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VOLUME THREE.

In concluding the Third Volume there is no need to write more of the answer we have given as seamen to the "Foreword" of the Director of the Meteorological Office at the launching of our Journal, nor need we quote from the many expressions of approval received from those at sea. THE MARINE OBSERVER has attained its greatest object in obtaining the redoubled efforts of our Corps. There will always remain the need for written contributions from the sea, and Marine Observers are not only asked to write of special phenomena observed and of interesting experiences of Weather and Current as "Additional Remarks" in their Logs and reports, but to contribute articles of general interest to seamen based upon observed facts. To those who hesitate to appear in print we would say, remember that your observation and experience may be invaluable to your brother-seamen and that only the man who observes can give first-hand information. The plain language of the sea will be more telling than striving for literary effect.

Many Commanders and Officers having attained "Excellent" awards are now in possession of specially bound Volumes I. and II., and a number of ships have assembled their monthly Numbers at the end of each year and had them bound as volumes; but it is feared

that there are still a great many who have not taken this wise precaution. As notified each year on the reverse side of the Ice Chart of the Western North Atlantic, a specially made binding cover may be purchased from the Stationery Office, so that all observing ships and subscribers may have means of preserving THE MARINE OBSERVER. Only limited numbers are printed and so each year's Numbers will be "Out of print" quite soon. The Corps of Marine Observers can do much to preserve their work for the future by having their ship's Numbers bound at the end of each year.

The arrangement for binding is as follows:—

The title page—loose—and the Index are published in this Number.

The cover, advertisement pages, list of voluntary observing ships, and Ice Chart, contain information which is not permanent or may be repeated in future volumes, may be dispensed with. When these have been removed there will remain pages numbered in sequence throughout each Number, also pages unnumbered containing lithographic charts which will follow the numbered pages as they were published in the monthly Numbers. These should be placed in the Volume cover and bound.

MARINE SUPERINTENDENT.

## THE MARINE OBSERVER'S LOG.

It is hoped that these pages will be filled each month with a selection of the contributions of Mariners in manuscript, or remarks from the Logs and Reports of regular Marine Observers.  
Responsibility for statements rests with the Contributor.

## ABNORMAL CURRENT.

## Approaching Ceylon.

THE following is an extract from the Meteorological Log of S.S. *Orsova*, Captain C. G. MATHESON, D.S.O., R.D., R.N.R., Melbourne to Colombo:—

"December 22nd, 1925, Noon, Latitude  $4^{\circ} 36' N.$ , Longitude  $81^{\circ} 45' E.$  Course  $320^{\circ}$ , Speed  $12\frac{1}{2}$  knots. An abnormal current was experienced during the previous 24 hours 10 mins., setting the ship  $N. 38^{\circ} E. 30\frac{1}{2} m.$ ; and at 3.30 p.m. (A.T.P.), position by observation  $5^{\circ} 00' N.$ ,  $81^{\circ} 19' E.$ , a normal current set the ship West 6 m. from Noon.

"At 6.30 p.m. (A.T.P.) position by observation  $5^{\circ} 16' N. 80^{\circ} 36' E.$  current was found to set the ship S.  $70^{\circ} W.$  (T) 11 m. from 3.30 p.m. observation.

"On picking up Dondra Head Light and in position  $5^{\circ} 40' N.$ ,  $80^{\circ} 17' E.$  a set was experienced S.  $45^{\circ} W.$  8 m. from 6.30 p.m. observation.

"From a position (Pt de Galle Lt. brg. N.  $70^{\circ} E.$  (T) 8 m.) and at a reduced speed of  $10\frac{1}{2}$  knots to Colombo over a period of 5 hours a favourable set was experienced of 6 m."

## STREAK OF DISCOLOURED WATER AND CURRENT.

## Off Entrance to Malacca Strait.

THE following is an extract from the Meteorological Log of S.S. *Hatarana*, Captain T. S. BEEDLE, Calcutta to Singapore; Observer, Mr. F. WELLS, 2nd Officer:—

"December 10th, 1925, at 8.35 a.m. A.T.S. in Latitude  $7^{\circ} 54' N.$ , Longitude  $97^{\circ} 20' E.$ , 57 miles West of Salang Island on position marked Tide Rips on Chart No. 830. Vessel passed through a streak of yellow matter, stretching on both sides of vessel as far as the eye could reach (in an E.N.E. and W.S.W. direction). This was observed when abeam of bridge to be composed of dead leaves. Wind was E.N.E., with a moderate sea and slight confused N'ly and E.N.E. swell. Course  $146^{\circ}$ . At noon vessel was found to be 8 miles North of D.R. Position but on D.R. Longitude. Maybe this is just a freak and yet may have been caused by wind alone, the line being practically straight."

"Noon position on December 10th, Latitude  $7^{\circ} 35' N.$ , Longitude  $97^{\circ} 44' E.$ "

## TIDE RIPS.

## In the Vicinity of Brazil.

THE following is an extract from the Meteorological Report of S.S. *Dunrobin*, Captain J. D. RAMSAY, New York to Montevideo; Observer Mr. M. M. RAMSAY, 2nd Officer:—

"From 12 hours to 17 hours 30 min. G.M.T. on 10th December, 1925, and between Latitude  $7^{\circ} 10' N.$ , Longitude  $42^{\circ} 22' W.$  and Latitude  $6^{\circ} 38' N.$ , Longitude  $41^{\circ} 40' W.$  (approx.) long well-defined belts of troubled water (each about 150 feet wide) were observed assuming at first an East and West direction when the wind was N.E. by E. force 5, and S.E. and N.W. direction when the wind veered to East force 5.

"At 17 hours 30 min. G.M.T. wind became light and variable and tide belts disappeared.

"The temperature of the sea was taken at frequent intervals and was found to be  $82^{\circ} F.$  in the belts and  $81^{\circ} F.$  in the smoother water.

"Temperature of the air was  $82^{\circ} F.$  Barometer, 29.72. Slightly confused swell at time of observation.

"Unfortunately on this date the sun was obscured, with the result that the true direction and drift of the current in the vicinity of the troubled water could not be ascertained."

## TORNADO

## At Bermuda.

THE following report is contributed by Commander C. H. KNOWLES, D.S.O., R.N., His Majesty's Surveying Ship *Ormonde*, of a Tornado which passed over Ireland Island Dockyard at 5.25 a.m. on December 12th, 1925:—

"The outstanding features of this tornado were the rapidity with which the whole thing was over and the small area it affected.

"The barograms of various vessels were collected at the end of the week and the track of the tornado was plotted from the ships' barograph readings and by taking the rough line of damaged buildings from a plan kindly lent by the Officer in charge of Works Department.

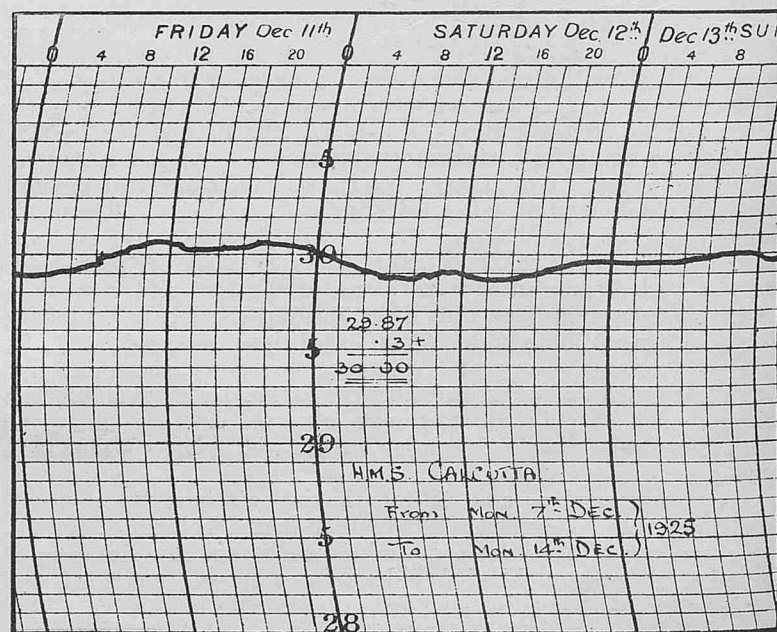
"It will be noticed that *Calcutta* shows no depression in the pen trace at all, although only 200 yards from the centre of the storm; *Capetown*, about 100 yards away, showed a slight depression. The barometer readings at the Captain of the Dockyard's Office and *Ormonde* show that the centre of the storm must have been close to both, probably closest to the Captain of the Dockyard's Office.

*Ormonde's* Quartermaster reported that the wind was only audible for 15 seconds before it burst upon the ship, and its duration was approximately 30 seconds, which did not enable him to get a reading of the Anemometer—the ship heeled violently over to starboard, brought up against the wires and then heeled over—about  $15^{\circ}$  to port.

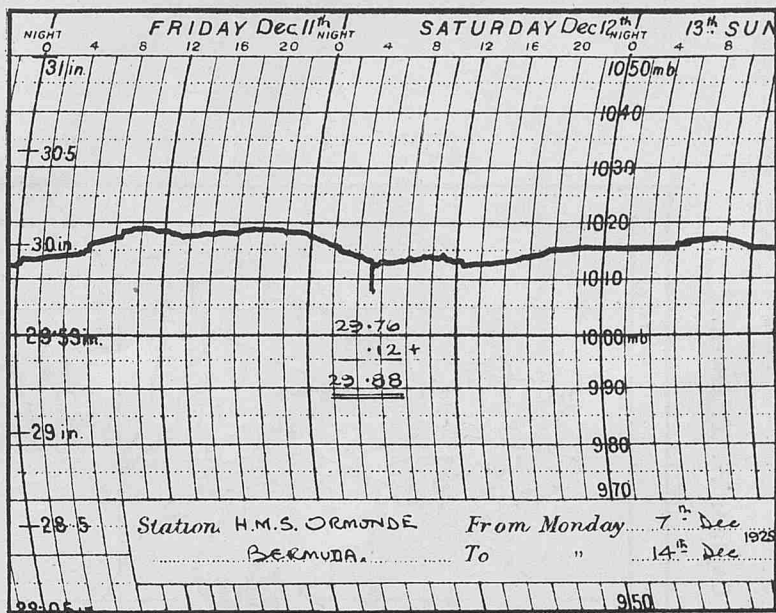
"All the buildings shaded in the accompanying plan were damaged in some way or another, tiles ripped off, small sheds capsized, and fences blown down. A whaler belonging to *Capetown* on the chocks at the boat slip was shifted 12 feet and badly holed. The ten-ton crane abreast *Ormonde's* bridge was swung right round and a cart close to it turned over. *Ormonde* lost two awnings (as shown), which were ripped away from stanchions and not seen again.

