

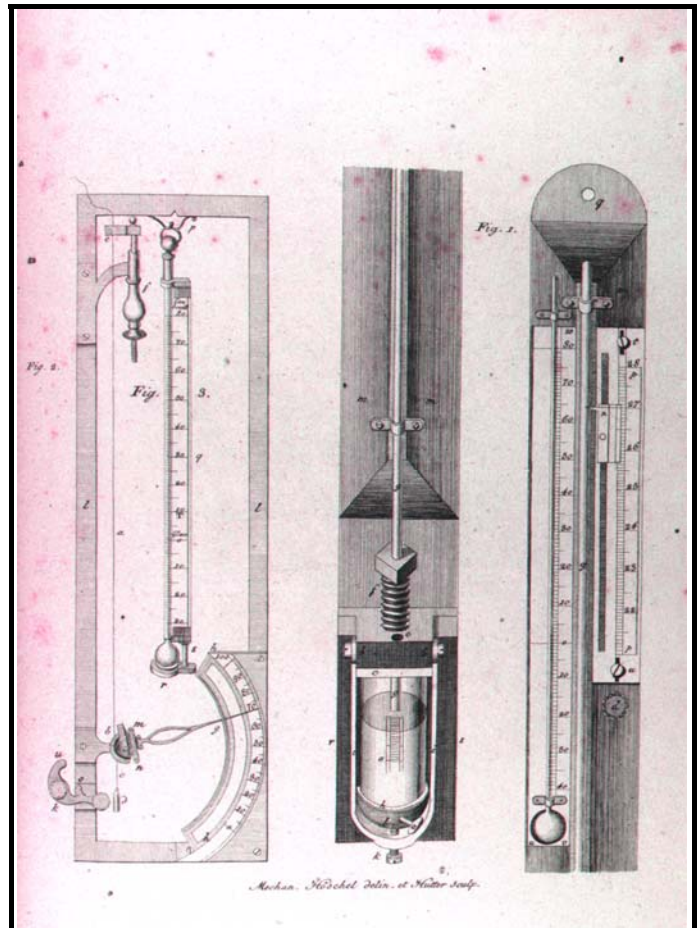
Courtesy NOAA Geodetic Survey

Map showing the route of the Lewis and Clark Expedition from it's origins in Virginia to St. Louis and on to the Pacific Coast.

## Examples of 18<sup>th</sup> Century Thermometers

Thermometers and barometer in:  
 Beschreibung der meteorologischen  
 Instrumente...  
 by Augustin Stark, published in 1815.  
 Library Call Number QC876 .S72 1815.

Courtesy NOAA Photo Library  
 Libr0639





**One of only a few stretches of free flowing water in the lower Missouri River basin. Photo near Lisbon, Missouri.**

Vernon Preston

**Low water during September along Missouri River near 1804-1805 Fort Mandan Camp. Photo near Washburn, North Dakota.**

Vernon Preston



**Replica of Fort Mandan - Winter Quarters for 1804-1805. Near Washburn, North Dakota.**

Vernon Preston



**Earthen Lodge replica at Knife River Indian Villages National Historic Site near Stanton, North Dakota.**

Vernon Preston

**Inside an earthen lodge replica at the Knife River Indian Villages National Historic Site near Stanton, North Dakota.**

Vernon Preston



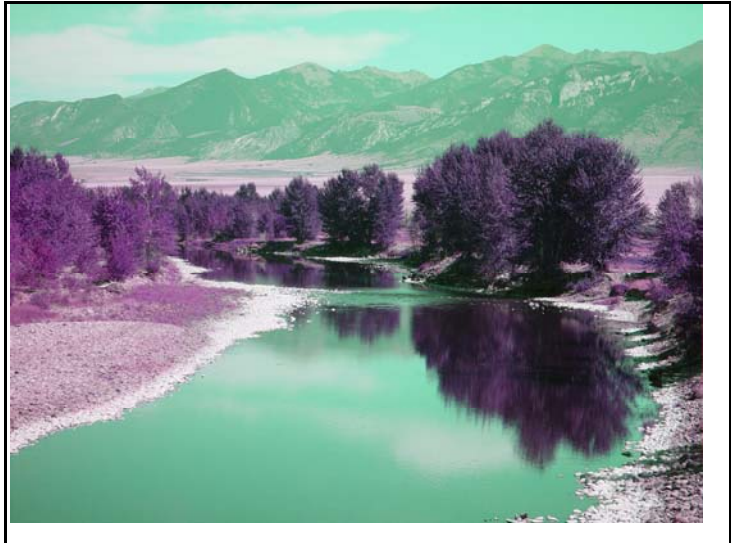
**Modern highway signs in the Dakotas show respect to the Expedition.**

