

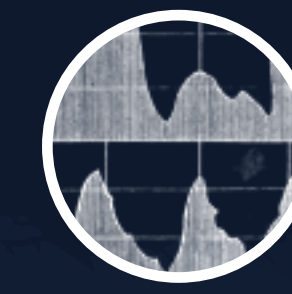
Arctic Data Explorer

CHRISTOPHER SETZER AND AMY TROST

Since 2012, volunteers have digitally transcribed more than 100,000 pages from the logbooks of historic Arctic exploring ships via the citizen science project Old Weather. These logs are rich with observations that scientists can use to model the

past and future of climate change in the Arctic, including records of weather conditions, sea ice extent, and species range. But this data can only be used if it is properly structured and made accessible to the public.

OUR WORK CONTRIBUTES TO...



CLIMATE SCIENCE



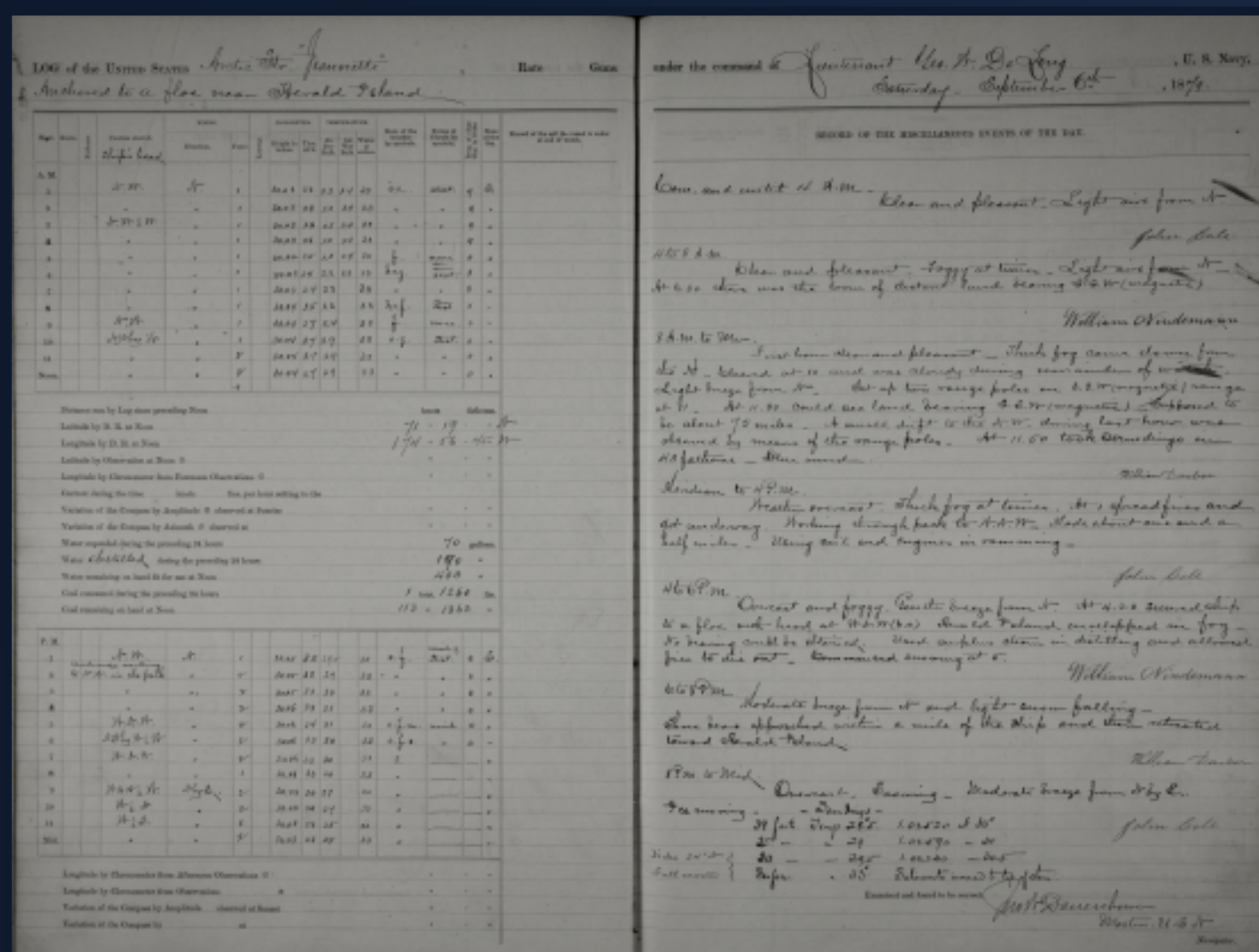
BIOGEOGRAPHY



HISTORY

Can the scientific data contained in historic ships' logbooks be structured and displayed for public use?

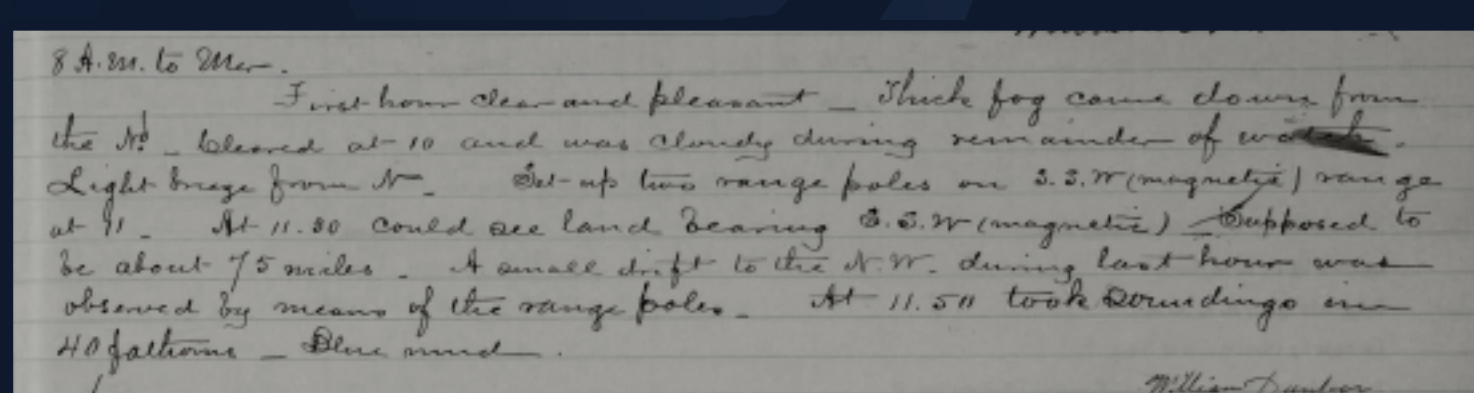
Case Study: *USS Jeannette*, "Beset and Drifting in the Pack" 1879–1881