"It was also said that a Dockyard Policeman had a stormy passage up the jetty and was only saved from a ducking by fetching up against a bollard.

"The breadth of the path of tornado is estimated to be about 300 yards."



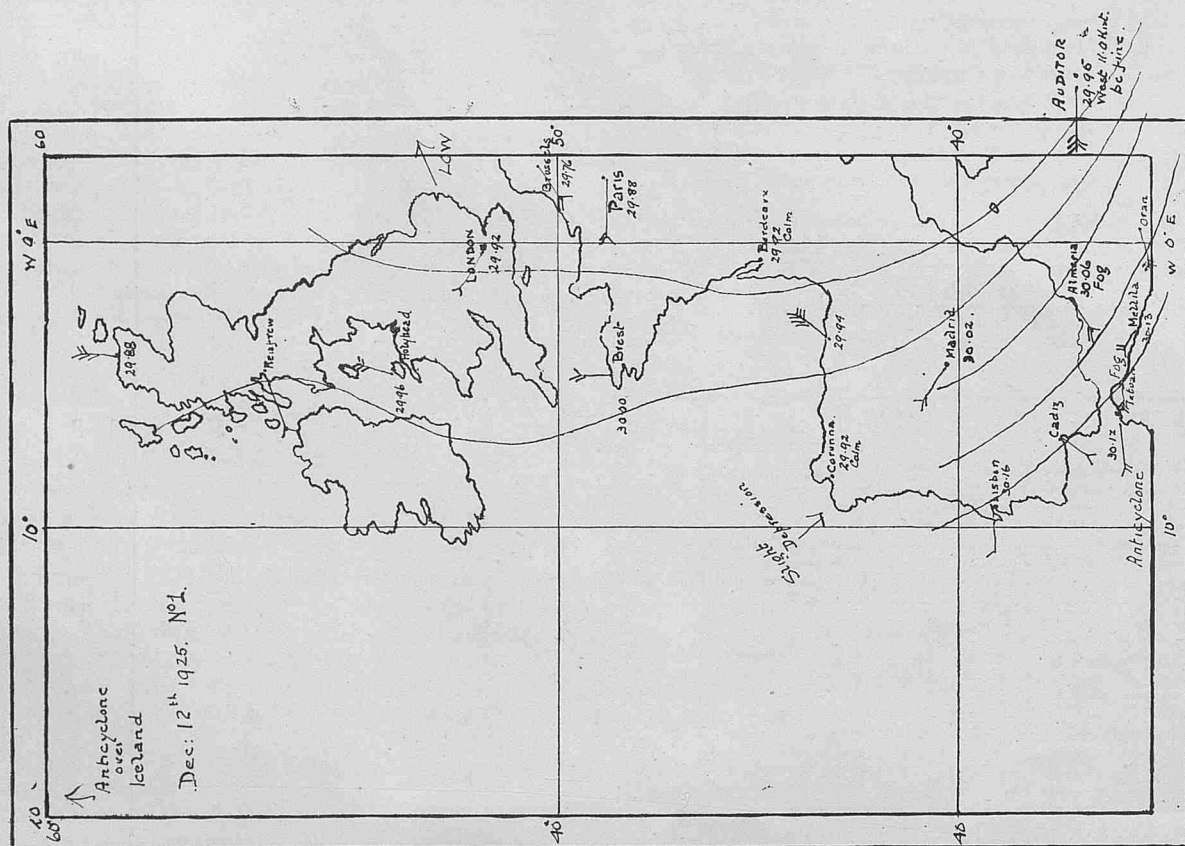


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## WEATHER CHARTS MADE AT SEA.

A series of Weather Charts made by Mr. T. E. Steel, 3rd Officer S.S. "Auditor," Captain W. T. Owen.

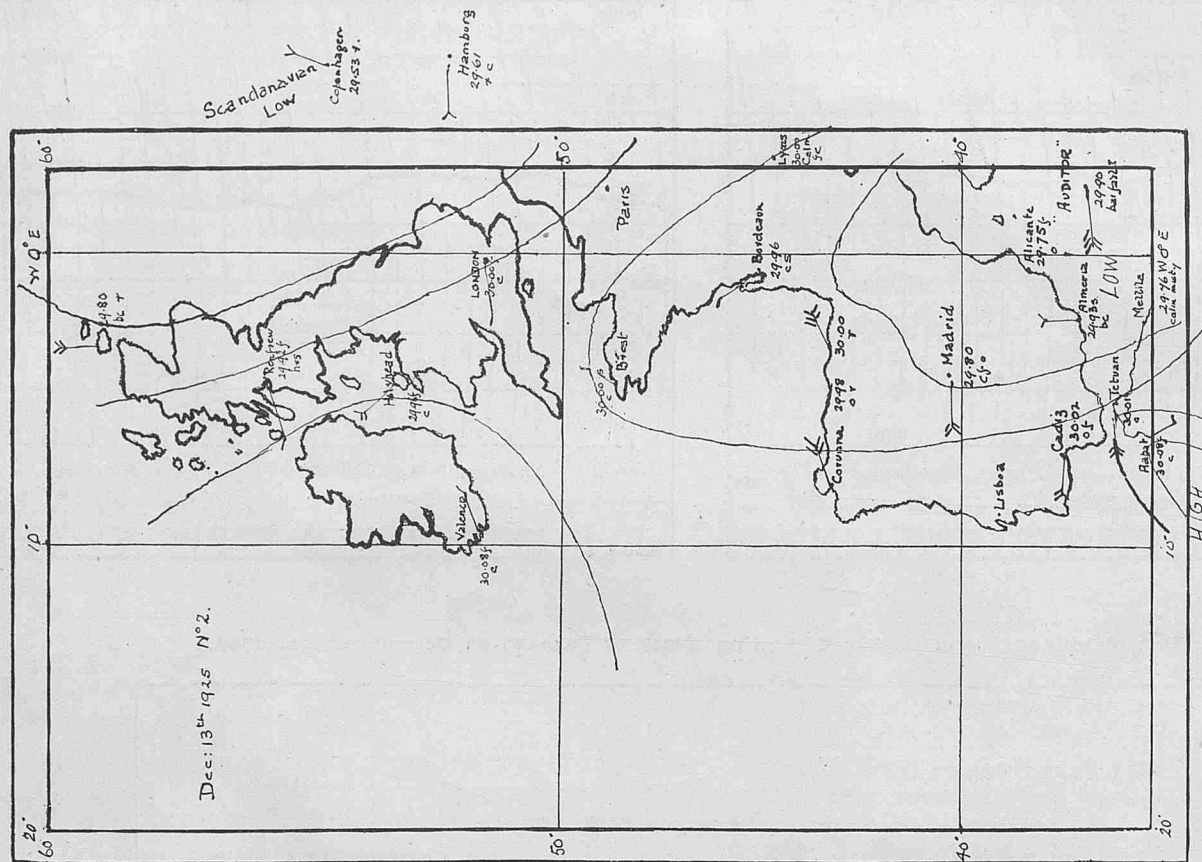


FORECAST: FOR 13TH-12 HRS. SHIP.

"Moderate Westerly wind—later backing to W.S.W. or S.W., force 5—Passing showers."

"Weather actually experienced during following 12 hours:—

"2 a.m. 13th Dec. Wind backed to W.S.W. and freshened slightly. Passing showers."



FORECAST FOR 14TH:—

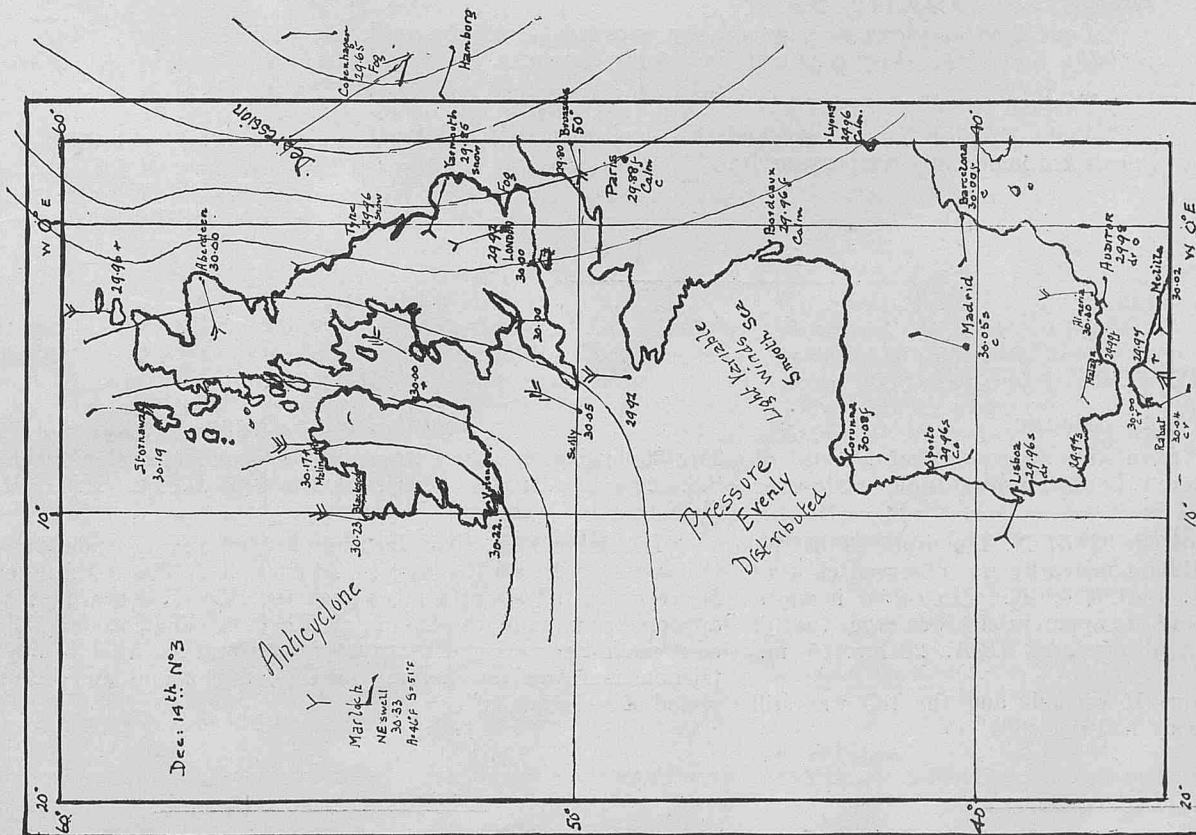
"Fresh W.S.W. to Westerly winds will continue with a steady barometer and temperature falling slightly."

