

It All Adds Up: Contributing Climate Data to the Community.

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It All Adds Up: Contributing Climate Data to the Community.

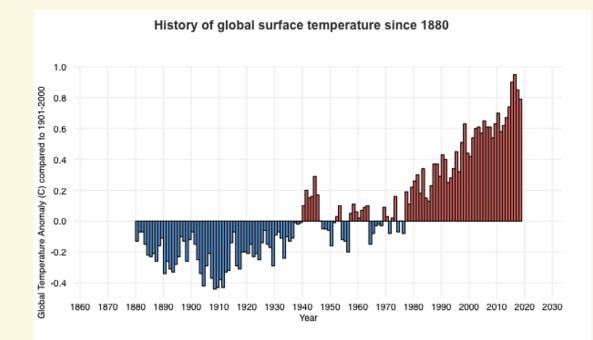


RBMS June 19, 2019 Baltimore, MD



Patrick D. Milhoan Lead Processing Archivist Hesburgh Libraries University of Notre Dame









- There is not enough data in order to formulate global temperature averages prior to 1880
 - NASA's Goddard Institute for Space Studies
 - National Oceanic and Atmospheric Administration's National Centers for Environmental Information

Hesburgh Libraries

- UK Meteorological Office's Hadley Centre
- How do scientists supplement the data set?
- Get creative



- Climate Database Modernization Program (CDMP)
- Climatological Database for the World's Oceans (CLIWOC)
- Recovery of Logbooks and International Marine Data (RECLAIM)
- Old Weather Project
- Seas of Knowledge: Digitization and Retrospective Analysis of the Historical Logbooks of the United States Navy





• Record

- Events
- Transactions
- Navigational observations

• Entries include

- Day-to-day operations
- Provisions and supplies
- Ship and biological sightings
- Crew lists
- LOCATION
- WEATHER





• Observational Weather Data

- Fog
- o Precipitation
- State of the sea "heavy" or "calm"
- o Ice

• Instrumental Weather Data

- Wind speed
- Wind direction
- Temperature



Collections at The University of Notre Dame

• Strengths include:

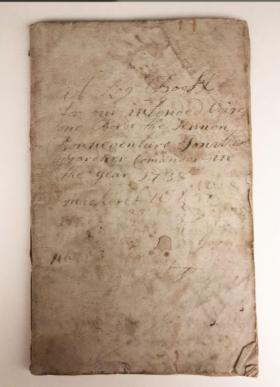
政

- Catholic Studies
- Irish Studies
- Italian Literature
- Latin American Studies
- American Studies
- o Sports





Bonaventure Logbook



Recounts the 1739-1740 voyage of the *Bonaventure* from New England to the Leeward Islands (Antigua, Nevis, etc.).

"Wether Sabath Day" "Squally and rainy"

"Fairwether" "Latt in 36.13"







Meridian Logbook



Recounts the 1839-40 voyage of the *Meridian* to the Canaries, South to Brazil, through the Caribbean and Gulf of Mexico.

"Sunday, May 17, 1840, Begins with strong gales from the eastward laying to heading to the S.E. Middle part S.S.E. squally latter part set the foresail Ends."

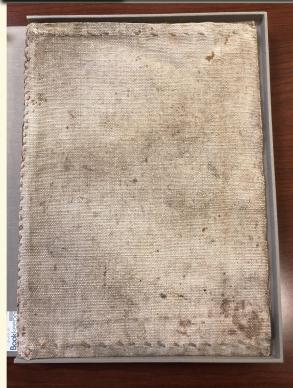
"Latt. By. Obs. 27.37 North" "Long 89.31 West"

Tatt. By Olo, 28.37 N. Long. 89. day Comm with strong gales from the Eastward standing N. No & sow Black fish to Rong to lower at sim set coore to & & Emissile and tatter part me to Ends No Observation with strong Gales from he Gastward laying to heading to D. C. middle part D. D. Exqual latter hart set the fore sail to Ends 1. By Obs. 27.37 Storth 89 mo31 Hent





Corvo/Enterprise Logbook



Recounts the voyages of the ship *Corvo* and the brig *Enterprise* in waters off Chile and the Falkland Islands, between 6 October 1840 and 17 May 1841.

"Monday March 29, 1841. Comes in with strong breezes from the S.W. and light squales of rane at 4pm went out and saw nothing the later part strong gales from the SW and squally."

hand chood as In Nest of Island Tome In With Strong Broge the Sthand light Syn les tag 1841 Att 4 an got understay a Went out Sou Sothing of forme Tord In Send Os fa the later part Strong gales 10 pour the S.M. and Syselle Jusday Comes In With light Breges the IW and plesant Watthes the 30 1841 & am got undertatay and h out Jan Whales loand the and got one and Stode him In tow quaker hanker and but him In Winsday Comes Son With Calens at 5" march have up and tade aut alt these is for get a long Side at " ant the Bhale and dig





WUSS Bonita Logbook



A personal journal kept by the purser of the U.S.S. Bonita during the U.S.-Mexican War. The journal contains daily entries running from 25 June 1846 to 25 July 1847 and remarks on locations throughout the Gulf coast of Mexico.