Vernon Preston



**Headwaters of the Missouri River  
where the Gallatin, Jefferson and  
Madison Rivers combine to form  
the Missouri. Photo near  
Threeforks, Montana.**

Vernon Preston



**Headwaters area along the  
Jefferson River. Photo near Twin  
Bridges, Montana.**

Vernon Preston

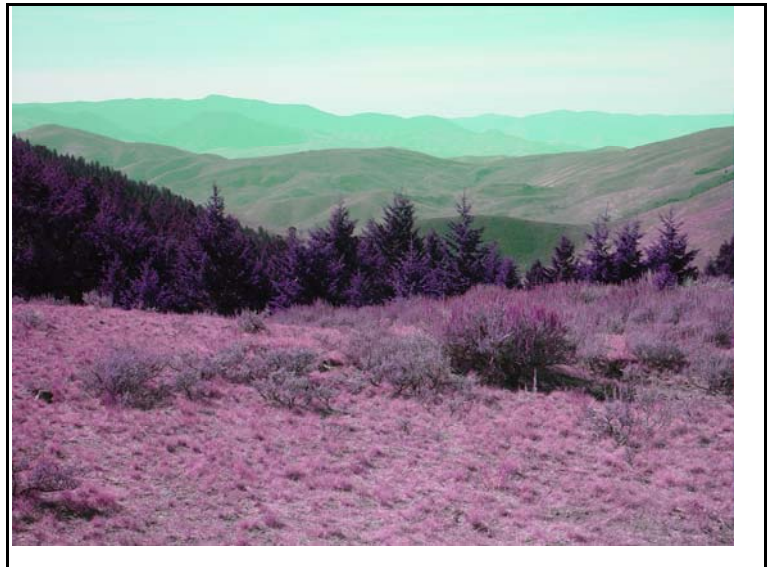


**Near the Continental Divide on Trail Creek near Lemhi Pass. Photo west of Grant, Missouri.**

Vernon Preston

**At the Continental Divide looking west from Lemhi Pass into Idaho. Photo east of Tendoy, Idaho.**

Vernon Preston



**Bitterroot Mountains along the Idaho / Montana border. Photo near Lolo, Montana.**

Vernon Preston



**Clearwater River below Lolo Pass. Photo near Kamiah, Idaho.**

Vernon Preston

**Snake River where the Expedition made dugout canoes and started to float toward the Pacific Ocean. Near Lewiston, Idaho.**

Vernon Preston



**Columbia River just below the Cascade Locks. Beacon Rock in the distance where the Expedition first noted tidal influences. Photo near Skamania, Washinton.**