"Weather actually experienced:—

10 p.m. 13th. Wind fell light.  
11 p.m. 13th. Wind veered N'ly.  
2 a.m. 14th. Wind backed to W.N.W., force 2.

Passing occasional drizzle. Mainly overcast.  
Barometer rising slightly and falling temperature."





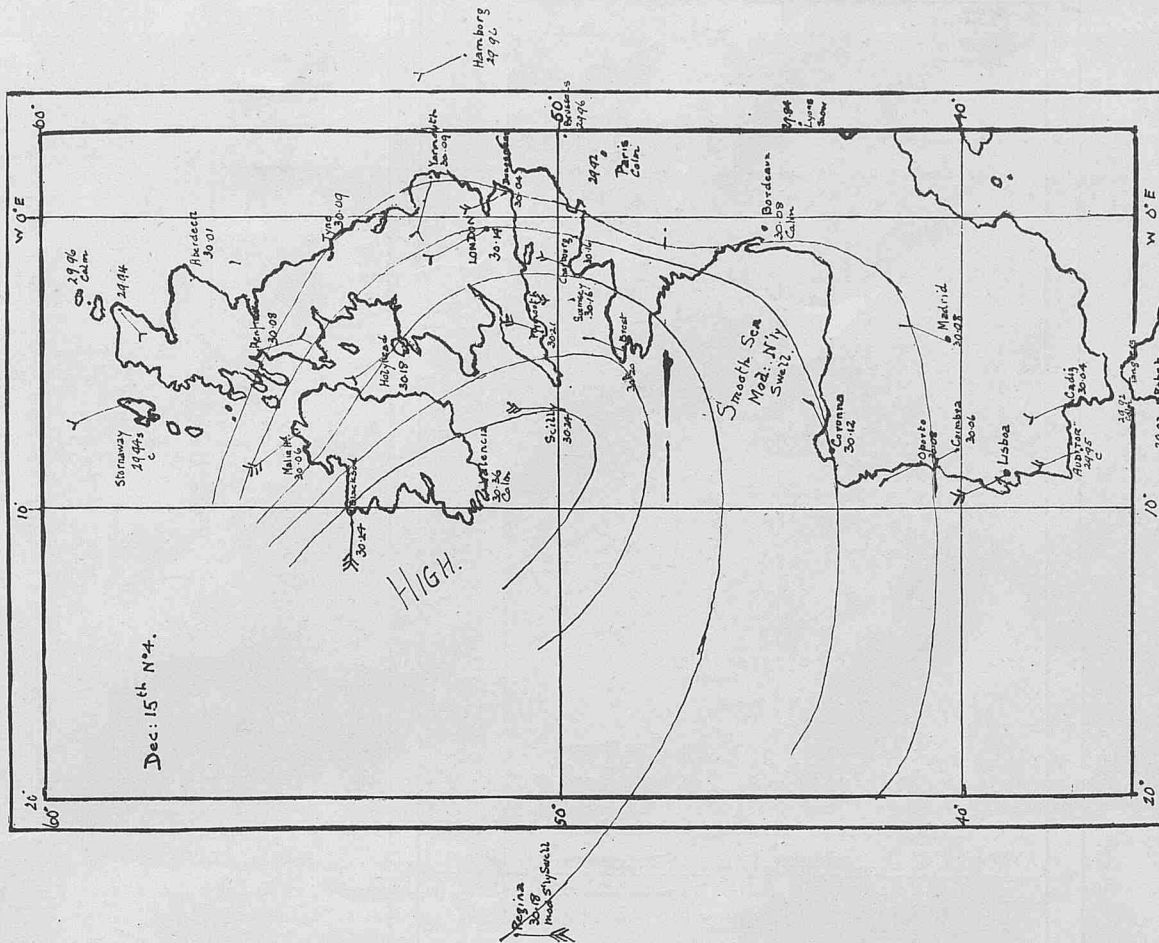
FORECAST: FOR 15TH (FOR SHIP).

"Light Westerly wind, overcast occasional moderate rain or drizzle—visibility poor."

"After midnight wind hauling to W.N.W. or N.W., force 3. Steady barometer."

"Weather actually experienced:—

"Steady barometer, 10.30 p.m. December 14th, Wind hauled to N.W.W., 3, and rain cleared—temperature fallen considerably."



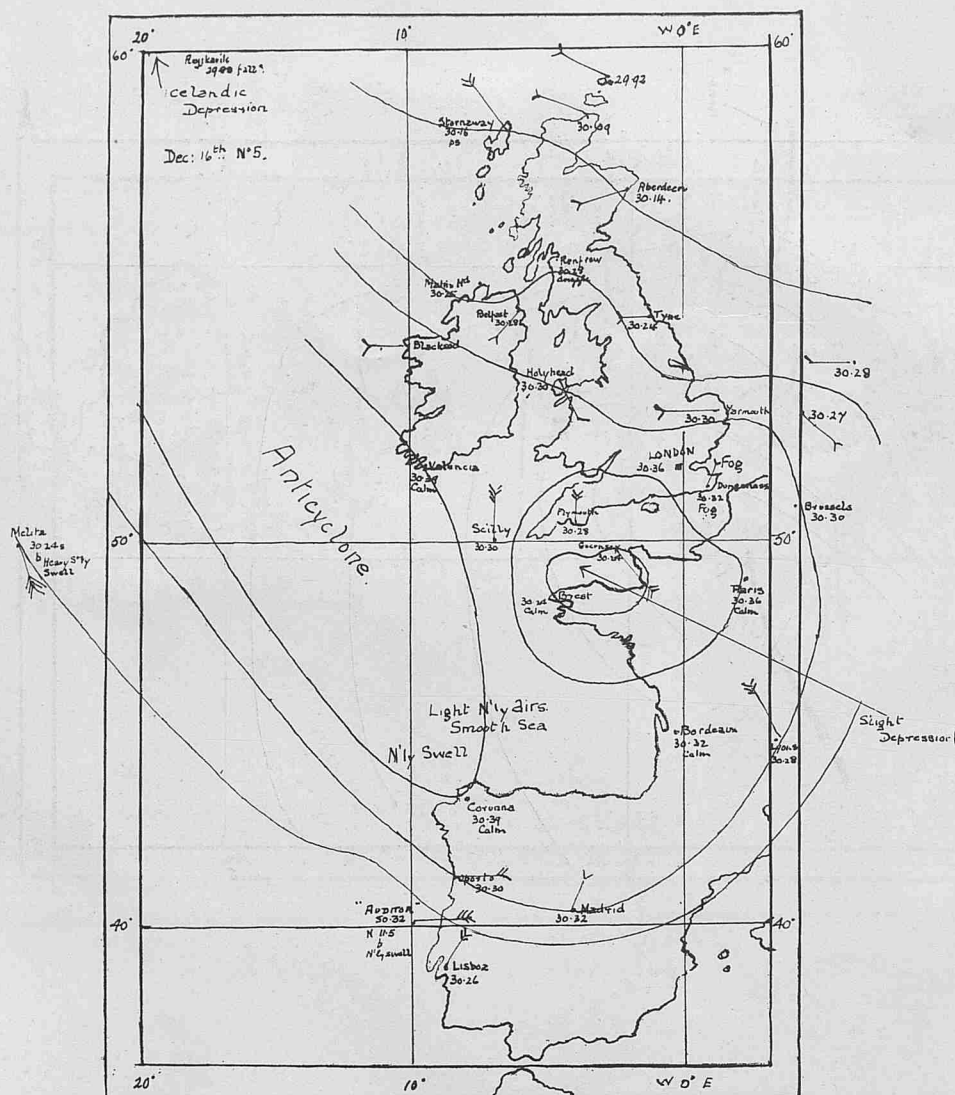
FORECAST: FOR 16TH (FOR SHIP).

"Light to moderate N.N.W. to N. winds—rising barometer—falling temperature—visibility good—No fog."

"Weather actually experienced:—

"6 p.m. December 15th. Wind freshening and hauling to eastward—falling temperature—barometer rising quickly."

"6 a.m. December 16th. Wind moderating."



FORECAST: FOR 17TH (FOR SHIP):—

"Light North-Easterly airs, smooth sea, moderate Northerly swell, visibility Very Good—remaining cold, and steady barometer."

"Weather actually experienced:—

"Light E. to E.N.E. breeze and sea—moderate confused swell steady barometer and temperature low."

## METEOR.

### In the North Atlantic.

THE following is an extract from the Meteorological Report of S.S. *Ingoma*, Captain R. K. BARROW, London to West Indies; Observer Mr. O. STANHOPE, 3rd Officer:—

"December 6th, 1925, in Latitude  $32^{\circ} 54' N.$ , Longitude  $29^{\circ} 01' W.$  At 7.45 p.m. (ship's time) a brilliant meteorite was observed close to a *Aquilæ*. (R.A. 19 hrs. 47 m., Decl.  $8^{\circ} 40' N.$ ). In colour it was a beautiful and vivid pale green and its apparent size was twice that of Venus, alongside of which it disappeared (R.A. 20 hrs. 16 m., Decl.  $22^{\circ} 25' S.$ ).

"Its passage occupied about 15 seconds and the tail was still visible two seconds after the body had vanished."

