

## **12. Archives, Libraries, and Bibliography in the History of Meteorology Prior to 1900**

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Bibliographical tools and guides are important components for promoting research in the history of meteorology and related fields. The International Commission on the History of Meteorology (<http://www.colby.edu/ichm>), founded in 2001 in Mexico City, hopes to assist scholars by noting materials in printed, manuscript, cartographic and electronic formats, international in scope, and culled from disciplines as diverse as medicine, geography, agriculture, economics, literature, art, and the popular press on its website. The citations below are meant to be the initial effort at presenting these resources. Suggestions and additions are most welcomed, and can be sent to the ICHM website.

### **Starting Points**

“Bibliography of Bibliographies on Meteorology,” by Malcolm Rigby and Dorothy M. Gropp. *Meteorological Abstracts and Bibliography* 6 (1955): 82-118.  
—Organizes in a systematic manner the most fruitful sources of references to literature on meteorology, climatology, and related fields.

*Web Resources in the History of Geophysics*, compiled for the AGU History of Geophysics Committee by Shaun J. Hardy & Roy E. Goodman. ([http://www.ciw.edu/library/hgc/hgc\\_web\\_resources.htm](http://www.ciw.edu/library/hgc/hgc_web_resources.htm)).  
—Provides general resource sites, biographies, history of organizations and institutions, subject histories, online journals and museums and online exhibitions.

Brush, Stephen G. and Helmut E. Landsberg. *The History of Geophysics and Meteorology*, (Bibliographies of the History of Science and Technology, v.7). New York & London, Garland Publishing, Inc., 1985.

—Brings together a broad range of historical citations difficult to find in any one volume.

Fleming, James R. and Roy E. Goodman, ed. *International Bibliography of Meteorology: from the Beginning of Printing to 1889*. Upland, PA, Diane Publishing Company, 1994. 4 v. in 1. Forward by E. Philip Krider.

—A new edition of the *Bibliography of Meteorology*, issued as a 4 volume set in 1889-1891. Copies of the original edition are quite scarce and very fragile. Included are 16,000 references on temperature, moisture, winds and storms. Articles in each subject are arranged chronologically and in their original languages. There is a good table of contents and author index. This is the major bibliographic resource on the atmospheric sciences prior to the *Meteorological and Geo-astrophysical Abstracts* that began publication in 1950.

Hellmann, Gustav. *Repertorium der deutschen Meteorologie. Leistungen der Deutschen in Schriften, Erfindungen und Beobachtungen auf dem Gebiete der Meteorologie und des Erdmagnetismus von den ältesten Zeiten bis zum Schlusse des Jahres 1881*. Leipzig: W. Engelmann, 1883.

—Repertory of German meteorology. Achievements of Germans in writings, inventions and observations in the sphere of meteorology and terrestrial magnetism from very ancient times up to the close of the year 1881.

Hellmann, Gustav. *Geschichte des Königlich Preussischen Meteorologischen Instituts von seiner Gründung im Jahre 1847 bis zu seiner Reorganisation im Jahre 1885*. Berlin, 1887.

Hellmann, Gustav, ed. *Neudrucke von Schriften und Karten über Meteorologie und Erdmagnetismus*, nos. 1-15. Berlin: A. Asher & Co., 1893-1904. Reprinted in 4 volumes. Nendeln, Liechtenstein, Kraus Reprint, 3 vols., 1969.

—Contents:

1. Reynman, Leonhard. *Wetterbüchlein von wahrer Erkenntniss des Wetters*, 1510. Berlin, 1893. 56 p.
2. Pascal, Blaise. *Recit de la grande experience de l'équilibre des liqueurs*. Paris, 1648. Berlin, 1893. 20 p.
3. Howard, Luke. *On the modifications of clouds*. London, 1803. Berlin, 1893. 32 p.
4. *Die Ältesten Karten der Isogonen, Isoklinen, Isodynamen, 1701, 1721, 1768, 1804, 1825, 1826*. Berlin, 1895. 24 p.
5. *Die Bauern-Praktik*, 1508. Berlin, 1896. 83 p.
6. Hadley, George. *Concerning the cause of the general trade-winds*. London, 1735. Berlin, 1896. 21 p.
7. Torricelli, Evangelista. *Esperienza dell' argento vivo*. Berlin 1897. 15 p.