Vernon Preston



**The Pacific Ocean near the mouth of the Columbia River. Photo near Long Beach, Washington.**

Vernon Preston

**Fort Clatsop Replica where the Expedition spent the winter of 1805-1806. Photo near Astoria, Oregon.**

Vernon Preston



**Lewis and Clark River near Fort Clatsop Replica. Astoria, Oregon.**

Vernon Preston

| Day of the month | State of the sky at sunrise | Weather | Wind at 0 alt. | Therm. at 4 P.M. | Weather | Wind at 4 P.M. | State of the River at sunrise |       |           | Remarks.                                                                                                                                                                                            |
|------------------|-----------------------------|---------|----------------|------------------|---------|----------------|-------------------------------|-------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  |                             |         |                |                  |         |                | raised or fallen              | Feet. | Dir. Part |                                                                                                                                                                                                     |
| 15               | 10c                         | f       | E              | 32               | SN      | c              | r                             | ~     | 1         | They were equal in dimension, each ring appearing to subtend an angle of 15° degrees of a great circle. An eclipse of the moon total last night, visible here but partially obscured by the clouds. |
| 16               | 36a                         | c       | W              | 16a              | SN      | f              | r                             | ~     | 2         |                                                                                                                                                                                                     |
| 17               | 2c                          | c       | W              | 12c              | NW      | f              | ~                             | ~     | ~         | at sun rise 2° below 0.                                                                                                                                                                             |
| 18               | 2c                          | f       | NW             | 7a               | NW      | fac            | f                             | ~     | 1         |                                                                                                                                                                                                     |
| 19               | 12a                         | c       | NE             | 6c               | NW      | f              | r                             | ~     | 1         | Ice is now 3 feet thick on the most rapid part of the river.                                                                                                                                        |
| 20               | 28                          | f       | NE             | 6c               | SE      | c              | r                             | ~     | ~         |                                                                                                                                                                                                     |
| 21               | 2c                          | c       | NE             | 3a               | SE      | f              | ~                             | ~     | ~         | mist the afternoon observation.                                                                                                                                                                     |
| 22               | 10a                         | fac     | NW             | 19a              | NW      | c              | r                             | ~     | ~         |                                                                                                                                                                                                     |
| 23               | 2c                          | s       | E              | 2c               | NW      | cas            | f                             | ~     | 2         | the snow fell about 4 inches deep last night and continues to snow.                                                                                                                                 |
| 24               | 12c                         | c       | NW             | 2c               | NW      | f              | r                             | ~     | ~         |                                                                                                                                                                                                     |
| 25               | 26c                         | f       | NW             | 4c               | W       | fac            | ~                             | ~     | ~         | It frequently happens that the air fair and in about 15 or 20 minutes it becomes suddenly cloudy as if there had some chemical effect on the atmosphere.                                            |
| 26               | 12a                         | c       | NE             | 20a              | SE      | fac            | ~                             | ~     | ~         |                                                                                                                                                                                                     |
| 27               | 20a                         | c       | SE             | 16a              | NW      | c              | r                             | ~     | 2         | Snow the feeder is 2 inches last night.                                                                                                                                                             |
| 28               | 2c                          | f       | NW             | 5a               | SW      | f              | ~                             | ~     | ~         |                                                                                                                                                                                                     |
| 29               | 4a                          | f       | SW             | 16a              | W       | f              | r                             | ~     | ~         | the feeder is 2 inches last night.                                                                                                                                                                  |
| 30               | 6a                          | c       | NW             | 14a              | NW      | c              | r                             | ~     | 1         |                                                                                                                                                                                                     |
| 31               | 2c                          | cas     | NW             | 8a               | NW      | fac            | f                             | ~     | 1         |                                                                                                                                                                                                     |
| Feb 1            | 6a                          | c       | NW             | 16a              | SW      | f              | r                             | ~     | 2         | the feeder is 2 inches last night.                                                                                                                                                                  |
| 2                | 10a                         | c       | NE             | 3a               | E       | f              | r                             | ~     | 1         |                                                                                                                                                                                                     |

Courtesy American Philosophical Society / US National Park Service  
 Photo by Vernon Preston

Lewis and Clark Expedition Weather Diary entries for January 15, 1805 through February 2, 1805 while the Corps of Discovery were in winter quarters at Fort Mandan, near present day Washburn, North Dakota.



