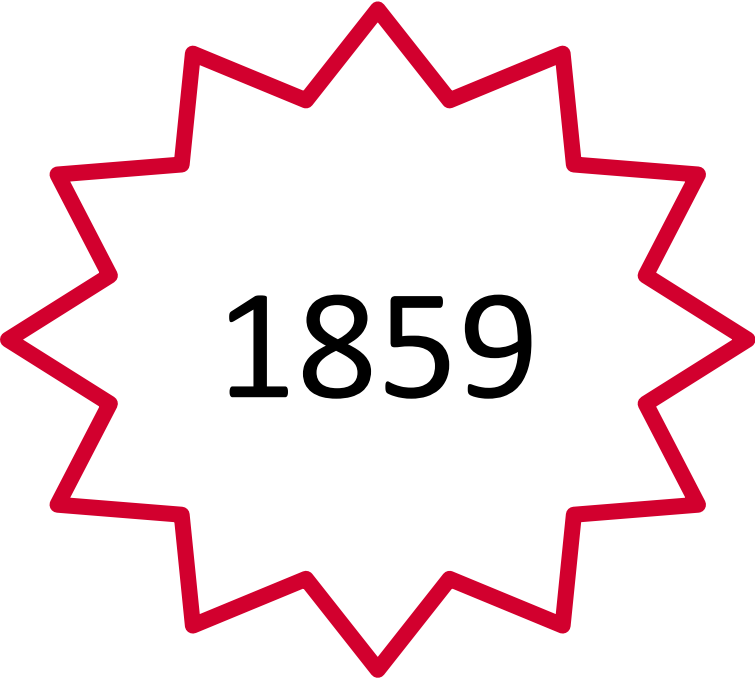


# The Value of Ships' Logs and the Role of Citizen Science in their Recovery

Praveen Teleti

NCAS, University of Reading

26th March 2024



1859

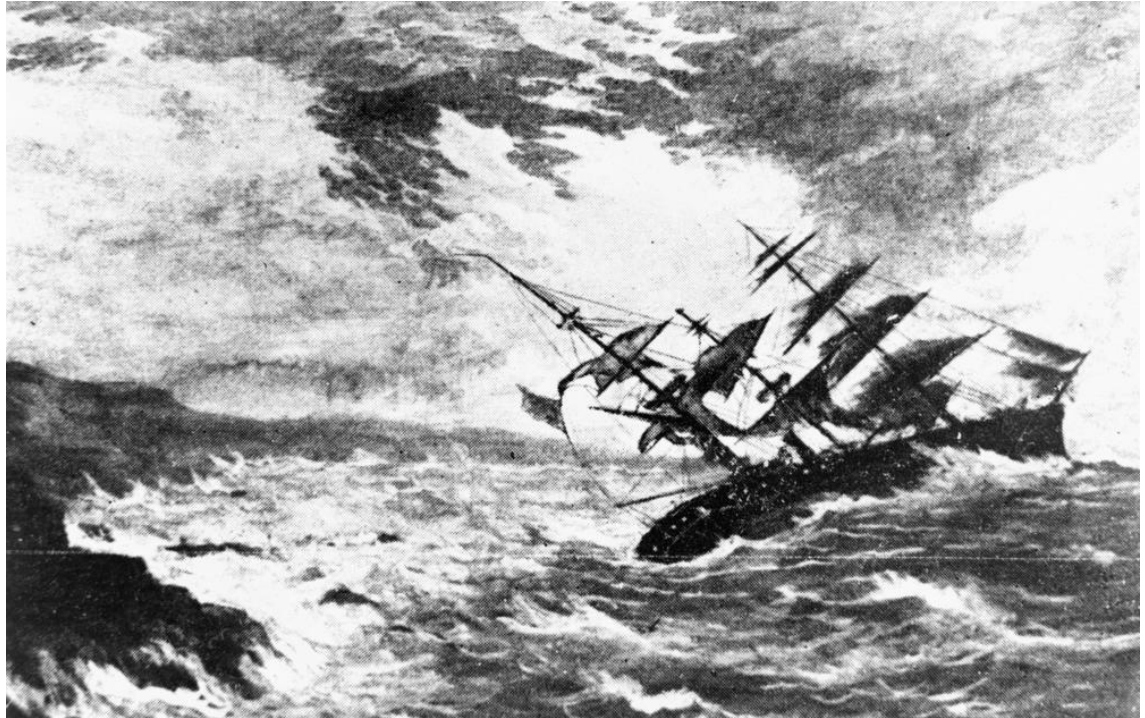


1944

# Royal Charter Storm (1859)

In the early hours of 26 October 1859, the Royal Charter ship, driven by the heavy winds onto the east coast of Anglesey, Wales, with the loss of over 450 lives.

Major flooding and damage across UK and Ireland, with a total death toll estimated at over 800.



Inspired Captain Robert FitzRoy of the Meteorological Office to issue gale warning, now known as 'Shipping Forecast'

# Typhoon Cobra (1944)

Sank three destroyers in the US Navy Pacific Fleet, killed 790 sailors, damaged 9 other warships, and swept dozens of aircraft overboard, off Philippines

Biggest non-combative loss during WW2



It led to creation of Joint Typhoon Warning Center (JTWC)

# Too many – Too little

There are at-least hundreds of thousands (possibly millions) of ship logbooks never been used in climate research

Though appears simple - copying text from paper to computer, proving difficult for individual(s), or AI

Collective effort – crowdsourced transcription  
Old Weather - WW2 | Weather Rescue at Sea