8. *Meteorologische karten 1688, 1817, 1846, 1863, 1864. Sechs tafeln in lichtdruck mit einer einleitung.* Berlin, 1897. 12 p., 6 charts.
9. Gellibrand, Henry. *A discourse mathematical on the variation of the magneticall needle.* London 1635. Berlin, 1897. 22 p.
10. *Rara magnetica 1269-1599.* Berlin, 1898. 174 p.
11. *Ueber Lufterlektricität 1746-1753.* Berlin, 1898. 50 p.
12. *Wetterprognosen und Wetterberichte des XV. und XVI. Jahrhunderts.* Berlin, 1899. 184 p.
13. *Meteorologische Beobachtungen vom XIV. bis XVII. Jahrhundert.* Berlin, 1901. 212 p.
14. *Meteorologische Optik 1000-1836... Mit einer Einleitung.* Berlin, 1902. 106 p.
15. *Denkmaler mittelalterlicher Meteorologie. Mit einer Einleitung und einem Anhang.* Berlin, 1904. 327 p.

Hellmann, Gustav. *Beiträge zur Geschichte der Meteorologie*, 3 v. Veröffentlichungen des Königlich Preussischen Meteorologischen Instituts, Nr. 273, 296, 315. Berlin: Behrend, 1914, 1922.

—Contents:

1. Bd. Aus der Blutezeit der Astrometeorologie. (J. Stofflers Prognose für das Jahr 1524). Die ältesten instrumentellen meteorologischen Beobachtungen in Deutschland. Die älteste gedruckte Nordlichtbeschreibung. Die theologisch-meteorologische Literatur. Die Vorläufer der Societas Meteorologica Palatina.

2. Bd. Entwicklungsgeschichte des meteorologischen Lehrbuches. Die Witterungsangaben in den griechischen und lateinischen Kalendern. Die Wettervorhersage im ausgehenden Mittelalter, XXI. bis XV. Jahrhundert. Wetterpropheten des XIX. und XX. Jahrhunderts. Kleine Beiträge.

3. Bd. Entwicklungsgeschichte des klimatologischen Lehrbuches. Geschichte des Hundert jährigen Kalenders. Die Entwicklung unserer Kenntnisse vom Nordlicht. Die Meteorologie in ausserdeutschen Flugschriften und Flugblättern. Zur Geschichte der meteorologischen Instrumente u. Beobachtungen. Anhang: Verzeichnis meiner 1883-1922 veröffentlichten Arbeiten zur Geschichte der Meteorologie und des Erdmagnetismus.

Hellmann, Gustav. *Die Entwicklung der meteorologischen Beobachtungen in Deutschland von den ersten anfangen bis zur Einrichtung staatlicher Beobachtungsnetze.* Berlin, 1926.

—On meteorological observations. From *Abhandlungen der Preussischen Akademie der Wissenschaften*. Jahrg. 1926. *Physikalisch-mathematische Classe*, Nr. 1.

Hellmann, Gustav. *Die Entwicklung der meteorologischen Beobachtungen bis zum Ende des XVIII Jahrhunderts.* Berlin, 1927. 48 p.

—On the history of meteorological observations. From *Abhandlungen der Preussischen Akademie der Wissenschaften*. Jahrg. 1927. *Physikalisch-mathematische Classe*, Nr. 1.

- Reuss, Jeremias David. *Repertorium commentationum a societatis litterariis editarium...* Gottingae, Henricum Dieterich, 1801-21. 16 v. Reprinted New York, B. Franklin, 1961.  
—Valuable index to the publications of learned societies of various countries from the time of the founding of each society to 1800.
- Royal Society of London. *Catalogue of scientific papers, 1800-1900*. London, Clay, 1867-1902; Cambridge, University Press, 1914-25. 19 v.  
—Author index, for the entire 19<sup>th</sup> century, to 1,555 periodicals in various languages including the transactions of the European academies and other learned societies.
- Schneider-Carius, Karl. *Weather Science, Weather Research: History of Their Problems and Findings from Documents During Three Thousand Years*. Munich, 1955. Translated from German, and published for NOAA and NSF. New Delhi: Indian National Scientific Documentation Centre, 1975. 554p.  
—A valuable but hard to find compilation, this source book documents meteorological problems from the ancient world to the early twentieth century. Extensive quotes from original sources are provided, including Aristotle, Bacon, Boyle, Hadley, Dalton, Margules, and many others. The volume ends with a topical bibliography of over eighty pages, and a thirty-two page biographical index.

### Area Resources

- Asociacion Ecologica "Eterna Primavera". Datos meteorologicos en Centroamerica y Mexico: Aspectos historicos y cientificos durante la segunda mitad del siglo XIX y su aplicabilidad al cambio climatico*. Ciudad de Guatemala, Guatemala, C.A. forthcoming.  
—Meteorological data for Central America and Mexico during the second half of the 19<sup>th</sup> century. E-mail: eterna\_primavera@hotmail.com
- Climatic Research Unit, University of East Anglia. *Global land and marine surface temperature from 1856 to 1999*. (<http://www.cru.uea.ac.uk/>)  
—The time series shows the combined record. Compiled jointly by the Climate Research Unit, UEA and the UK Met. Office
- History of Meteorology in India. (<http://www.imd.ernet.in/doc/history/history.htm>).  
—Site of the India Meteorological Department.
- Royal Meteorological Society (Great Britain). *History of Meteorology and Physical Oceanography Specialist Group*. (<http://www.royal-met-soc.org.uk/hisgroup.html>).  
—Information on activities, publications, library resources, and profiles of notable meteorologists.