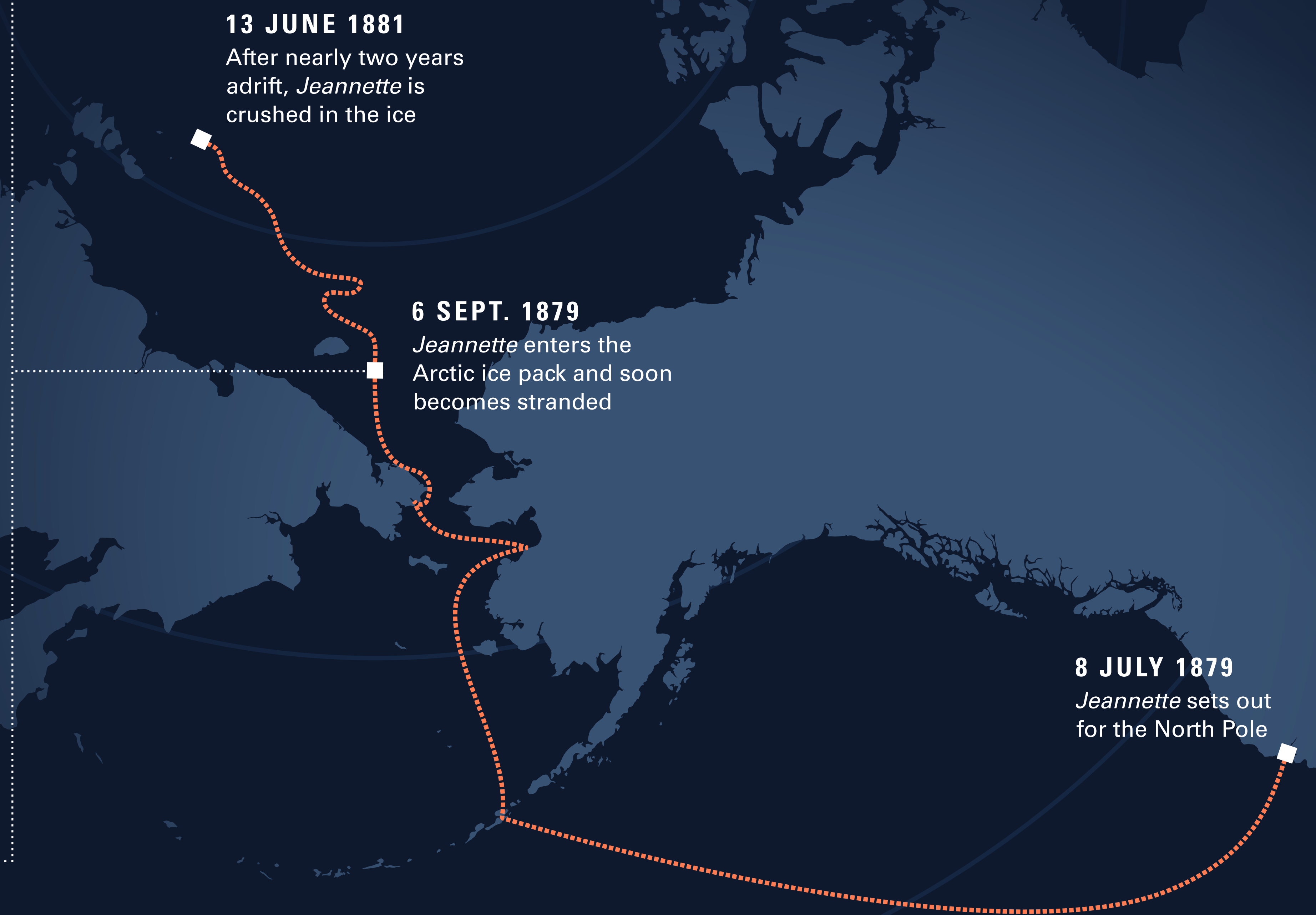
ABOVE: Log entry, *Jeannette*, 6 Sept. 1879.

BELOW: Weather observations (detail).

Hour	Knots	Full name	Course steered	Direction	Force	Leaving	Height in inches	Ther. at'd.	Air Dry Bulb	Air Wet Bulb	Water at surface
A. M.			Ship's head								
1			N. W.	N.	1		30.03	29	23	24	33
2			"	"	1		30.03	28	23	24	33
3			N. W. 1/2 W.	"	1		30.03	28	23	24	33



ABOVE: Narrative of day's events (detail).



Building the Arctic Data Explorer

1.

DATA SOURCE

Each scanned *Jeannette* log entry is digitally transcribed by citizen scientists at Old Weather.

2.

DATA STRUCTURE

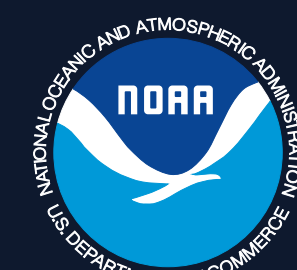
We harvest, process, and structure *Jeannette* logbook data for optimal discovery, access, and re-use.

3.

DATA EXPLORER

Our pilot interface enables access to images, ship positions, weather data, and linked materials.

Our thanks to our sponsor, Kevin R. Wood, NOAA/JISAO; Philip Brohan, Met Office Hadley Centre; and the rest of the Old Weather team. Images courtesy of NOAA (in partnership with NARA), the Internet Archive, and the Biodiversity Heritage Library.



Information School
UNIVERSITY of WASHINGTON