LOG OF THE UNITED STATES SHIP		FARRAGUT (346)		(Identification Number)																
AT		Pearl Harbor, T.H.		TO Sunday 7 December 1941																
PASSAGE		(Day) (Date) (Month)		(Day) (Date) (Month)																
ZONE DESCRIPTION		Plus 10°		G.F. HUNTER, Lieut. Comdr., U.S. Navy, Commanding.																
Hour	Miles Run	BY REV. Miles Run	BY LOG Miles Run	WIND	BAROMETER	TEMPERATURE	CLOUDS			SEA										
							Force	Motion Force	Direction		Direction									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1				NE	1 3011	80 72	bc	cu	NE	1	10									
2				NE	1 3010	80 72	bc	cu	NE	1	10									
3				NE	1 3009	80 73	bc	cu	NE	4	10									
4				NE	1 3002	80 72	bc	cu	NE	4	20									
5				NE	1 3002	80 72	bc	cu	NE	4	20									
6				NE	1 3004	81 70	bc	cu	NE	4	20									
7				NE	1 3004	81 72	bc	sst	NE	4	20									
8				NE	1 3004	80 70	bc	sst	NE	5	10									
9	132.5	14		180	NE	1 3003	80 70	78	bc	cu	NE	4	51	1	N					
10	105.5	11.2		280	NE	1 3001	80 70	78	bc	cu	NE	4	51	1	N					
11	105.5	11.2		280	NE	1 3000	80 71	78	bc	cu	NE	4	51	1	N					
12	201.5	20.5		260	NE	1 2999	80 71	78	bc	cu	NE	5	51	1	N					

DRILLS AND EXERCISES	
Time	Description
0	Received 0
1	Expended 23061
2	On hand 128242
3	Division 1
4	2
5	3
6	4
7	5
8	6
9	7
10	8
11	9

CURRENT	
Set	Drift
270	.6 kt.

GYROCOMPASS IN USE	
Error	Drift
10	

STANDARD MAG. COMPASS	
Compass No.	Drift
212	

MAGAZINE TEMPERATURES	
Maximum	Minimum
80	75

CONDITIONS	
Remarks	Notes
NOT RECORDED	

SUMMERED RUN DATA—SUBMARINE		
Run No. (Serial)	Time to submerge	Greater depth
1		
2		
3		
4		
5		

(Original ribbon copy of this page to be sent to Bureau of Navigation monthly)

U. S. S. HONOLULU  
CONFIDENTIAL WAR DIARY  
C-O-N-F-I-D-E-N-T-I-A-L

27 December 1943.

0800 Position Latitude 07°14'S, Longitude 157°50'E.  
Completed passage through MANNING STRAIT at 0800. Steered course 310°T until about 1100. Steered 298°T until about 1430. Until 1330 destroyers were formed in an anti-submarine screen ahead on circle 4.5. At 1341 an anti-aircraft screen was formed with ships as follows: FARENHOLT 1.5-315, BUCHANAN 1.5-045, LARDNER 1.5-135, LANSDOWNE 1.5-225. At 1410 formed column on course 322°T. Order from the van: FARENHOLT, BUCHANAN, HONOLULU, ST. LOUIS, LANSDOWNE, and LARDNER. This order was maintained until after the firing was completed. During the approach changes of course were made by turn signal.

From 1607 until 1802 fired on shore positions at KIETA and NUMA NUMA as directed in Commander Task Force 38 Operation Order No. 14-43 of 26 December 1943. Total ammunition expended: 960 rounds 6"/47 H.C., and 432 rounds 5"/25 AA Common. Upon completion of the shore bombardment retirement was made on course 085°T until 1910. Courses were then followed passing to the Northward of BUKA ISLAND and down the West Coast of BUKA and BOUGAINVILLE about 40 miles off shore.

28 December 1943.

At 0740 U.S.S. HOPKINS, U.S.S. SICARD, U.S.S. GAMBLE, and U.S.S. TRACY relieved the destroyer escort as anti-submarine screen for U.S.S. HONOLULU and U.S.S. ST. LOUIS. U.S.S. FARENHOLT, U.S.S. BUCHANAN, U.S.S. LANSDOWNE, and U.S.S. LARDNER took departure for BLANCHE HARBOR, TREASURY ISLANDS, for refueling.

0800 Position Latitude 07°43'S, Longitude 155°34'E.  
1200 Position Latitude 8°33'S, Longitude 156°03'E.  
2000 Position Latitude 7°33'S, Longitude 155°29'E.

29 December 1943.

0800 Position 9°23.5'S, Longitude 159°08'E.  
At 1205 entered PURVIS BAY, FLORIDA ISLAND, SOLOMON ISLANDS.

30 - 31 December 1943.

At anchor PURVIS BAY FLORIDA ISLAND, SOLOMON ISLANDS.

Master's REMARK BOOK 17<sup>th</sup> October 1863 to 18<sup>th</sup> Oct. 1863

H. M. S. "Vivago"

On Passage from Bermuda to Nassau N.P.

Date	Lat. at Noon	Long. at Noon	Current	Variation	Barom.	Temperature		Wind		Weather											
						Air	Sea	Direction	Force												
17 Oct 1863						A.M.		SW	2	cl											
						4	30.07				75	78									
						8	30.05				82	80	SW								
						12	30.04				88	80	West								
						P.M.					4° E	SW	2	bc							
						4	30.10								81	79	West				
						8	30.15								78	78	North				
						12	30.15								79	80	SW				
						A.M.									0	SW	1	bc			
						4	30.10												79	82	N.E.
						8	30.16												80	84	N.W.
						12	30.16												82	88	"
P.M.		0	SW	1	bc																
4	30.18					85	83	N.W.													
8	30.09					81	82	SE													
12	30.08					81	82	E.S.E.													

\* Captain's or Master's, as the case may be.

REMARKS, &c. (On Passage from Bermuda to Nassau N.P. or At Anchor at)

No Remarks.