## Congresses & Conferences

Fassig, Oliver L., ed. *Report of the International Meteorological Congress, held at Chicago, Ill., August 21-24, 1893*. Washington, D.C., U.S. Department of Agriculture, Weather Bureau, 1894. (Bulletin 11)

—An important overview on the development of meteorology throughout the world, as well as, historical bibliographical essays.

*Second International Climate and History Conference*. Climatic Research Unit, Norwich, U.K. 7-11 Sept. 1998. (<http://www.cru.uea.ac.uk/cru/conf/sicch/>)

—The first conference held in Norwich in 1979, brought together, for the first time, climate scientists, social and economic historians, and historical geographers.

*Conference to explore the impact of climate on social and historical events in the United States*. College of William & Mary, Williamsburg, VA. 24-26 May, 2001. (<http://www.wm.edu/CAS/WMCAR/confer/descr.htm>)

—Leading goal was to open a dialogue on the complementary research of climatologists and historians.

## Library & Archival Resources

American Institute of Physics, Center for History of Physics. *The International Catalog of Sources for History of Physics and Allied Sciences*. (<http://www.aip.org/history/icos.htm>).

—A catalog of information on the locations and contents of collections of archival materials, such as unpublished correspondence and institutional records, around the world. It is an ongoing project to gather and provide computer-readable, indexed information on holdings in libraries and other institutions, and to share the data with the major online catalog, the Research Libraries Group (RLG), Research Libraries Information Network (RLIN) and Archives and Manuscripts Collections. For details on these resources see (<http://www.rlg.org>).

Chenoweth, Michael. "Historical marine data in American and UK archives, 1775-1900." In *International Workshop on Digitization and Preparation of Historical Surface Marine Data and Metadata*, Geneva, World Meteorological Organization, 1999, pp.57-60. (WMO/TD-957, MMROA Rep. 43).

—Strong on Caribbean data

EURO-CLIMHIST. (<http://www.cx.unibe.ch/hist/fru/fru-ech.htm>)

—This database set up by C. Pfister at the Institute of History, University of Bern, Switzerland, comprises 600,000 data for the period from AD 750 to the beginning of the period of instrumental networks. More than 40 countries are included. All weather observations are connected with carefully made bibliographical documentation including source texts and are bound to distinct observation places.

- Fleming, James R. *Guide to historical resources in the atmospheric sciences: Archives, manuscripts, and special collections in the Washington, D.C. area*. Boulder, Colorado, National Center for Atmospheric Research Climate and Global Dynamics Division, 1989. (National Center for Atmospheric Research Technical notes 327A)  
—Especially, useful for U.S. government repositories. Revised edition available online. (<http://www.colby.edu/sci.tech/97guide/>).
- Nebeker, Fredrik. *Astronomy and the geophysical tradition in the United States in the nineteenth century: a guide to manuscript sources in the library of the American Philosophical Society*. Philadelphia, American Philosophical Society Library, 1991. (Publication 16)  
—Numerous entries for meteorology, climatology & scientific instruments. The Society's printed and manuscript collections are listed on its website. (<http://www.amphilsoc.org>).
- Pfister, Christian, et al. *Geografia d'Europa: textos de suport. Documentary evidence on climate in sixteenth-century Europe*. (<http://www.ub.es/medame/climaXVI.html>)  
—The known documentary evidence from six European countries, Switzerland, Germany, the Czech Republic, ancient Hungary, Italy and Spain is presented and classified. See EURO-CLIMHIST site for additional resources that Pfister and his Institute of History, University of Bern, Switzerland have gathered on climate data.

### **Meteorology & Agriculture**

- Baron, W.R. "Retrieving Climate History: A Bibliography", *Agricultural History*, 3 (1989), 2: 7-35.  
—Thorough overview of printed materials, international in scope. One of 19 articles from a symposium issue on Climate, Agriculture, and History.

### **Weather Events in the Press**

- Earle, W.H., ed. *Niles' Register: Cumulative Index, 1811-1849*. Malvern, PA., Accessible Archives, Inc. 1990.  
—CD-ROM edition of the printed volumes of *Niles'* which provides international coverage on the impact of weather events. Articles are in English and extracted from newspapers, government reports and periodicals.
- Pennsylvania Gazette, 1728-1800*. Malvern, PA, Accessible Archives, Inc, 1995. (<http://www.accessible.com>).  
—CD-ROM full text of the most important 18<sup>th</sup> century North American newspaper. During and after Benjamin Franklin's ownership of the paper, weather events are given much coverage. This data is also available online by subscription.