## METEOR.

### South Indian Ocean.

THE following is an extract from the Meteorological Log of S.S. *Orsova*, Captain C. G. MATHESON, D.S.O., R.D., R.N.R., Melbourne to Colombo:—

"December 14th, 1925, Latitude  $28^{\circ} 00' S.$ , Longitude  $109^{\circ} 00' E.$  Course  $320^{\circ}$ . Speed  $13\frac{1}{2}$  knots. At 8.30 p.m. (1300 G.M.T.) observed Meteorite to fall about 4 miles from the ship on a bearing  $290^{\circ}$ . It appeared as a luminous patch in a Cu-Nimbus cloud, becoming brighter as it made its track and eventually burst and fell into the sea. The phenomenon was not accompanied by any sound and occupied a period of 4-5 seconds."



## CLOUD PHOTOGRAPHS.

In the West Indies.



The accompanying photographs have been received from S.S. *Baychimo*, Captain S. A. CORNWALL, taken by Mr. S. JACKSON, 3rd Officer. They were taken shortly after sunrise on the 15th December, 1925, Position at 8 a.m. Latitude  $22^{\circ} 57' N$ . Longitude  $74^{\circ} 17' W$ . Wind E.N.E. force 1, Barometer 1018.9 mb. Air Temperature  $80^{\circ}$ . Sea Temperature  $81^{\circ}$ .

## CAPTAIN J. M. HARVEY, O.B.E.

BY HIS SUCCESSOR.

WITH the death of Captain J. M. HARVEY at Ruthen Castle, North Wales, on the 20th March last, has passed away another well-known figure in the Mercantile Marine World.

Born on the 30th March, 1856, at Plassey House near Limerick, JOSEPH MASSEY HARVEY was the eldest son of J. M. HARVEY, a gentleman farmer of Co. Limerick, and JANE HANNA PHELPS. On his father's side he was descended from an old Anglo-Norman family who sailed in 1172 with STRONGBOW from Newnham-on-Severn, while on his mother's side he was descended from that General PHELPS who, under CROMWELL'S Government, defeated the Irish at the Battle of Newport, Co. Limerick, and who, as a reward of this victory, was granted all the land he could see from the battlefield.

Young HARVEY'S boyhood was spent at Bally Collston, Nenagh, Co. Tipperary, to which place his parents moved in 1867. The first school he attended was POWERS SCHOOL at Dublin, where he early gave great promise and showed a special liking for athletics of all kinds being a great performer on the bar and trapeze.

From his earliest days he had made up his mind to embrace a sea career and in 1871 he joined H.M.S. *Conway*, where he remained for two years. On this training ship he had an exceptionally brilliant career and when he left in 1873 he had not only won the Queen's Gold Medal and the Gold Medal of the Mercantile Marine Service Association, a feat hitherto unprecedented, but had also won many other valuable prizes and was also awarded a commission in the Royal Naval Reserve. So impressed was the Rt. Hon. CHICHESTER FORTESCUE, the then President of the Board of Trade, who distributed the prizes, with HARVEY'S scholastic feats that he specially asked that "his brilliant young countryman" should be invited to the Mayoral banquet given to himself.

On September 25th, 1873, he signed indentures with JAMES POOLE of Liverpool, serving his apprenticeship on the *Furness Abbey*. After

three years service he passed for Second Mate at Liverpool and was immediately appointed Second Mate of the *Kenyon* in which capacity he served for nearly two years, leaving her to pass for First Mate in June 1879. He then served as Mate of the *Evesham Abbey* for about 18 months when he passed for Master and Extra Master, after which he served for a further eight months as First Mate of the *Battle Abbey*. As he could see no immediate prospect of obtaining an early command in his own company, owing to the small number of ships they owned, he entered steam in the service of the Leyland Line, serving as Second Mate of the *Lisbonense* and First Mate of the *Clarence*. He then joined the WATERFORD STEAMSHIP Co. and served with them as Mate and Master for over three years, trading regularly between Waterford, the Bristol Channel and Liverpool. At the latter port he was well known and his tall powerful figure and long golden beard earned him the soubriquet of the "Viking."

In 1887 he entered the service of the BOARD OF TRADE, the sea having lost its savour for him when he left sailing ships, as assistant to Captain BEALE, the then Principal Examiner of Masters and Mates. Throwing himself heart and soul into his new work he soon earned the trust and esteem of his Chief and on the latter's retirement in 1903, Captain HARVEY was himself appointed Principal Examiner. In this capacity he rendered yeoman service in raising the standard of the BOARD OF TRADE examinations to the very high level they now hold. Among his many activities was his work as the BOARD OF TRADE representative on the Meteorological Committee to which he was appointed on Captain CHALMERS' retirement in 1911, an appointment which he held till his retirement from active service in 1921. For his valuable work at the BOARD OF TRADE during the War, he was awarded the O.B.E. He was a Fellow of the Royal Geographical Society and a Member of the Institute of Naval Architects.

W.E.



The Principal Examiner of Masters and Mates, 1903--1921.

CAPTAIN J. M. HARVEY, O.B.E.

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## MEAN SEA SURFACE TEMPERATURES.

## NORTH ATLANTIC.

PREPARED IN THE MARINE DIVISION BY H. KEETON, PRINCIPAL CLERICAL ASSISTANT.

MUCH interesting information may be gathered from a study of the monthly charts of sea surface temperatures which have appeared in this Journal since the January, 1926, number; and the following notes are given, drawing attention to some of the most outstanding features disclosed by an examination of the charts.

If the North Atlantic were an undisturbed mass of water, we should expect that the zone of highest sea surface temperature would coincide with the Equator, and that the temperature would decrease with increasing latitude. Actually in no month do the isotherms run parallel to the latitude, though there is generally a dominant east to west trend, especially in middle latitudes. The deviations of the isotherms from this normal east to west direction are mainly due to the warm and cold ocean currents, whose influence can be most clearly traced throughout the year; while the geographical distribution of land and sea, and local meteorological conditions near the coast also have their effect.

The most marked characteristic of the charts for all twelve months is the crowding together of the isotherms on the American side, from whence they spread out fan-wise across the Atlantic to the European side. This is due to the combined effect of the Gulf Stream and Labrador current. The warm waters of the Gulf Stream, issuing from the Gulf of Mexico between Florida and Cuba, turn north and follow the trend of the American coast to the north-eastward, forcing the sea isotherms in a sharp bend to the northward. The stream spreads out as it progresses, diminishing in strength, and now known as the Gulf Stream Drift, flows to the European side, extending from Spain to Scandinavia, carrying relatively warm water to those regions.

The cold Labrador current, after rounding Newfoundland, flows to the south-westward between the Gulf Stream and the American shore, and may be bringing cold water down the American coast, extending in the autumn, winter and spring months as far as Cape Hatteras and beyond.

As a result, on the eastern side of the North Atlantic, north of about Latitude 40° N., the mean sea temperature is several degrees higher than the mean at the corresponding latitude on the American side, the difference at times in the vicinity of Latitude 50° N., being 20° F.

The change of mean surface temperature with position is very rapid where the Labrador current flows alongside the Gulf Stream, amounting to as much as 25° F. in a range of only 4° of latitude.

Another important feature of the charts is the cool water off the north-west coast of Africa. This water is brought from the northward by the Canary current setting around the eastern part of the permanent high-pressure system; the effect on the sea temperature means being apparent as far south as Latitude 10° N. For this reason the water on the African side between Latitude 40° and 10° N. is distinctly cooler than on the American side in the same latitude.

The change in temperature month by month varies considerably in different areas. Owing to the slowness of sea water in responding to temperature changes, seasonal and otherwise, the sea does not reach its highest temperature until late in summer (August) nor its lowest temperature until February; while in temporary spells of severe cold or very warm weather, the temperature of the sea surface is not changed by more than a few degrees.

From January to April the changes in mean sea surface temperature are generally slight over the whole ocean. With the approach of the summer season there is in May, outside the tropics, a marked rise in the temperature which is continued throughout June and July; and in August the maximum is reached, the temperatures in this month ranging from 10° to 25° higher than in February, according to position. September shows very little change from August, but from October to December the temperature decreases appreciably.

The region of smallest range in mean temperature is in the Doldrums area, between Latitude 4° and 6° N., Longitude 20° to 30° W. Here there is exceptional regularity throughout the year, and the monthly mean does not fluctuate more than 3°, the values ranging from 79° to 82° F.

During the summer months, particularly July and August, when the south-east trade wind from the South Atlantic extends across the Equator, cool water is carried with it into the region immediately north of the Equator, and the temperature falls considerably, being as low as 71° in August in Latitude 0° to 2° N., Longitude 18° to 20° W.

## CURRENTS ON THE TRANS-NORTH ATLANTIC TRACKS, PART II.

PREPARED IN THE MARINE DIVISION BY C. S. DURST, SENIOR PROFESSIONAL ASSISTANT.

IN this part of the article it is proposed to deal with the currents experienced on the Western Side of the Atlantic Ocean, North of Latitude 38° N.

The outstanding feature is, of course, the Gulf Stream. Its mean limits throughout all months of the year have been plotted on the Admiralty Chart, Newfoundland to Bermuda (No. 3272), and these limits are reproduced on FIGURE 7. It consists, as is well known, of a stream of warm water flowing at considerable speed. On its Northern and Western side is a most pronounced cold wall separating it from a mass of cold water.

The Gulf Stream is a feature of oceanography which has given rise to much speculation as to why it should flow, and as to its effect upon the weather phenomena of the Atlantic Ocean. But these characteristics are by no means peculiar to the Atlantic Ocean, a similar stream, the Kuro Siwo, exists in the North Pacific, and the Agullas Current off South Africa have very similar characteristics in the South Indian Ocean; there are also warm Southerly currents flowing along the East Coasts of South America and Australia, and when the South-West Monsoon is blowing the strong North-Easterly sets near Cape Guardafui are probably due to similar cause.

In each case the stream is formed where the prevailing wind blows towards the pole and roughly parallel to a coastline, or rather parallel to a continental shelf or bank of soundings, for it is essential to its mechanism for the cold deep waters of the ocean to rise towards the surface.