Master's REMARK BOOK 19<sup>th</sup> October 1863 to 20<sup>th</sup> October 1863

H. M. S. "Vivago"

Master's REMARK BOOK August 9<sup>th</sup> 1863 to August 12<sup>th</sup> 1863  
H. M. S. "Tribune"  
On Passage from Wallis to Pitcairn Island

Date	Lat. at Noon	Long. at Noon	Current	Variation	Barom.	Temperature		Wind		Weather											
						Air	Sea	Direction	Force												
Aug 9 <sup>th</sup>						A.M.		NE	4	bc											
						4	30.20				77	70									
						8	30.26				60	"	West								
						12	30.45				72	70	"								
						P.M.					E	SW	2	bc							
						4	30.32								72	"	W.S.				
						8	30.34								60	"	SW				
						12	30.34								69	"	"				
						A.M.									E	SW	2.5	bc			
						4	30.33												60	70	SW
						8	30.36												62	"	"
						12	30.36												70	"	SW
P.M.		E	SW	2	bc																
4	30.34					64	"	SW													
8	30.50					65	"	South													
12	30.41					65	"	SW													

\* Captain's or Master's, as the case may be.

REMARKS, &c. (On Passage from Wallis to Pitcairn Island or At Anchor at None to Pitcairn Bay)

Pitcairn Isd. The Caterers of the *Master's* landed, and brought on board several large Pigs in many stocks as well as the quantities of Potatoes, Yams, sweet Potatoes, Cabbages and Lemons, for a sufficient quantity for every one on board for a week: they would not have remunerated any kind for them. There are no Cattle on the Island being destroyed in consequence of their introduction.

Master's REMARK BOOK August 11<sup>th</sup> 1863 to August 12<sup>th</sup> 1863  
H. M. S. "Tribune"  
On Passage from Wallis to Pitcairn Island


Date	Lat. at Noon	Long. at Noon	Current	Variation	Barom.	Temperature		Wind		Weather											
						Air	Sea	Direction	Force												
August 11 <sup>th</sup>						A.M.		SW	4.5	bc											
						4	30.41				64	70									
						8	30.36				65	"	South								
						12	30.41				66	"	"								
						P.M.					E	SW	5	bc							
						4	30.42								65	70	South				
						8	30.46								65	"	SW				
						12	30.46								66	"	"				
						A.M.									E	SW	4	bc			
						4	30.42												66	"	SW
						8	30.46												66	"	"
						12	30.47												70	"	"
P.M.		E	SW	4	bc																
4	30.40					74	70	"													
8	30.45					69	"	"													
12	30.46					70	"	"													

\* Captain's or Master's, as the case may be.

REMARKS, &c. (On Passage from Wallis to Pitcairn Island or At Anchor at None to Pitcairn Island)

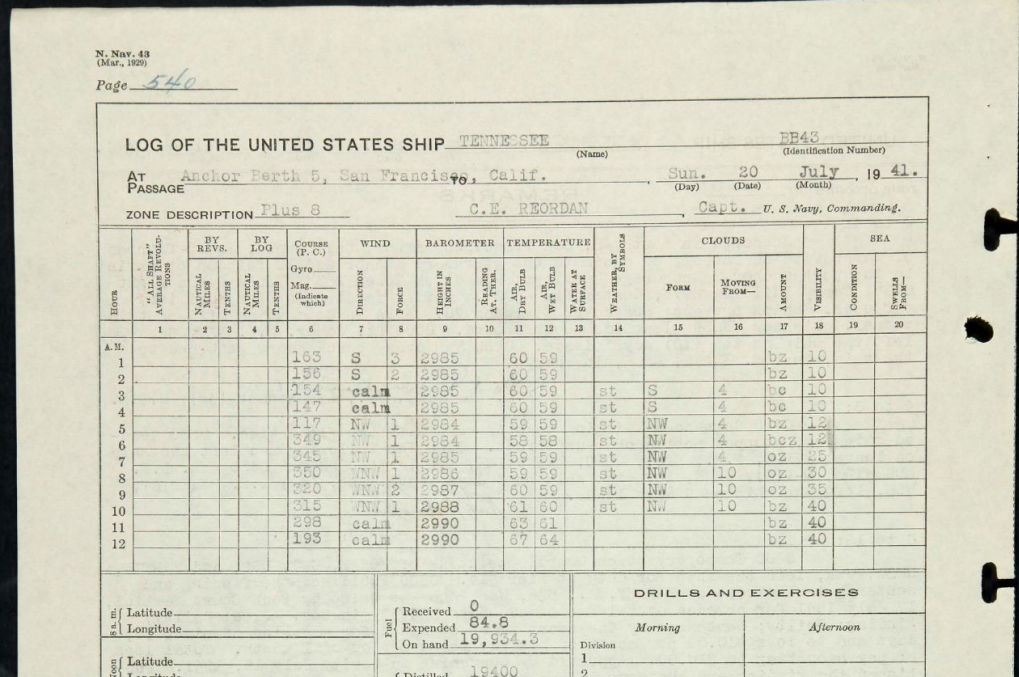
Pitcairn Isd. to the Potable Gardens, Wild Apples and Peaches can be shot on the mountains, they are part of the stock of the old Islanders. Admittance is hidden amongst large trees and cannot be seen from Bounty Bay. When a vessel is close they show a red English Ensign on the No. 1 peak of the Island.

# Zooniverse - transcription platform


Old Weather - WW2

[ABOUT](#)
[CLASSIFY](#)
[TALK](#)
[COLLECT](#)
[RECENTS](#)
[LAB](#)

Thanks everyone, PROJECT IS COMPLETE! (There will be some oddities while I collect the overall statistics.)



N. Nav. 43  
(Mar., 1929)  
Page 540

**LOG OF THE UNITED STATES SHIP** TENNESSEE BB43  
(Name) (Identification Number)  
 AT Anchor Berth 5, San Francisco, Calif. Sun. 20 July, 1941.  
(Day) (Date) (Month)  
 ZONE DESCRIPTION Plus 8 C.E. REORDAN Capt. U. S. Navy, Commanding.