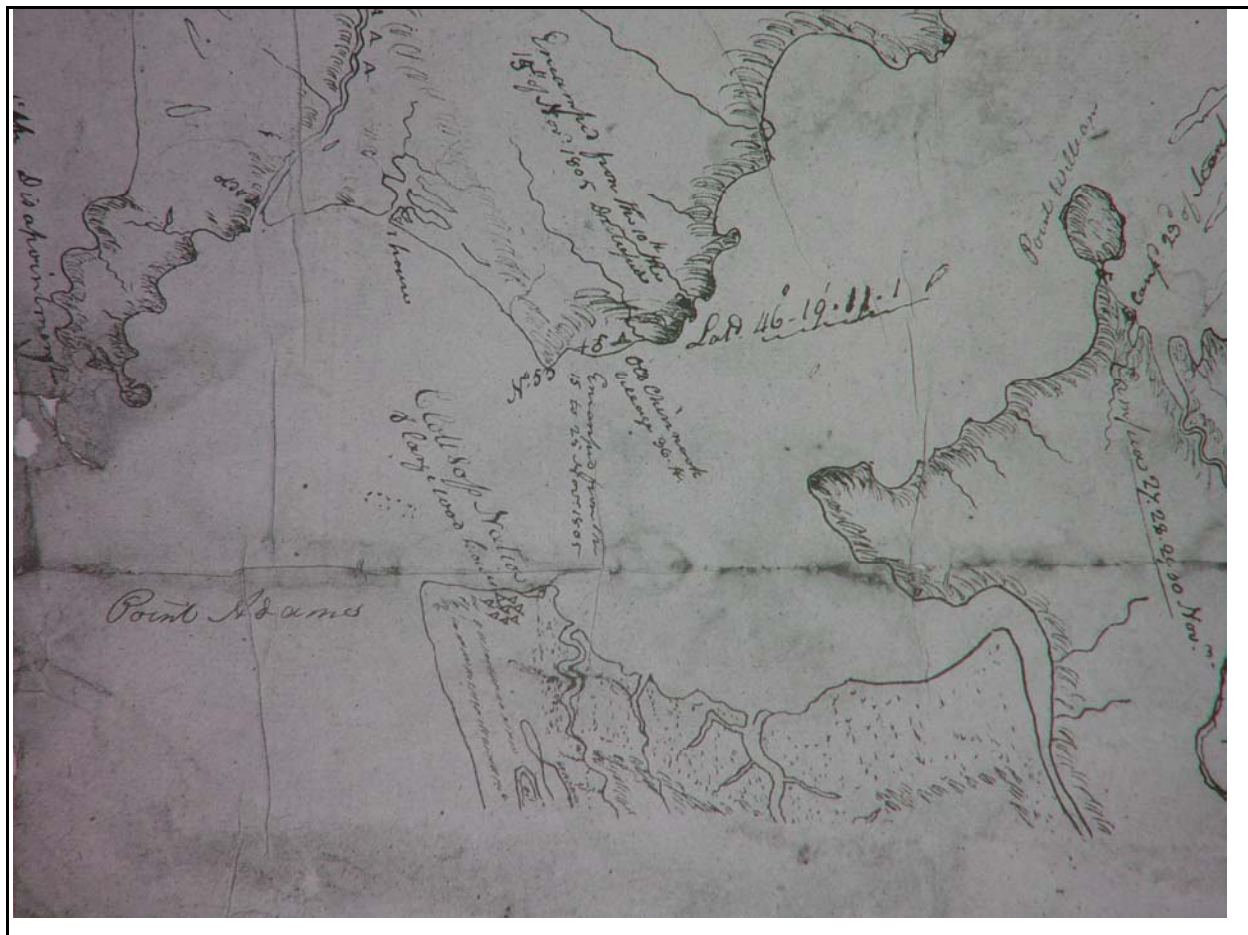
Fort Clatsop. 1806.

Diary of the weather for the month of January.

| Day of the month | Aspect of the weather at 0 rise | Wind at 0 rise | Weather at 4 P.M. | Wind at 4 P.M. | Remarks.                                                                          |
|------------------|---------------------------------|----------------|-------------------|----------------|-----------------------------------------------------------------------------------|
| 1 <sup>st</sup>  | c a r                           | S. W.          | r a c             | S. W.          | sun visible for a few minutes about 11. c d d                                     |
| 2 <sup>nd</sup>  | c a r                           | S. W.          | r                 | S. W.          |                                                                                   |
| 3 <sup>rd</sup>  | c a r h f                       | S. W.          | c a r h f         | S. W.          | the sun visible for a few minutes only.                                           |
| 4 <sup>th</sup>  | c a r h                         | S. W.          | r a f             | S. E.          | the sun visible about 2 hours                                                     |
| 5 <sup>th</sup>  | r                               | S. E.          | r                 | S. E.          |                                                                                   |
| 6 <sup>th</sup>  | c a r                           | S. E.          | f                 | E              | the sun shown about 5 hours this evening & it continued fair during the night.    |
| 7 <sup>th</sup>  | f                               | N. E.          | c a f             | E              | it clouded up just about sun set, but but shortly after became fair.              |
| 8 <sup>th</sup>  | f                               | N. E.          | c a f             | S. E.          | lost my N. - E. obs. for Equal Altitude                                           |
| 9 <sup>th</sup>  | f                               | S. W.          | c a f             | S. W.          | began to rain at 10 P.M. and continued all night                                  |
| 10 <sup>th</sup> | f. a r                          | S. W.          | c a f             | S. W.          |                                                                                   |
| 11 <sup>th</sup> | c                               | S. W.          | c a r             | S. W.          |                                                                                   |
| 12 <sup>th</sup> | f a c                           | N. W.          | c                 | N. W.          | cool this morning but no ice nor frost<br>at noon saw flies and insects in motion |

Courtesy American Philosophical Society / US National Park Service  
Photo by Vernon Preston

Lewis and Clark Expedition Weather Diary entries for January 1, 1806 through January 12, 1806 while the Corps of Discovery were in winter quarters at Fort Clatsop, near present day Astoria, Washington.



Courtesy American Philosophical Society / US National Park Service  
Photo by Vernon Preston

William Clark's drawing of the land mass around the mouth of the Columbia River and Pacific Ocean.