AND Field, OSGOOD, & CO.


### ASTRONOMICAL

#### EXPLANATION OF THE CALENDAR

The sun sets or sunrise 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 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 as 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 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 tide 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 than that for Boston:

<table>
<thead>
<tr>
<th>Port</th>
<th>Time Difference from Boston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hallowell's Pt</td>
<td>12 minutes</td>
</tr>
<tr>
<td>Portland</td>
<td>2</td>
</tr>
<tr>
<td>Portsmouth</td>
<td>4</td>
</tr>
<tr>
<td>Newport</td>
<td>6</td>
</tr>
<tr>
<td>Rockport</td>
<td>30</td>
</tr>
<tr>
<td>Salem</td>
<td>14</td>
</tr>
<tr>
<td>Boston</td>
<td>16</td>
</tr>
<tr>
<td>Plymouth</td>
<td>6</td>
</tr>
<tr>
<td>Weiflitz</td>
<td>22</td>
</tr>
<tr>
<td>Providence</td>
<td>5</td>
</tr>
<tr>
<td>Menemcy</td>
<td>31</td>
</tr>
<tr>
<td>Nantucket</td>
<td>67</td>
</tr>
<tr>
<td>Hyannis</td>
<td>16</td>
</tr>
<tr>
<td>Edgarton</td>
<td>49</td>
</tr>
<tr>
<td>Holmen's Hole</td>
<td>16</td>
</tr>
<tr>
<td>New York</td>
<td>Subtract 2h 14</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>Add 2h 17</td>
</tr>
</tbody>
</table>

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 1895.

#### PHENOMENA, ETC.

The holidays marked in this column are those on 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 old books Figit. Fest. or Cast., as in Vrgti. Mart., Fære. Martin, Coast. 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 Wicalmen do of St. David, the shoemakers of St. Crispus, 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 holidays 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 Lowmas-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

<table>
<thead>
<tr>
<th>Time Difference from New York</th>
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</thead>
<tbody>
<tr>
<td>New York</td>
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<tr>
<td>Buffalo</td>
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<tr>
<td>Philadelpia</td>
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<tr>
<td>Chicago</td>
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<td>Allaire</td>
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<td>New Orleans</td>
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<tr>
<td>Louisville</td>
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<tr>
<td>St. Louis</td>
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<tr>
<td>Portland</td>
</tr>
</tbody>
</table>

### ECLIPSES

There will be four eclipses:

1. A partial eclipse October 22. This will be visible through-out the Atlantic States as a partial eclipse of faint moon upon the moon from the time of its rising until 8h 19m p.m., Washington time. It will be more apparent the farther east the observer is.

2. An annular eclipse of the moon, June 26. This will be visible in Alaska, as a small partial eclipse, a little before sunset.

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

4. An annular eclipse of the sun, June 26. This will be visible only at Cape Horn and the southern part of South America.

#### COURSE OF THE PLANETS

For the conjunctions of Jupiter and Saturn with the Sun, 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 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 morning of the year until July 16th at 6h 3m 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 July 16th.

- 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 (β) in the name of Hercynus. On the 15th it will be in a line between ζ and ζ Capit.-corn. In the next four weeks it will traverse Aquarius (crossing close to ζ on February 17th); thence it will pass to Pisces, then to Aries, and then to Taurus, where it will be overaken by the sign of the 17th of May, at 11h 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 15th, 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 bright star, ζ Canis Majoris. It will then rise about an hour and a quarter after midnight.

- Saturn, the slowest moving of all the visible planets, will begin at the beginning of the year, follow close after the sun. It will come into conjunction with Venus on the 34th of January at 1h 3m A.M. and will be moving in a line with Jupiter until July 17th. On the 17th of January it will be a little south of the 2nd-magnitude star, ζ Sagittarii, and will be advancing slowly towards the eastern stars. On the 25th January it will come into conjunction with Mercury, and on the 3rd of February with Venus. On the 30th April, at 8h 3m A.M., being about 9° from ζ Sagittarii, it will begin to turn back towards that star. Its brilliancy will at the same time (slightly) increase until July 4th, when at 8h 15m A.M. it will be in opposition with the sun, having then performed half its journey back to Sagittarii. On September 15th, at 9h 40m A.M., having nearly reached that star, it will again commence its usual eastern course, and on the 23rd of December it will reach the point where it began to retrograde. It will then rise 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**
- **Ecclesiastical Indication, 15**
- **Solar Cycle, 5**
- **Julian Period, 5955**

#### SYMBOLS USED IN THIS ALMANAC

- + North, ☀ Sun, ☉ Venus, ♄ Saturn
- - South, ☽ Moon, ☉ Mars, ☑ Degree
- ♍ Conjunction, ♆ Mercury, ♄ Jupiter, ♄ Minute