Hour	ALL SHIPBOARD ACTIVITIES, 1928	BY REVS.	BY LOG	Course (P. C.)	WIND		BAROMETER		TEMPERATURE				WEATHER SYMBOLS	CLOUDS			SEA		
					Direction	Force	Height in Inches	At Sea	At Deck	At Day Deck	At Mast	At Water Surface		Form	Moving From—	Amount	Visibility	Condition	Swells From—
A.M.																			
1				163	S	3	2985		60	59						bz	10		
2				156	S	3	2985		60	59						bz	10		
3				154	calm		2985		60	59	st					bz	10		
4				147	calm		2985		60	59	st					bz	10		
5				117	NW	1	2984		59	59	st	NW	4			bz	12		
6				349	NW	1	2984		58	58	st	NW	4			bz	12		
7				345	NW	1	2985		59	59	st	NW	4			bz	12		
8				320	NW	1	2986		59	59	st	NW	10			bz	30		
9				320	NW	3	2987		60	59	st	NW	10			bz	35		
10				315	NW	1	2988		61	60	st	NW	10			bz	40		
11				298	calm		2990		63	61						bz	40		
12				193	calm		2990		67	64						bz	40		

TASK
TUTORIAL

**Navigation**

See [FIELD GUIDE > Navigation](#) for step-by-step instructions.

Copy & paste the form between the lines into the white box.

**Hour, Latitude (N/S), Longitude (E/W)**

8 am,  
Noon,  
8 pm,  
Place,

Then enter **Latitude (N/S), Longitude (E/W)** separated by commas, or a Place Name if given. Do not enter degree (°), or ('), (") symbols.

Back
Done & Talk
Done

FIELD GUIDE



# Work done by volunteers

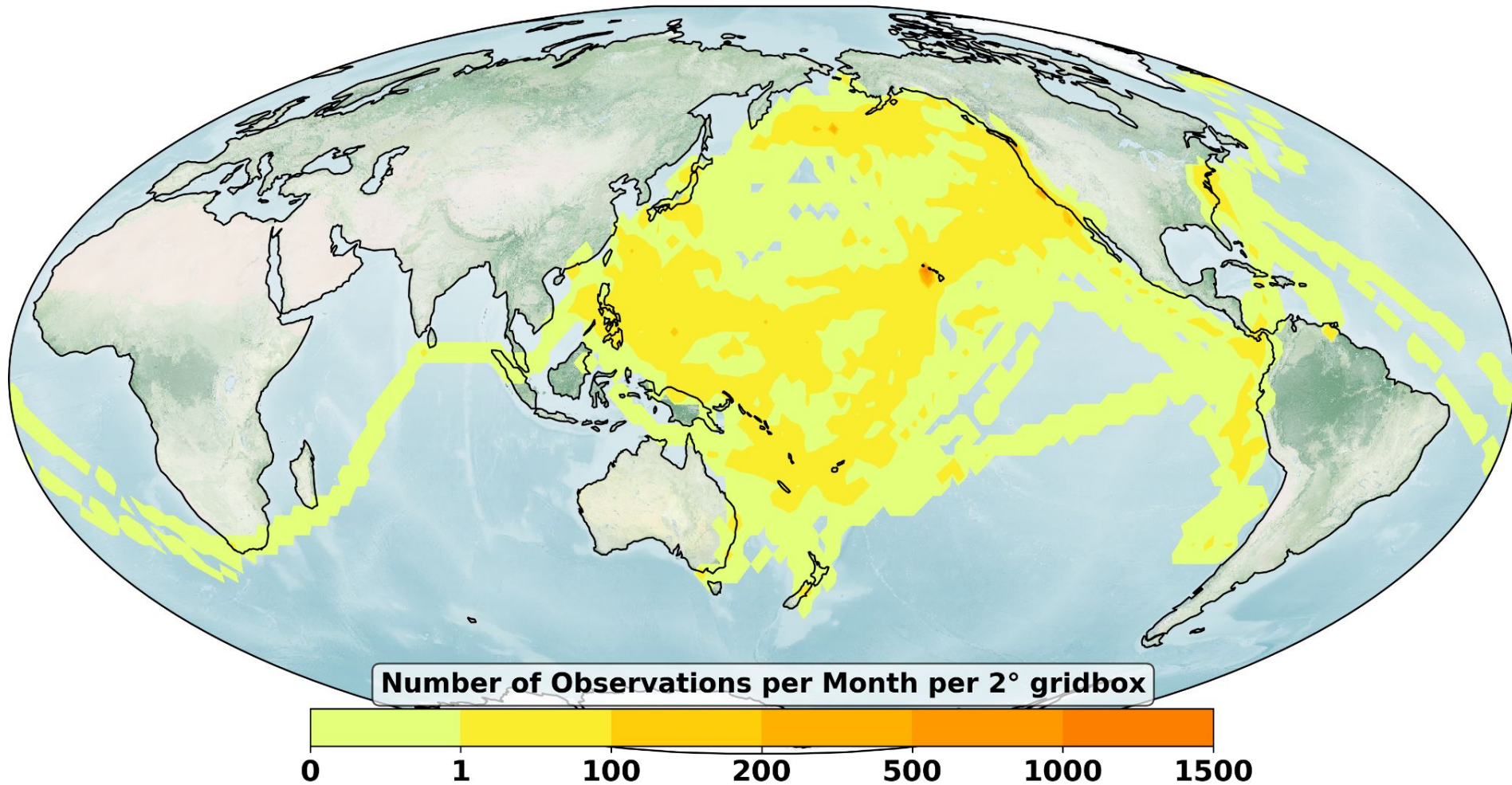
## Old Weather - WW2

3 million individual observations x 3 redundancy values x 7 variables = ~63 million items x 2 strokes  
= more than 126 million keystrokes (over 60 months for one person)