This mechanism is briefly as follows:—The wind blowing along the coastline draws water away from the coastline; this water has to

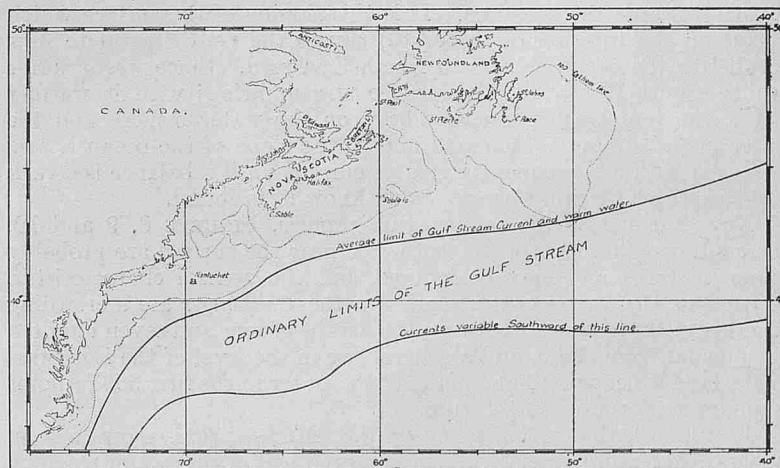


Figure 7.—Chartlet showing limits of the Gulf Stream (reproduced from Admiralty Chart No. 3272).

be replaced by deep water, which is cold and heavy. The isotherms of a section of the ocean will follow some such curves as are shown in FIGURES 8, 9 and 10, which are vertical sections of the North Atlantic including the Gulf Stream made by H.M.S. *Challenger* and the research ship *Michael Sars*. If the surface of the ocean were perfectly level, the pressure in the sea at the bottom of the cold water inshore would

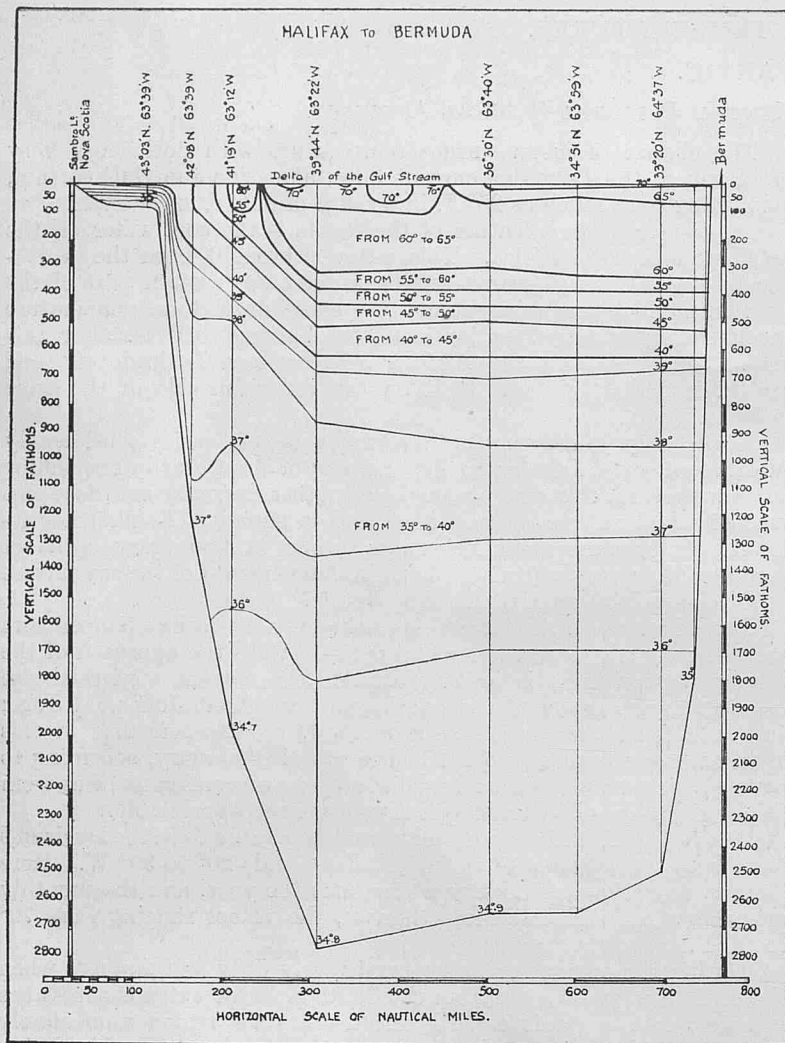
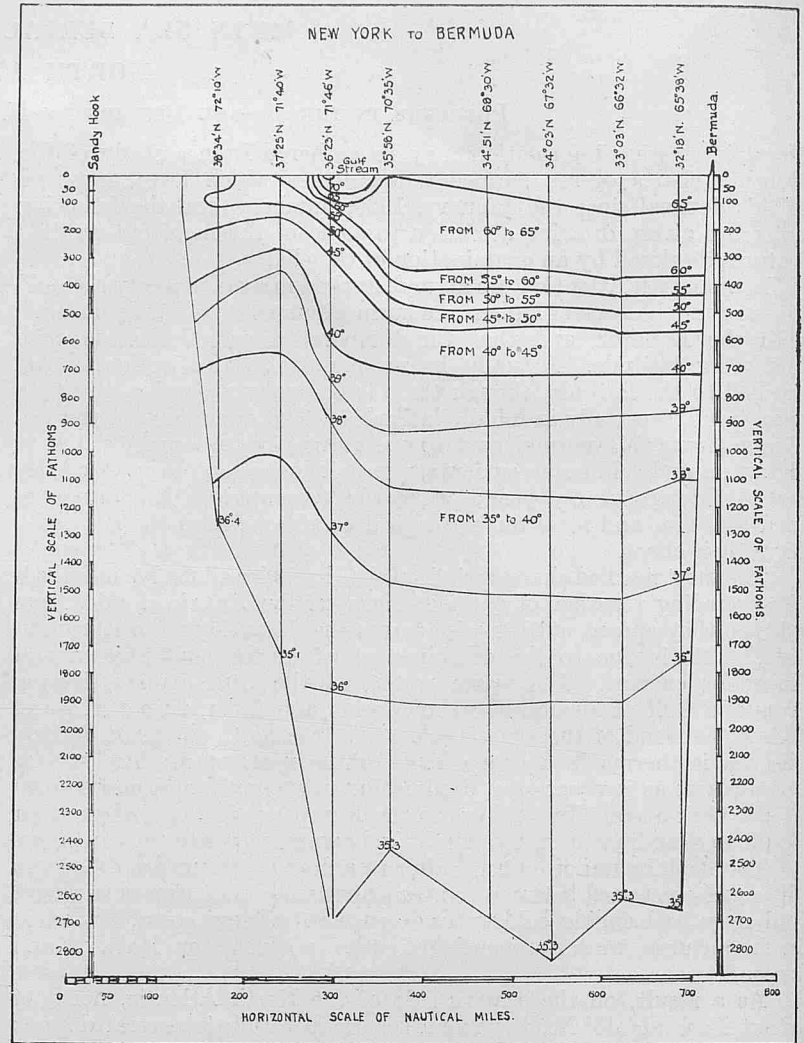


Figure 8.—Temperature profile of North Atlantic (reproduced from the report of H.M.S. Challenger, Captain G. S. Nares, R.N.).





that region so that the reversed current found by the *Michael Sars* was a passing phase and logically it may be inferred that the presence of cold water in that region was also a passing phenomenon.

### Reverse Sets in the Gulf Stream.

The reversal of the Gulf Stream locally has always puzzled seamen, though the existence of reverse sets has been well authenticated in several cases, notably in a set of observations made by *C.S. Colonia*, CAPTAIN V. CAMPOS, whilst working cables in April 1917 :—

Position.	Date.	Current.	Wind.
Latitude 39° 48' N - Longitude 62° 01' W	April 1st	S20°W 1½ Knots	- NE 4
	„ 2nd	S22°W 2 Knots	- NNE 5
	„ 3rd	S25°W 1 Knot	- Var. 1
Latitude 39° 44' N - Longitude 61° 51' W	„ 19th	S22°W 2 Knots	- NNE 2
	„ 20th	S22°W 1½ Knots	- SE 3
	„ 20th	S22°W 3 Knots	- NE by N 5
	„ 21st	S12°W 3-4 Knots	- E by N 2

These currents were obtained by the set and drift past a moored mark buoy and are of a high order of accuracy. Captain CAMPOS stated in forwarding them that they appeared to be all surface and very much influenced by the wind in most cases. However, from the observation of *Michael Sars* we know that the reverse set may occur against the wind and it seems quite possible that *Colonia's* set was also due to the presence of cold water.

Now the question remains—how could cold water come to be in this position so as to give such S.W. sets?

It is to be noted that the mean path of depressions passes over the Gulf Stream throughout the whole year. As was stated in the previous part of this article, when a depression passes over any area of the ocean, it tends to drive the surface water outwards away from its centre, the water driven away is replaced by deep water sucked up from the bottom. The track of a depression should then be marked by a streak of cold water thrust up from the bottom and it is conceivable that the passage of a cyclonic depression or even a change in direction and force of the wind in two neighbouring localities due to a secondary might produce such a streak as *Michael Sars* found. This, however, can only be put forward at present as a tentative suggestion as it is not known how far the pumping action of the surface winds would suffice to raise the cold waters from the depths of the ocean.

### The Inshore Counter-Current.

It has been often stated or at any rate implied in writings about the Gulf Stream and Labrador Current that the one pushes the other before it, for instance, it is said that the Labrador Current flowing down along the Coast of Newfoundland thrusts the Gulf Stream to the Southward away from the Banks and that the Labrador Current dives beneath the Gulf Stream. Such a statement must be due to an entire misconception of the physical processes at work. Water in the ocean is not thrust from behind, any more than it is pulled from in front, it flows in a very similar way to that in which the wind flows, namely, under lateral pressure. It has been believed that the tendency for the waters inshore to flow South-Westwards and Southwards is due to the creeping down of the Cold Labrador Current as far as Cape Hatteras. But that belief is due to the old conception. While it can be said definitely that the inshore counter-current is not due to the thrust of a stream of water from the North, it is not possible as yet to state precisely why it should flow South-Westward. It is, however, noticeable that this counter-current is confined to soundings and this will certainly be a most important fact in its explanation when that is found. The coldness of the waters of this counter-current does not necessarily imply that they have travelled down directly on the surface from higher latitudes. In fact it is more than probable that the low temperature is derived from the admixture of bottom water sucked up by wind action which has its origin in the Polar Regions and spreads Equatorwards in the depths.