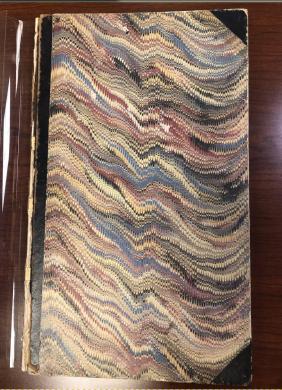
"September 3 - The morning quite rainy and very warm - the thermometer reading at 86 [degrees]."

from the Starfors, Then Gooddinan denied hand the Banits, and and salar suchard quite a fraid times they after The Almange as momenter of the care. concurrency the Buy Concerting for the execution and the circumstances connected with it is the ment of almost all who have heard and there are but face persons in the limited have set byand of the "Somes Trajed" .- Mer on one of the officer of an percel, was attached to 1 I the time of the Meeting and execution of the How - Ry the may the lown might be made a day Araven very waren and rather suplement - The What at la after takich I spent an hour on he is structing white the directed office - let 10. I file aslaf on the water decks and remained three center 3.30 might money, the west below and regularly twend in. Eptember 3 (Moning quite rainly and ring in the thermometer reaging at 86. Saring the mon und, talked mole & arnased oursclass in Narion mays 2. Me dired on twell Soup a Steats, + other pice thing dinner I passed away the time as well as I could the corcernetances quiting the are really like prisoner, " will not permit us to land, or hold any ente Beatle ashore, lest we should get sail





Raven Logbook



Logbook of a voyage of the Raven, with daily entries spanning 1855-1856. Raven sailed east from Richmond, Virginia to Sydney, Australia, to Sumara and back to New York.

November 25, 1855

"Strong breezes and thick foggy weather throughout the day"

Set to Set fore top Salan Employed at various Sural Long by the 20°31 Thest 11 Mariation 1 Point When Anus to Mit Courses Winds Les Demarks Sunday chess th to by 9 of 41 Strong bears and think by g to g to 9 to g to Saw a Ship Steering to the South ward Esoplay at at various killed a lig 1'h get Long by I DE 15'S' When 888 1 12 1 2 12 1



Three Questions

- 1. If Notre Dame has marine logbooks, what other repositories not traditionally associated with the maritime industry have them?
- 2. How do those repositories describe their materials?
- 3. How do we leverage and describe the data contained within the logbooks to ensure their discoverability.

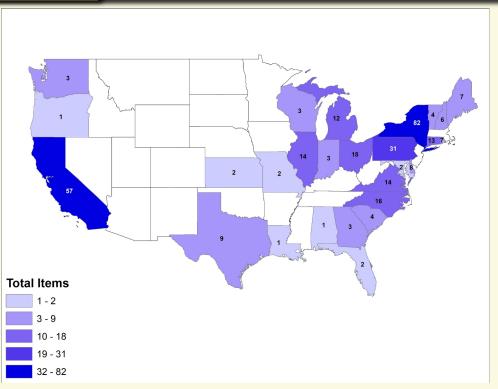


The Research

- Scope
 - Logbooks contained in the United States
 - Logbooks most likely not to have been used in a previous large-scale project
 - Utilized ArchiveGrid for collections search "logbook"
 - Omitted search results from repositories that have a collecting focus on the maritime or sailing industry
 - Peabody Essex Museum
 - New Bedford Whaling Museum
 - Logbooks created prior to 1880



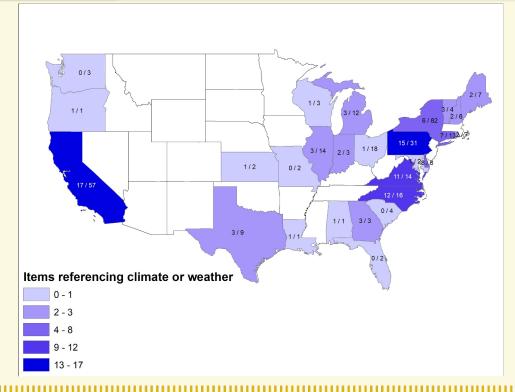
Total Number of Logbooks



- Logbooks on ArchiveGrid that fit within the parameters: 325
- 27 different states



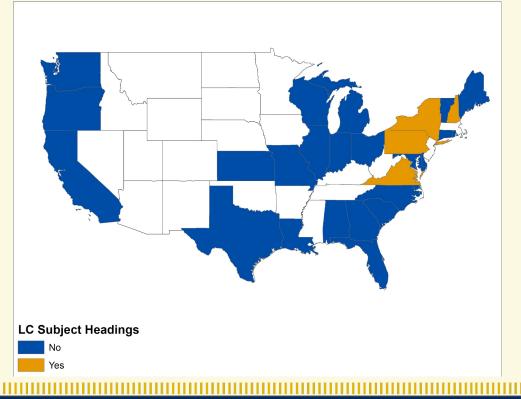
Logbooks Referencing Weather/Climate



- 106 records include weather or climate within the description
- 32.6%



Logbooks Containing LCSH



- Only four records (.012%) include LCSH.
 - **O** Weather
 - **O** Climatology
 - **O** Meteorology





- 1. Weather data prior to 1880 was insufficient to calculate global weather averages
- 2. Logbook data is being used to supplement the historical weather data set prior to 1880
- 3. Logbooks do exist in repositories not necessarily associated with the maritime industry
- 4. Descriptive metadata is lacking and as information professionals we can and should do more to ensure the discoverability of these items
 - Descriptive records should be updated to fully reflect the entire contents of a logbook
 - Library of Congress Subject Headings should be applied systematically as access points





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Logbook images courtesy of the presenter

Logbook Maps courtesy of Mat Sisk, The Navarre Family Center for Digital Scholarship, Hesburgh Libraries, University of Notre Dame