## Weather Rescue at Sea

1.5 million individual observations x 6 redundancy values x 5 variables = ~45 million items x 2 strokes  
= more than 90 million keystrokes (over 43 months for one person)

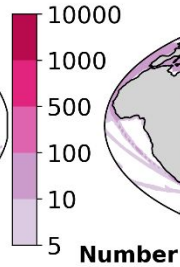
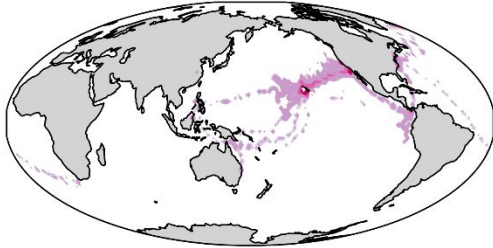
# Old Weather - WW2



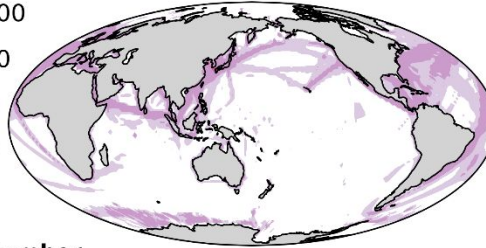
# Old Weather - WW2

1941

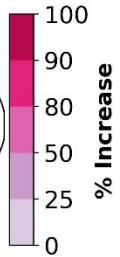
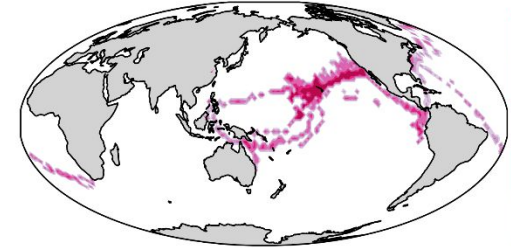
WW2 dataset Obs for: 1941