### The effect of wind on the Stream.

There is a widespread belief that the Stream current is increased or decreased considerably by the action of the wind blowing at the actual time of observation. From the account of the Gulf Stream given above, it will be seen that the effect of local wind will be almost negligible, though the effect of a wind blowing steadily for some days over a considerable surface of the Stream may be very great.

An analysis was made of the wind directions and the current experienced for the months February, March and April in the area bounded by Latitude 38° and 42° N and Longitude 62° and 66° W, and it was found that no appreciable relationship could be assigned between the wind and the stream current, though probably the wind fluctuation will affect the surface drift to the extent of a mile or two in the day in much the same way as it affects the drift current in the open ocean.

In Part I of this article were given some extracts of letters from Commanders of long experience in North Atlantic navigation referring mainly to questions of Ocean Currents in the Eastern North Atlantic. Following this practice some similar extracts are given below dealing mainly with the Western North Atlantic and the Gulf Stream.

CAPTAIN S. G. S. McNEIL, R.D., R.N.R. *S.S. Carmania*.

“It is somewhat difficult to give adequate information from the experience learnt in fast ships steaming through very slow sets; during the past year (1925) the Gulf Stream has been very warm—i.e. 79° and 80° on the surface, 84° and 85° twenty feet below the surface—between meridians 65° and 40° W., on the summer New York tracks, and I have estimated approximately that the set for the day was 10 miles to the South and 15 miles to the East. I am also of the opinion that the Gulf Stream about the Meridian of 60° West and 50° West may be in two streams, the southern one probably not very wide and setting S.E. and E., the wider and slower stream setting to the East and to the North of East when East of Long. 45° W. I have had experience of being dead stopped for fourteen days commencing approximately in 43° N. and 49° W. and our drift was approximately 25 miles a day to the S.E. and E. North of the parallel 42° 30' N. and West of Long. 46° I have experienced invariably a set to the westward; this set is greater when the sea water is below 56° Fahr. in summer and probably runs 8 miles in the day. From the North of Ireland track to Belle Isle between the Meridians of 25° W. to 52° W. my experience has been a set to the North of about 10 miles a day and never any set to the South excepting close in to Labrador, and, although passing bergs as far East as 46° West, have arrived at the conclusion that the N.W. winds have been stronger, and that as the bergs are usually large and high in the locality the wind more than counteracted the North set which a ship experiences crossing to Belle Isle Straits.”

CAPTAIN J. ROBERTS, C.B.E., D.S.O., R.D., R.N.R., *S.S. Ceramic*.

“East of the Grand Banks of the Labrador current (denoted by the low temp. of the sea water) I have found to be a narrow stream, with, further east, the warmer water setting north to north-east; the result is that ships west bound are set north in the first place, and quickly crossing the narrow colder water, find soundings for more distance than the track course would give. When east bound there is also found to be a current setting north, both west and east of the Grand Banks. Apparently the Bank is extending south and east since the latest survey. There is frequently a current setting north-west also to the eastward of Nantucket Bank. Within the so called ‘average limits of the Gulf Stream’ there are variable currents at times combining in a set to the westward. The more currents are observed and calculated the more uncertain and irregular they seem to be. From 65° West to 47° West the Gulf Stream is greatest with South to West winds, and least with northerly winds. Steamers west-bound frequently experience a westerly set of a mile an hour between 50° West and 60° West with northerly winds, within the supposed limits of the Gulf Stream. Ships eastbound 40 or 50 miles south in similar weather have observed an adverse current of variable amount. Star obs. in the evening will show two knots an hour current to the eastward since noon and star obs. next dawn will indicate that the current ceased about the time of the previous obs. and the run during the night will correspond with D.R. between the obs. As a general rule, overcast and humid weather accompanies Gulf Stream current; fine clear cool weather, no current and sometimes a considerable S'ly set. When the Gulf current is first felt it frequently sets due North.”

*S.S. Orduna*, CAPTAIN W. E. SMITH, D.S.O., R.D., R.N.R., Observer  
Mr. H. G. WHITTLE, 2nd Officer, sent the following note on her experiences in June, 1926 :—

“You will see by our Meteorological Report Form, No. 911 for June, that from 10 a.m. 30th June in Latitude 40° 33' N., Longitude 45° 15' W. to 8 p.m. on the same date in Latitude 41° 43' N., Longitude

42° 49' W. we experienced a S. 86° W. set of 19 miles, and from 8 p.m. June 30th in Latitude 41° 43' N., Longitude 42° 49' W. to 4.14 a.m. July 1st in Latitude 42° 36' N., Longitude 40° 46' W. we experienced a S. 80° W. set of 13 miles.

"I would like to point out to you the circumstances under which these observations were taken, so that you can judge for yourself their reliability.

"The conditions for obtaining solar and stellar observations were probably among the most favourable we experience at sea, owing to a very clearly cut horizon, and a cloudless sky. We had no reason to think that there was any abnormal refraction, as the sea and air were the same temperature. During the whole period of this set we were steaming through an absolutely calm sea, so that we were in no way influenced by the wind."

### Currents on Trans-North Atlantic Tracks East of 40° W.

#### Maximum Drifts Reported.

Name of Ship.	Date.		Middle.		Current.		Wind.	
	Day.	Year.	Latitude.	Longitude.	Set.	Drift.	Dir.	Force.
<b>January.</b>								
Dutch Ship -	4	1912	49° 50' N.	6° 20' W.	E.N.E.	37	W.	5
" -	2	1913	49° 50' N.	6° 42' W.	E.	40	S.W.	6
" -	28	1914	49° 31' N.	8° 15' W.	N.N.E.	45	S.W.	3
" -	29	1914	49° 48' N.	6° 05' W.	S.W.	48	S.W.	4
S.S. Assyria -	15	1923	48° 26' N.	35° 10' W.	N. 57° E.	41	-	-
" -	30	1924	50° 51' N.	31° 41' W.	N. 84° E.	37	-	-
<b>February.</b>								
S.S. Hillmere -	12	1910	48° 11' N.	22° 51' W.	S. 88° E.	39	S.W. by W.	5
S.S. Verbania -	8	1924	48° 27' N.	22° 38' W.	E.	46	-	-
S.S. Nortonian -	25	1924	46° 02' N.	37° 18' W.	N. 75° E.	41	-	-
<b>March.</b>								
Dutch Ship -	15	1912	43° 50' N.	39° 47' W.	E.N.E.	37	S.W.	6
" -	12	1919	49° 30' N.	6° 14' W.	S.	35	N.W.	6
S.S. Manchester Corporation.	18	1923	50° 25' N.	17° 7' W.	N. 75° W.	35	-	-
S.S. Nardana -	26	1924	50° 14' N.	13° 49' W.	S. 64° W.	37	-	-
<b>April.</b>								
Dutch Ship -	23	1915	44° 52' N.	39° 9' W.	N.E.	34	S.E.	4
" -	20	1916	48° 14' N.	9° 39' W.	S.S.E.	34	N.W.	5
S.S. Manchester Corporation.	12	1923	48° 13' N.	29° 41' W.	N. 75° E.	35	-	-
<b>May.</b>								
Dutch Ship -	13	1919	46° 29' N.	31° 30' W.	E.S.E.	40	N.W.	4
" -	18	1919	48° 45' N.	6° 33' W.	E.N.E.	40	E.	1
S.S. Welshman -	1	1922	49° 42' N.	36° 46' W.	N. 63° E.	46	-	-
<b>June.</b>								
S.S. Orduna -	6	1924	47° 17' N.	23° 53' W.	S. 26° W.	40	-	-
<b>July.</b>								
S.S. Rimutaka -	27	1916	48° 17' N.	18° 29' W.	S.S.E.	32	W. by S. to N.W. by N.	3
<b>September.</b>								
S.S. Orduna -	20	1924	49° 20' N.	18° 27' W.	N. 77° E.	32	-	-
<b>October.</b>								
S.S. Minnetonka -	22	1924	49° 23' N.	26° 21' W.	N. 9° E.	38	-	-
<b>November.</b>								
Dutch Ship -	11	1910	48° 15' N.	37° 47' W.	E.N.E.	31	S.W.	4
S.S. Manchester Mariner	29	1921	50° 41' N.	15° 40' W.	S. 62° W.	30	-	-
S.S. Assyria -	29	1924	49° 51' N.	37° 46' W.	S. 43° E.	47	-	-
<b>December.</b>								
Dutch Ship -	30	1911	49° 41' N.	6° 15' W.	E.	31	S.W.	3
S.S. Vennonia -	15	1921	48° 23' N.	29° 56' W.	N. 83° E.	47	-	-

