

README for Historical Southern Ocean Icebergs

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This document provides a description of the dataset created for the *Journal of Glaciology* paper “*Historical Occurrence of Antarctic Icebergs within Mercantile Shipping Routes and the Exceptional Events of the 1890s*” (JOG-22-0139) by Robert Headland, Nick Hughes and Jeremy Wilkinson (doi: TBD). We have endeavoured to make the data as accessible as possible by providing it in a range of formats.

Dataset Files

The dataset consists of the following files:

Historical Southern Ocean Icebergs 1.1.xlsx

This is an Excel spreadsheet consists of the following columns of data:

type	The type of observation, either an iceberg , non-existent [island], or [historical] event .
date	The date of the observation in ISO-format, i.e. YYYY-MM-DD .
datestr	The month and day of the month of the observation, as precise as it is known. The day is numeric and month is in roman numerals.
uncertainty	An estimate of the temporal precision of the observation, in days.
ship	The name of the vessel making the observation.
captain	The name of the captain of the vessel, if known.
latstr	Text string for the latitude(s) of the observation. The latitudes are in decimal degrees format, with hemisphere, i.e. DD-DD°S. If the value is given in parentheses it implies there is an uncertainty in the position. Two latitudes separated by a hyphen indicate observations across a range of latitudes along the vessel track.
lat1	The numerical value of the latitude.
lat2	The numerical value of the second latitude, if this is an along track observation.
lonstr	Text string for the longitude(s) of the observation. The longitudes are in decimal degrees format, with hemisphere, i.e. DD-DD°W. If the value is given in parentheses it implies there is an uncertainty in the position. Two longitudes separated by a hyphen indicate observations across a range of longitudes along the vessel track.
lon1	The numerical value of the longitude.
lon2	The numerical value of the second longitude, if this is an along track observation.
precise	Flag TRUE or FALSE to indicate if there is any uncertainty in the position.
source	Source(s) for the observations. These are listed in the bibliography below. Where several sources have been found, these are separated by semicolons.
observation	Text description of the observation. NB: To help with conversion to CSV-format, commas have been converted to semi-colons.

Historical Southern Ocean Icebergs 1.1.csv

This is the plain text, machine-readable, version of the spreadsheet and has the same columns of data as above.

SO_Iceberg_Points_1.1.shp
SO_Iceberg_Points_1.1.shx
SO_Iceberg_Points_1.1.dbf
SO_Iceberg_Points_1.1.prj

The data in ESRI Shapefile format for the observations that consist of single points.

The points are in longitude, latitude (EPSG:4326) map projection.

The attribute columns are the same as described above, and include:

type	The type of observation, either an iceberg , non-existent [island], or [historical] event .
date	The date of the observation in ISO-format, i.e. YYYY-MM-DD .
datestr	The month and day of the month of the observation, as precise as it is known. The day is numeric and month is in roman numerals.
uncert	An estimate of the temporal precision of the observation, in days.
ship	The name of the vessel making the observation.
captain	The name of the captain of the vessel, if known.
latitude	Text string for the latitude(s) of the observation. The latitudes are in decimal degrees format, with hemisphere, i.e. DD-DD°S. If the value is given in parentheses it implies there is an uncertainty in the position. Two latitudes separated by a hyphen indicate observations across a range of latitudes along the vessel track.
longitude	Text string for the longitude(s) of the observation. The longitudes are in decimal degrees format, with hemisphere, i.e. DD-DD°W. If the value is given in parentheses it implies there is an uncertainty in the position. Two longitudes separated by a hyphen indicate observations across a range of longitudes along the vessel track.
precise	Flag TRUE or FALSE to indicate if there is any uncertainty in the position.
source	Source(s) for the observations. These are listed in the bibliography below. Where several sources have been found, these are separated by semicolons.
obstext	Text description of the observation. NB: To help with conversion to CSV-format, commas have been converted to semi-colons.

SO_Iceberg_Lines_1.1.shp
SO_Iceberg_Lines_1.1.shx
SO_Iceberg_Lines_1.1.dbf
SO_Iceberg_Lines_1.1.prj

The data in ESRI Shapefile format for the observations that are along track. A linear interpolation has been applied between the start and end locations to provide intermediate locations to help with reprojection to other map projections.

The lines are in longitude, latitude (EPSG:4326) map projection.

The attribute columns are the same as described for the points file above.

Bibliography

The dataset includes reports from a number of additional sources, not all of which are cited in the paper. The full references for these are listed here:

Balch, E. S. 1902. Antarctica. Philadelphia: Allen, Lane & Scott.

Balch, E. S. 1904. Antarctic addenda. Pennsylvania: Journal of the Franklin Institute, 157 [2 (938)]; 81-88.

Bertrand, K. J. 1971. Americans in Antarctica 1775-1948. New York: American Geographical Society.