ICOADS Obs for: 1941

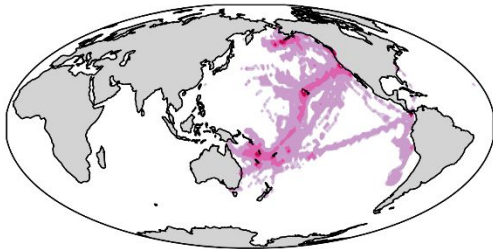


Increase for: 1941

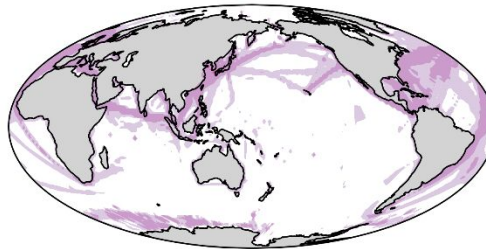


1942

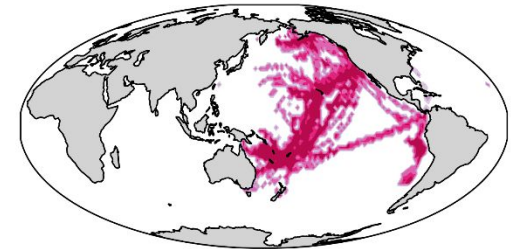