### Currents on Trans-North Atlantic Tracks West of 40° W.

#### Maximum Drifts Reported.

Name of Ship.	Date.		Middle.		Current.		Wind.	
	Day.	Year.	Latitude.	Longitude.	Set.	Drift.	Dir.	Force.
<b>January.</b>								
Dutch Ship -	25	1910	39° 13' N.	62° 12' W.	E.N.E.	61	S.	6
" -	26	1910	40° 05' N.	56° 12' W.	E.N.E.	66	S.E.	6
S.S. Alpine Range -	10	1922	39° 06' N.	63° 27' W.	N. 72° E.	74	-	-
<b>February.</b>								
Dutch Ship -	4	1912	38° 24' N.	64° 39' W.	E.N.E.	63	N.E.	3
" -	8	1913	38° 24' N.	62° 33' W.	E.	63	N.W.	8
" -	10	1915	38° 34' N.	64° 30' W.	E.	60	N.W.	6
" -	19	1919	38° 31' N.	63° 55' W.	E.N.E.	60	S.E.	5
<b>March.</b>								
Dutch Ship -	19	1910	38° 04' N.	68° 44' W.	E.N.E.	64	N.E.	2
" -	3	1912	38° 07' N.	66° 26' W.	E.N.E.	63	N.W.	5
S.S. Graciana -	26	1921	38° 10' N.	67° 40' W.	N. 65° E.	79	Var.	4
<b>April.</b>								
Dutch Ship -	2	1914	38° 07' N.	67° 16' W.	E.	80	W.	6
" -	3	1914	38° 28' N.	64° 00' W.	E.N.E.	65	N.W.	4
" -	7	1914	38° 07' N.	65° 03' W.	E.	81	N.W.	2
" -	7	1914	38° 21' N.	62° 54' W.	E.	64	N.W.	3
" -	24	1915	38° 29' N.	63° 55' W.	E.	68	N.W.	3
" -	5	1919	39° 23' N.	60° 55' W.	E.	75	Calm	0
" -	11	1919	38° 04' N.	64° 52' W.	E.N.E.	90	S.	5
" -	19	1919	39° 48' N.	59° 05' W.	E.N.E.	60	N.E.	2
" -	27	1919	38° 15' N.	64° 20' W.	E.N.E.	67	N.	3
<b>May.</b>								
Dutch Ship -	11	1910	38° 01' N.	68° 57' W.	E.N.E.	60	S.	4
" -	2	1915	39° 31' N.	57° 55' W.	E.	60	E.	5
S.S. City of Rangoon -	18	1922	38° 04' N.	67° 16' W.	N. 86° E.	60	S.	6
S.S. Zealand -	27	1922	40° 28' N.	61° 28' W.	S. 76° W.	62	-	-
S.S. Orduna -	30	1922	39° 46' N.	55° 08' W.	N. 80° E.	60	-	-
<b>June.</b>								
Dutch Ship -	7	1913	40° 02' N.	58° 40' W.	E.	65	S.	4
<b>July.</b>								
S.S. Waipara -	5	1923	38° 07' N.	63° 00' W.	N. 77° E.	91	S.	3
S.S. Saxoleine -	7	1924	40° 35' N.	60° 24' W.	N. 88° E.	69	-	-
<b>August.</b>								
S.S. British Star -	29	1922	39° 32' N.	60° 45' W.	S. 87° E.	61	-	-
C.S. Colonia -	26	1924	40° 47' N.	47° 06' W.	N. 86° E.	67	W.S.W.	4
<b>October.</b>								
S.S. Hillfern -	11	1912	38° 10' N.	62° 36' W.	N. 81° E.	86	N.N.E.	2
" -	12	1912	38° 51' N.	61° 57' W.	N. 73° E.	65	N.E.	3
<b>December.</b>								
Dutch Ship -	11	1914	40° 04' N.	62° 27' W.	E.	64	-	-



## WEATHER SIGNALS.

## II.—WIRELESS WEATHER SIGNALS.

## WIRELESS WEATHER BULLETINS.

## SOUTH AMERICA.

## CHILE.

**Valparaiso W/T Station**, approximate Latitude  $33^{\circ} 01' S.$ , Longitude  $71^{\circ} 39' W.$ , call sign **CCE**, broadcasts a weather bulletin in code commencing with the letters **OMC** (Oficina Meteorológica de Chile) at 0100 and 1700 G.M.T. on a wave-length of 1,000 metres (spark).

The message gives observations from the following stations:—

Indicator Letter.	Station.	Position (approx.).	
		Latitude.	Longitude.
V	Valparaiso	$33^{\circ} 06' S.$	$71^{\circ} 40' W.$
T	Talcahuano	$36^{\circ} 43' S.$	$73^{\circ} 08' W.$
C	Corral	$39^{\circ} 53' S.$	$73^{\circ} 35' W.$
J	Juan Fernandez	$33^{\circ} 42' S.$	$78^{\circ} 45' W.$
M	Mocha	$38^{\circ} 25' S.$	$74^{\circ} 00' W.$
G	Guafo (or Huafo)	$43^{\circ} 35' S.$	$74^{\circ} 45' W.$
R	Raper	$46^{\circ} 50' S.$	$75^{\circ} 38' W.$
P	Punta Arenas	$53^{\circ} 08' S.$	$70^{\circ} 56' W.$
O	Puerto Montt	$41^{\circ} 30' S.$	$72^{\circ} 58' W.$
Q	Coquimbo	$29^{\circ} 57' S.$	$71^{\circ} 20' W.$

The observations are contained in one group, consisting of a key letter and four figures for each station.

The first two figures give barometer corrected in whole millimetres, the initial 7 being omitted (see Table XV, p. 50, Vol. III, No. 27, to convert to mbs. and ins.).

The third figure gives wind direction true:—

1 = N.	3 = E.	5 = S.	7 = W.
2 = N.E.	4 = S.E.	6 = S.W.	8 = N.W.

The fourth figure gives wind force by Beaufort scale. When this is greater than 9 it will be given in words, thus:—

Diez = 10, once = 11, and doce = 12.

When necessary the following words will be added:—

Temporal = gale.	Neblina = fog.
Lluvia = rain.	Sol = sunny.

An "X" will replace the figure for any missing observation, but if all the values for any station are missing, the word "No" will precede the key letter, thus "No T."

The bulletin at 0100 G.M.T. will also contain a summary of the weather changes that have taken place during the day.

Each bulletin will conclude with a meteorological forecast, and a statement regarding the probable approach of bad weather.

**Talcahuano-Rocuant, W/T Station**, Latitude  $36^{\circ} 44' S.$ , Longitude  $73^{\circ} 06' W.$ , call sign **CCK**, broadcasts at 0130 and 1730 G.M.T. on a wave-length of 1,900 metres (spark), a repetition of the messages broadcast from Valparaiso at 0100 and 1700 G.M.T. respectively.

## ARGENTINA.

**Buenos Aires-Dársena Norte W/T Station**, approximate Latitude  $34^{\circ} 36' S.$ , Longitude  $58^{\circ} 22' W.$ , call sign **LIH**, broadcasts a weather bulletin, *en clair*, in Spanish, at 0205 G.M.T., on a wave-length of 1,000 metres. The bulletin will also contain a weather forecast for the ensuing 24 hours for the Rio de la Plata.

## BRAZIL.

## (a) Wireless Weather Reports on the Brazilian Coast.

With a view to assisting navigation, etc., the Brazilian W/T coast stations given in the list below transmit, every four hours, the state of weather and sea, as well as the force and direction of the wind. The elements so transmitted are direct observations made at the W/T stations. They are sent in Portuguese, *en clair*, and owing to uniformity can be easily understood by ships of other nationalities.

W/T Station.	Position (approx.).		Call Sign.	Times of Sending. G.M.T.
	Latitude.	Longitude.		
Belém (Para)	$1^{\circ} 27' S.$	$48^{\circ} 30' W.$	SPB	0245, 0645, etc., etc.
S. Luiz (Maranhão)	$2^{\circ} 32' S.$	$44^{\circ} 17' W.$	SOM	0300, 0700, etc., etc.
Natal	$5^{\circ} 47' S.$	$35^{\circ} 18' W.$	SNR	0330, 0730, etc., etc.
Olinda (Pernambuco)	$8^{\circ} 01' S.$	$34^{\circ} 51' W.$	SPO	0345, 0745, etc., etc.
Amaralina (Bahia)	$13^{\circ} 01' S.$	$38^{\circ} 28' W.$	SPA	0315, 0715, etc., etc.
Fernando Noronha	$3^{\circ} 51' S.$	$32^{\circ} 25' W.$	SPN	0315, 0715, etc., etc.
Abrolhos	$17^{\circ} 58' S.$	$38^{\circ} 45' W.$	SNN	0320, 0720, etc., etc.
C. St. Thomé	$22^{\circ} 02' S.$	$40^{\circ} 59' W.$	SPT	0330, 0730, etc., etc.
Santos	$23^{\circ} 56' S.$	$46^{\circ} 20' W.$	SPS	0245, 0645, etc., etc.
Florianopolis	$27^{\circ} 36' S.$	$48^{\circ} 30' W.$	SOV	0315, 0715, etc., etc.
Junção (Rio Grande do Sul)	$32^{\circ} 04' S.$	$52^{\circ} 07' W.$	SPJ	0345, 0745, etc., etc.
Rio	$22^{\circ} 54' S.$	$43^{\circ} 10' W.$	SOH	1200, 1500, 1800, 2100, 0000.

The wave-length used by the above stations for the transmission of the messages is 600 metres (spark) in each case.

(b) Special Messages, including forecasts for the South Coast of the State of Rio de Janeiro, the remainder of the Southern Brazilian Coast, and to Buenos Ayres.

**Ilha do Governado—Rio de Janeiro—W/T Station**, approximate Latitude  $22^{\circ} 48' S.$ , Longitude  $43^{\circ} 13' W.$ , call sign **SOH**, broadcasts daily two special weather bulletins at 1800 and 0100 G.M.T., both on 1,800 metres (spark).

These bulletins are divided into three parts; the first part contains respectively the 1200 and 2100 G.M.T. observations in New International Code of various Brazilian, Uruguayan and Argentine meteorological stations given below; the second part contains upper air observations in code; the third part contains detailed weather forecasts in Portuguese, *en clair*, expressed in a small collection of terms which can be easily understood by ships of other nationalities.