BNA. British Newspaper Archive. <https://www.britishnewspaperarchive.co.uk/>

Bogen, H. S. I. 1957. Main events in the history of Antarctic exploration. Sandefjord: Norsk Hvalfangst Tidende, 46 (4); 141-160, (5); 210-231, (6); 282-300, (7); 345-366, (8); 417-438, (9); 489-506 (also published as a single volume, 1958).

Boyson, V. F. 1924. The Falkland Islands. Oxford: Clarendon Press.

Bull, H.J. 1896. The Cruise of the Antarctic to the South Polar Regions. London: Edward Arnold.

Christensen, L. 1935. Such is the Antarctic. London: Hodder & Stoughton

Cumpston, J.S. 1968. Macquarie Island. Canberra: Antarctic Division.

Dana, R.H. 1840. Two Years Before the Mast. New York: Harper and Brothers

David, A., Fernandez-Armesto, F., Novi, C., and Williams, G. 2001, 2003, 2004. The Malaspina Expedition 1789-1794. London: Hakluyt Society. {E 5}

Dickson, W. 1850. The Antarctic Voyage. London: United Service Magazine.

Douglas, H.P. 1930. The Antarctic Pilot (1 st edition). London: HMSO.

Haig, A. 1835. Isla Grande, South Atlantic Ocean. London: Nautical Magazine; 4 (35); 7-8

Hardy, A. 1967. Great Waters. London: Collins.

Headland, R.K. 2009. A Chronology of Antarctic Exploration. A Synopsis of Events and Activities from the Earliest Times until the International Polar Years, 2007-09. 722 pp., Bernard Quaritch, Ltd.

Horsburg, J. 1830. Remarks on Several Icebergs which have been met with in Unusually Low Latitudes in the Southern Hemisphere. London: Philosophical Transactions of the Royal Society, 4 February 1830; 117-120, 392-393.

- Hough, R. (1980). *Falklands 1914: The Pursuit of Admiral Von Spee*. Penzance: Periscope Publishing. ISBN 978-1-904381-12-9.
- Jones, A. G. E. 1985. Icebergs in the Southern Ocean. *Cambridge: Iceberg Research*, 11; 16-19.
- Kozian, W. 1994. Die Grossen Eistdriften im Südwestlichen Tiel des Süd-Atlantiks und Voor Kap Hoorne von 1854 bis zum Niedergang der Segelschiffahrt. *Bremerhaven: Deutsches Schifffahrtsarchiv*, 17; 51-92.
- Lubbock, B. 1929. *The Last of the Windjammers*. Glasgow: Brown, Sons, and Ferguson.
- Lubbock, B. 1948. *The Colonial Clippers*. Glasgow: Brown, Son & Ferguson.
- Lubbock, B. 1958. *The Romance of Clipper Ships*. London: Hennell Lock.
- Moneta, J. M. 1939. *Cuatro años en las Orcadas del Sur*. Buenos Aires: Peuser.
- Munn, C.A. (editor) 1911. Huge Icebergs in the Southern Ocean. *New York: Scientific American*, 24 (105); 544-545.
- Prieto, M.R., García-Herrera, R. & Hernández-Martín, E. 2004. Early Records of Icebergs in the South Atlantic Ocean from Spanish Documentary Sources. *Amsterdam: Climatic Change*, 66; 29-48.
- Purdy, J. 1855. *Laurie's Sailing Directory for the Ethiopic or Southern Ocean ...*. London: R. H. Laurie.
- Reisenberg, F. 1941. *Cape Horn*. London: Robert Hale.
- Russell, H. C. 1895. Icebergs in the Southern Ocean. *Journal and Proceedings of the Royal Society of New South Wales*: 29; 286-315.
- Russell, H. C. 1897. Icebergs in the Southern Ocean No3. *Journal and Proceedings of the Royal Society of New South Wales*: 31; 221-251.
- Spears, J. R. 1908. *The story of New England whaling*. New York: Macmillan.
- Spencer-Cooper, H.E.H. (1919). *The Battle of the Falkland Islands: Before and After*.
- Staff, G. (2011). *Battle on the Seven Seas: German Cruiser Battles, 1914–1918*. Barnsley: Pen & Sword Maritime. ISBN 978-1-84884-182-6.
- Stommel, H. 1984. *Lost Islands : The Story of Islands that have Vanished from Nautical Charts*. Vancouver: University of British Columbia Press.
- Swan, R. A. 1998. *Of Myths and Mariners*. Woono (Australia): R. A. Swan.

Taylor, R.H. (2006) Straight through from London: the Antipodes and Bounty Islands, New Zealand. Heritage Expeditions, New Zealand

Thrower, N.J.W. 1981. The Three Voyages of Edmond Halley in the Paramore 1698-1700. London: Hakluyt Society.

Towson, J. D. 1859. Icebergs in the Southern Ocean. Liverpool: T. Brakell.

Trove. <https://trove.nla.gov.au/>

US Antarctic Pilot 1905

Wharton, W. (1894) Notice to mariners - south atlantic ocean - ice islands and bergs. Falkland Islands Gazette, 4(26), 330.