1942



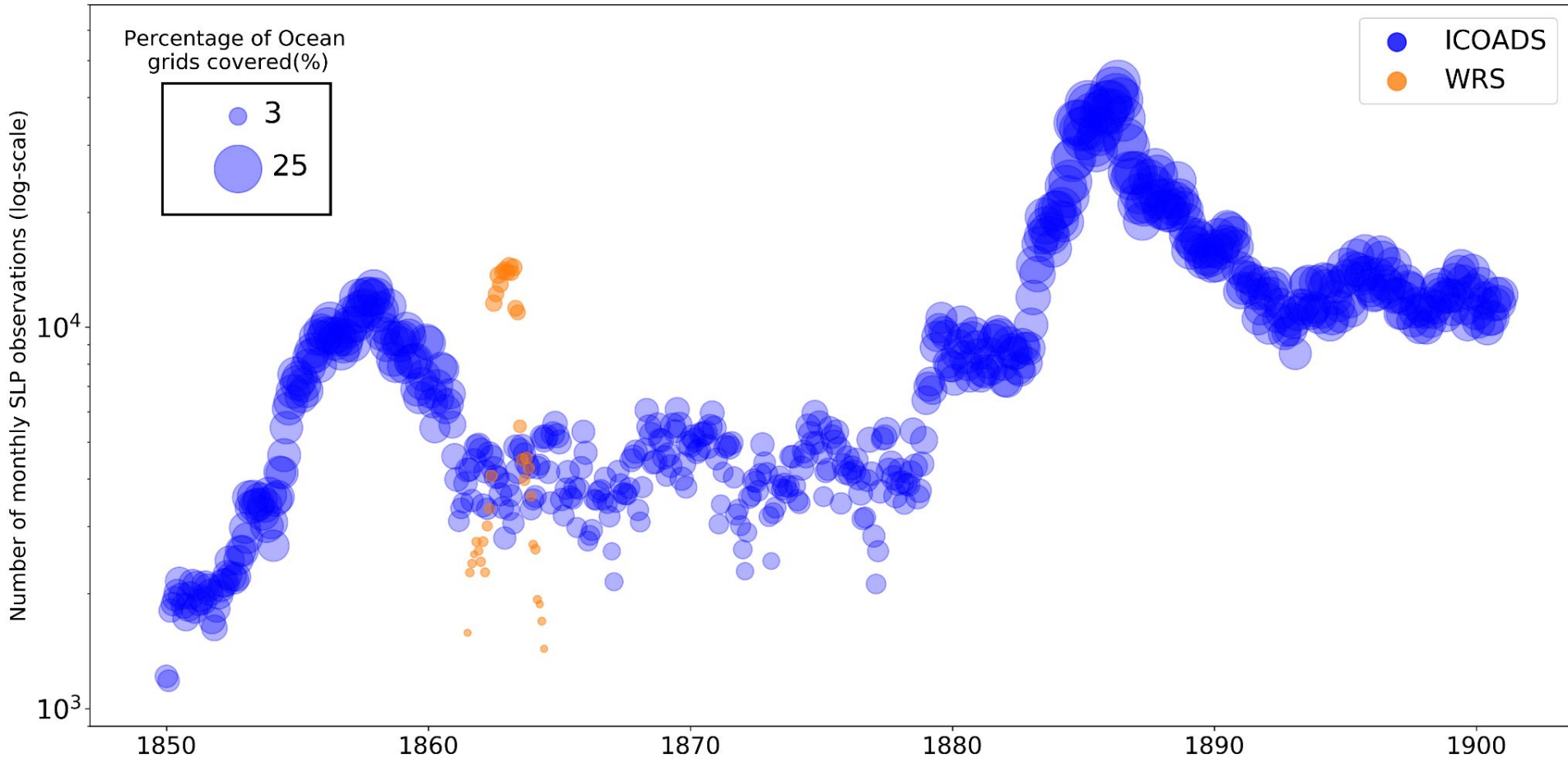
1942



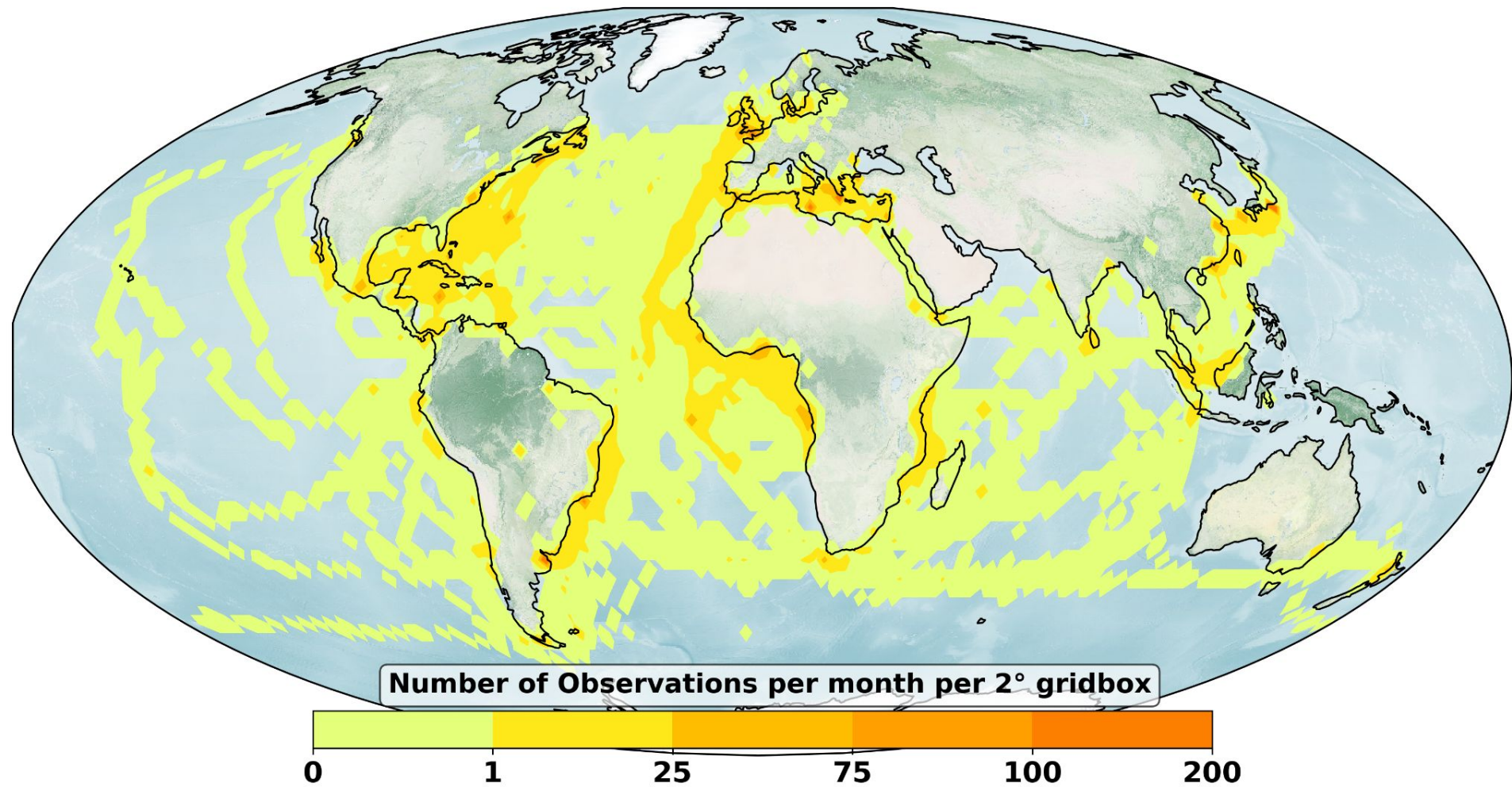
1942



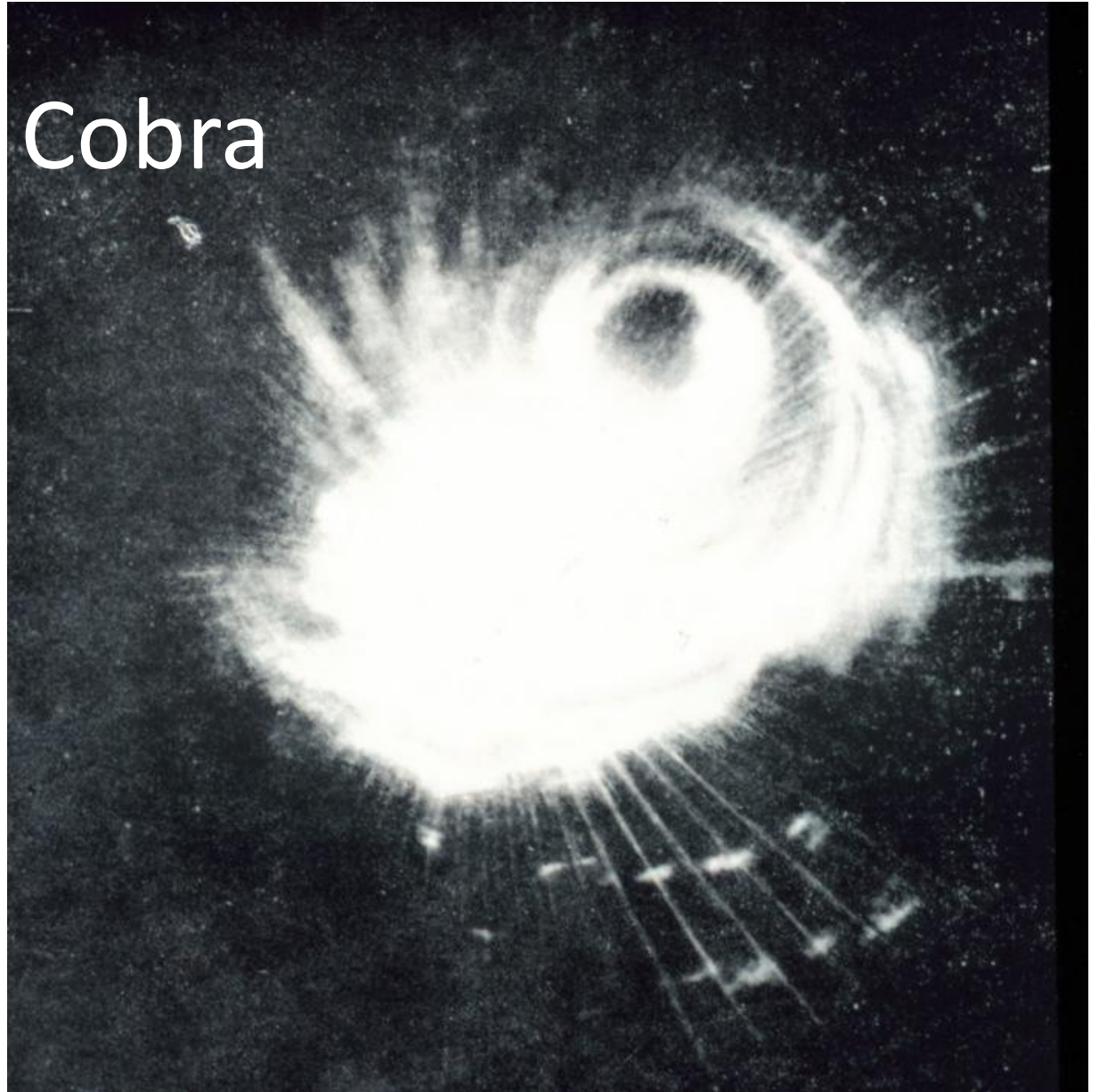
# Weather Rescue at Sea (WRS)

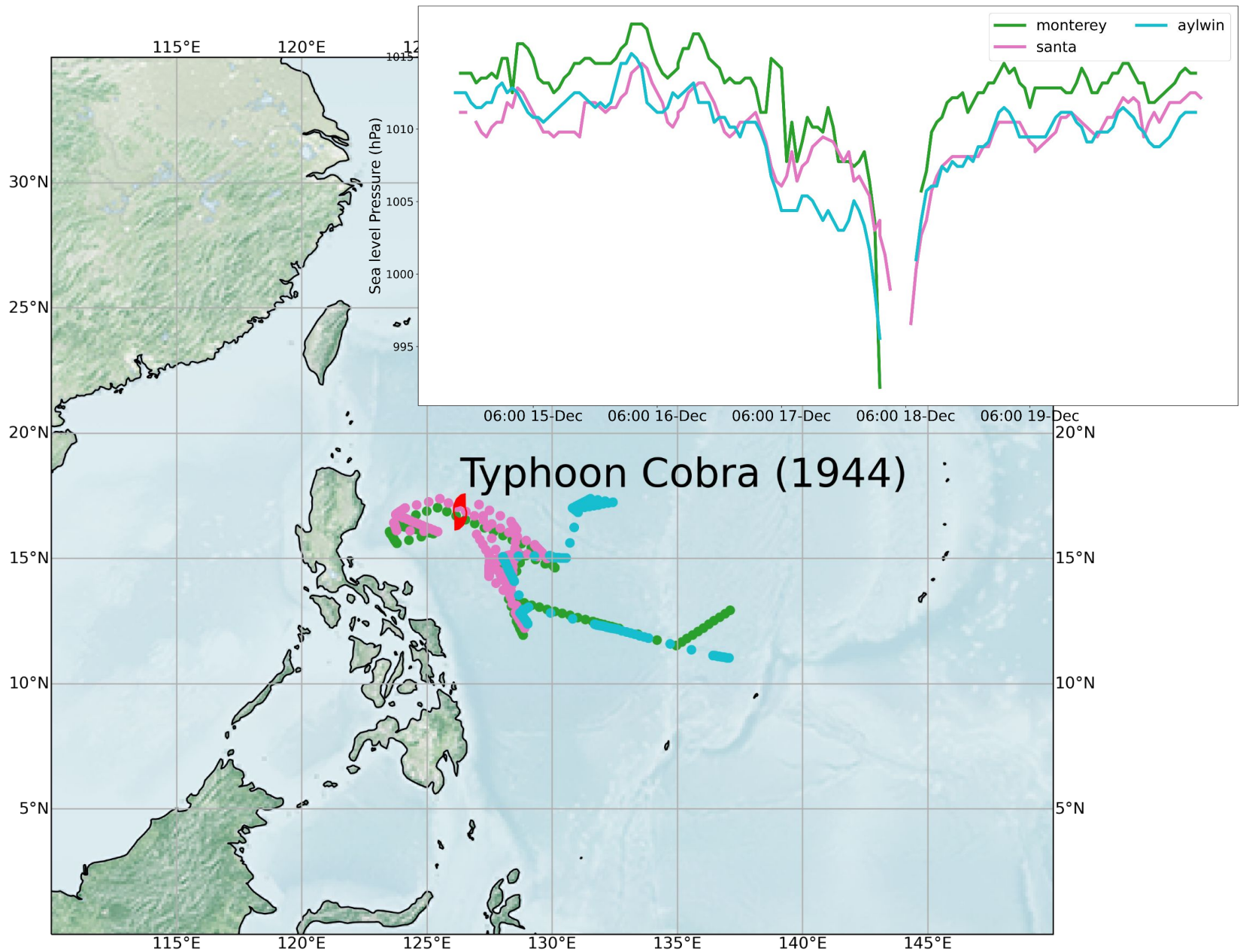


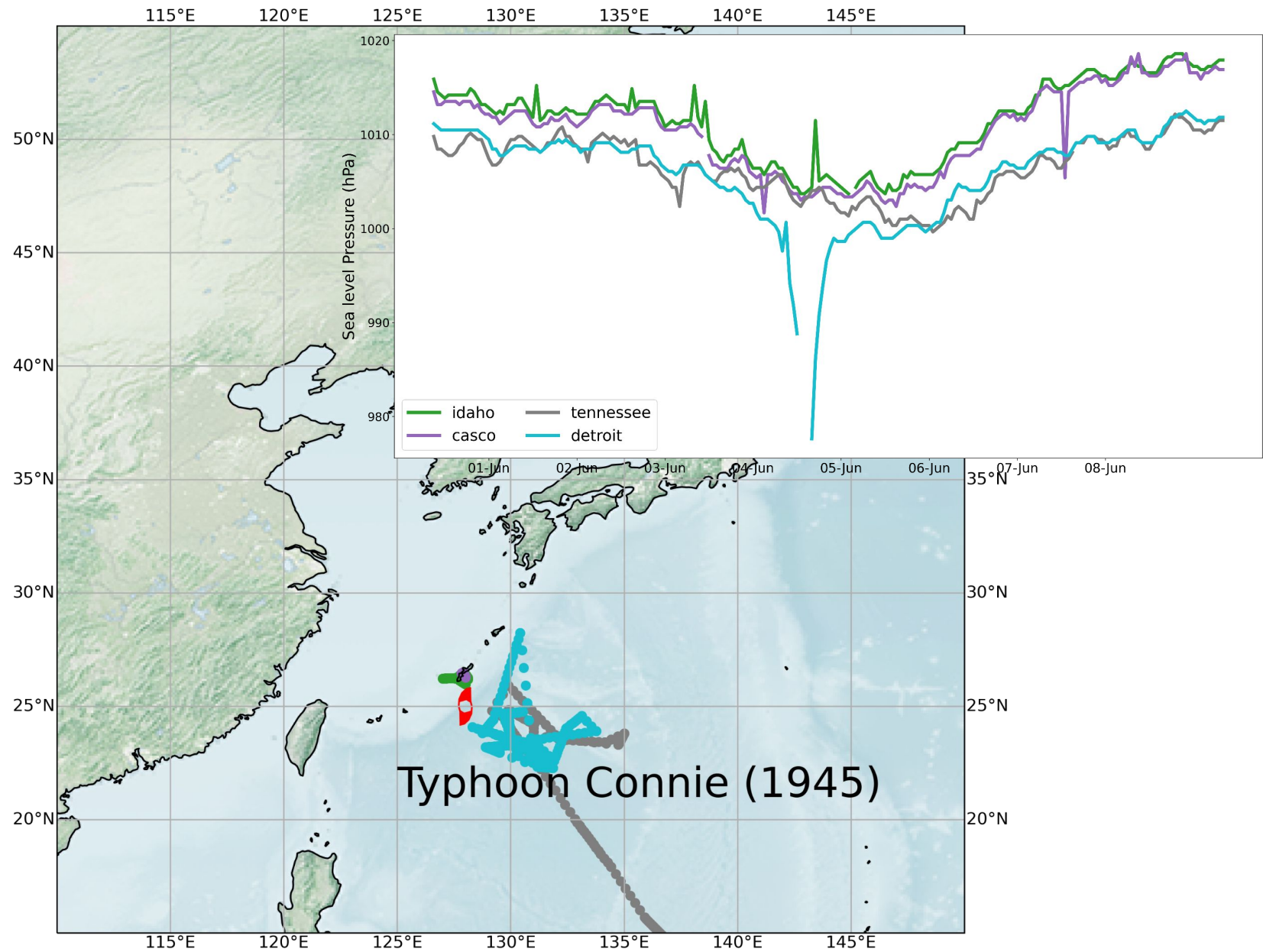
# WRS



# Typhoon Cobra









# Summary

Help understand long-term changes in the climate including extreme weather events

How current climate compares to past climate, how extreme rainfall events, for example, are changing

Formulate evidence-based adaptation strategies

**Thank you for your attention!**

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