Indicator Number.	Station.	State.	Position (approx.).	
			Latitude.	Longitude.
01	Ondina	Bahia	$13^{\circ} 00' S.$	$38^{\circ} 31' W.$
02	Caetité	"	$14^{\circ} 03' S.$	$42^{\circ} 37' W.$
03	Victoria	Esp. Santo	$20^{\circ} 10' S.$	$40^{\circ} 18' W.$
04	Bello Horizonte	Minas Geraes	$19^{\circ} 55' S.$	$43^{\circ} 56' W.$
05	Uberaba	"	$19^{\circ} 45' S.$	$47^{\circ} 57' W.$
06	Pirapora	"	$17^{\circ} 18' S.$	$44^{\circ} 57' W.$
07	Juiz de Fora	"	$21^{\circ} 45' S.$	$43^{\circ} 20' W.$
08	Rio de Janeiro	Rio de Janeiro	$22^{\circ} 54' S.$	$43^{\circ} 10' W.$
09	Cabo Frio	"	$22^{\circ} 52' S.$	$42^{\circ} 01' W.$
10	S. Paulo	São Paulo	$23^{\circ} 33' S.$	$46^{\circ} 38' W.$
11	Santos	"	$23^{\circ} 56' S.$	$46^{\circ} 19' W.$
12	S. Paulo dos Agudos	"	$22^{\circ} 28' S.$	$49^{\circ} 00' W.$
13	Cuyaba	Matto Grosso	$15^{\circ} 35' S.$	$56^{\circ} 05' W.$
14	Coxim	"	$18^{\circ} 28' S.$	$54^{\circ} 45' W.$
15	Tres Lagoas	"	$20^{\circ} 47' S.$	$41^{\circ} 42' W.$
16	Curitiba	Paraná	$25^{\circ} 25' S.$	$49^{\circ} 16' W.$
17	Florianopolis	S. Catharina	$27^{\circ} 36' S.$	$48^{\circ} 30' W.$
18	Palmas	Paraná	$26^{\circ} 28' S.$	$51^{\circ} 58' W.$
19	Porto Alegre	Rio G. Sul	$30^{\circ} 01' S.$	$51^{\circ} 13' W.$
20	Uruguayana	"	$29^{\circ} 45' S.$	$57^{\circ} 05' W.$
21	S. Luiz das Missões	"	$28^{\circ} 23' S.$	$54^{\circ} 58' W.$
22	Rio Grande	"	$32^{\circ} 01' S.$	$52^{\circ} 05' W.$
23	Bagé	"	$31^{\circ} 20' S.$	$54^{\circ} 06' W.$
24	S. Victoria do Palmar	"	$33^{\circ} 31' S.$	$53^{\circ} 21' W.$
25	Sta. Isabel	Uruguay	$32^{\circ} 45' S.$	$56^{\circ} 32' W.$
26	Montevideo	"	$34^{\circ} 54' S.$	$56^{\circ} 12' W.$
27	Buenos Aires	Buenos Aires	$34^{\circ} 36' S.$	$58^{\circ} 22' W.$
28	Oran	Salta	$23^{\circ} 06' S.$	$64^{\circ} 20' W.$
29	Adalgala	Catamarca	$27^{\circ} 30' S.$	$66^{\circ} 26' W.$
30	Corrientes	Corrientes	$27^{\circ} 27' S.$	$58^{\circ} 49' W.$
31	Santa Fé	Santa Fé	$31^{\circ} 40' S.$	$60^{\circ} 42' W.$
32	Mendoza	Mendoza	$32^{\circ} 53' S.$	$68^{\circ} 49' W.$
33	Victorica	Pampa Central	$36^{\circ} 10' S.$	$65^{\circ} 21' W.$
34	Cipolletti	Rio Negro	$38^{\circ} 56' S.$	$68^{\circ} 08' W.$
35	Bahia Blanca	Buenos Aires	$38^{\circ} 45' S.$	$63^{\circ} 15' W.$
36	P. Madryn	Chubut	$42^{\circ} 49' S.$	$64^{\circ} 58' W.$
37	Sarmiento	"	$45^{\circ} 30' S.$	$69^{\circ} 00' W.$
38	16 de Outubro	"	$42^{\circ} 12' S.$	$71^{\circ} 08' W.$

## 1800 G.M.T. Bulletin (1500 45th Meridian Time).

First part of Bulletin (observations of 1200 G.M.T.) Code used:

Brazilian Stations (01-24)	I <sub>n</sub> I <sub>n</sub> BBBDD, FwwTT,
Uruguayan "	(25-26) I <sub>n</sub> I <sub>n</sub> BBBDD,
Argentine "	(27-38) I <sub>n</sub> I <sub>n</sub> BBBDD

in which

- I<sub>n</sub> I<sub>n</sub> = Indicator number of station.
- BBB = Barometric pressure corrected, in millimetres and tenths (initial 7 omitted). (See Table XV, p. 50, Vol. III, No.27 to convert to mbs. and ins.).
- DD = Wind direction true (Table III, p. 17, Vol. III, No. 25).
- F = Wind force by Beaufort scale.
- ww = Weather at time of observation (Table V, p. 17, Vol. III, No. 25).
- TT = Air temperature in whole degrees C. (See Table XVII, p. 50, Vol. III, No. 27, to convert to Fahr.).

Second Part of Bulletin sent in code preceded by the word " Pilot " contains upper air observations.

Third Part of Bulletin contains night weather forecasts and is preceded by the word " Previsão."

0100 G.M.T. Bulletin (2200 45th Meridian Time).

The First Part of the Bulletin contains the 2100 G.M.T. observations (in code) of stations 08, 09, 11, 17, 22 and 24, in exactly similar form as for stations 01-24 in the 1800 G.M.T. Bulletin.

Second Part of Bulletin contains upper air observations in code and is preceded by the word " Temp Alegrete."

Third Part of Bulletin contains weather forecasts for the following day for the south coast of the State of Rio de Janeiro, remainder of the Brazilian coast and to Buenos Aires, in Portuguese *en clair*, preceded by the word " Previsão."

NOTE.—Missing figures replaced by hyphens.

WIRELESS STORM WARNINGS.  
SOUTH AMERICA.  
CHILE.

Valparaiso W/T Station. call sign CCE, broadcasts storm warnings when necessary, after the weather bulletins at 0100 and 1700 G.M.T. on a wave-length of 1,000 metres (spark).

III. WIRELESS TIME SIGNALS.  
CHILE.

W/T Station.	Call Sign.	Wave-length Metres.	G.M.T.
Valparaiso Lat. 33° 01' 04" S. Long. 71° 39' 27" W.	CCE	1,000 (spark).	<sup>h</sup> <sup>m</sup> <sup>s</sup> <sup>h</sup> <sup>m</sup> <sup>s</sup> 00 55 00-01 00 00

- SYSTEM.—The T.S. commence at 00h 55m 00s G.M.T. and continue for 5 min. During this period every tick (represented by a dot) of the standard clock at the even second is transmitted *except* the 29th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th and 59th.
- The tick at the final second of each minute is the T.S. (which ends at 01h 00m 00s G.M.T.).
- NOTES.—(1) Sent daily, except Sundays.
- (2) T.S. controlled by the Hydrographic Office.
- (3) In the event of failure or irregularities in the T.S., the word " señal nula " (signal annulled) will be made three times in succession, one minute after 0100 G.M.T.

BRAZIL.

W/T Station.	Call Sign.	Wave-length Metres.	G.M.T.
Ilha do Governador (Rio de Janeiro). Lat. 22° 48' 00" S. Long. 43° 13' 00" W. } approx.	SOH —	1,800 (spark)	<sup>h</sup> <sup>m</sup> <sup>s</sup> 14 00 00 24 00 00

SYSTEM.—The New International System of W/T time signals, which was adopted at the International Time Commission, 1925, is in use. The time signals are automatically transmitted from Rio de Janeiro Observatory at 14h 00m 00s and 24h 00m 00s G.M.T. After the usual preliminary signals, the procedure is as follows :—

G.M.T.	Signal.	Meaning.
<sup>h</sup> <sup>m</sup> <sup>s</sup> 13 } 57 00 to { <sup>h</sup> <sup>m</sup> <sup>s</sup> 23 } 57 50	— . . . . . etc. 55 56 57 58 59 60 — . . . . . 57 55 „ 58 00 58 08 „ 58 10 58 18 „ 58 20 58 28 „ 58 30 58 38 „ 58 40 58 48 „ 58 50 58 55 „ 59 00 59 06 „ 59 10 59 16 „ 59 20 59 26 „ 59 30 59 36 „ 59 40 59 46 „ 59 50 13 } 59 55 „ { <sup>h</sup> <sup>m</sup> <sup>s</sup> 23 } 00 00 { 24 }	Time Signal. Time Signal. Time Signal.

The duration of the dash is one second, and that of the dot 0·2 of a second. The final dot, therefore, terminates at 14h } 00m 00·2s, G.M.T.  
24h }

In the event of failure, the time signals are transmitted thirty minutes later—the word " Correção " being sent in conjunction with this series of signals.

IV.—VISUAL STORM WARNINGS, SOUTH AMERICA.  
CHILE.  
Valparaiso.

From 15th April to 15th October only. The following signals are exhibited from the signal mast on the turret of the " Gobernación Maritima " Building :—

		Significa-
By day.	By night.	Barometer. tion.
Flag D (Int.), close up	—	30·05
Flag D (Int.), half-mast	—	30·00
Flag D (Int.), low down	—	29·95
One ball, close up	One blue light	29·94
One ball, half-mast	Two blue lights	29·90
One ball, low down	Three blue lights	29·85
Two balls, close up	One red light	29·74
Two balls, half-mast	Two red lights	29·65
Two balls, low down	Three red lights	29·60
No day signal	One red light and one blue light, hoisted in a vertical line.	Barometer falling rapidly.


















# ARGENTINA.

## Buenos Aires.

The following storm signals for the Rio de la Plata are exhibited when necessary, from a flagstaff on the roof of the Ministry of Agriculture, situated near Dock No. 1.

### Signals for Local Gales—Probable up to the Next Day.

By day.	By night.	Meaning.
		Gale from N.W. quadrant.
		Gale from S.W. quadrant.
		Gale from N.E. quadrant.
		Gale from S.E. quadrant.
		Hurricane.
 Hoisted above cones	 Hoisted over white lights	Caution. Gales predicted are imminent or may occur on same day.
 Red	 White	 Black

## URUGUAY.







### Montevideo.

The following signals are exhibited from a flagstaff at the north-west angle of the Custom House to indicate the approach of storms or bad weather.

By day.—Red and white flag hoisted *under* the national flag.

By night.—Red light in place of the flag.

The following signals are exhibited as necessary from the Observatory semaphore, 137 feet above mean sea level.


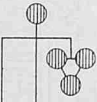

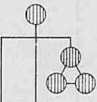

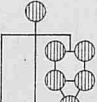

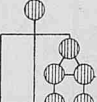
By day.	By night.	Meaning.
		Fair weather.
		Changeable.
		Bad weather.

## Uruguay, Montevideo—continued.

### By day.

### By night.

### Meaning.

		Southerly winds, strong.
		Northerly winds, strong.
		Southerly gale.
		Northerly gale.

Red Black White Blue Green











## BRAZIL.

The following system of Visual Storm Signals is in operation at Brazilian seaports, the symbols being hoisted when necessary :—

### By day

### By night.

### Meaning.

		Wind from any quarter, dangerous for small craft.
		Strong winds from S.E.
		Strong winds from N.E.
		Strong winds from N.W.
		Strong winds from S.W.

Red White Black

At Rio de Janeiro the signals are exhibited from the Time Signal Tower at the Observatory daily, also at Copacabana Fort, on the western side of the approach to the harbour, and from Ilha das Cobras; at Santos from the signal station on Monte Serrat; and at Cape Frio, from the signal station.

## WIND, FOG AND MIST.

S.W. APPROACHES TO GREAT BRITAIN AND IRELAND.

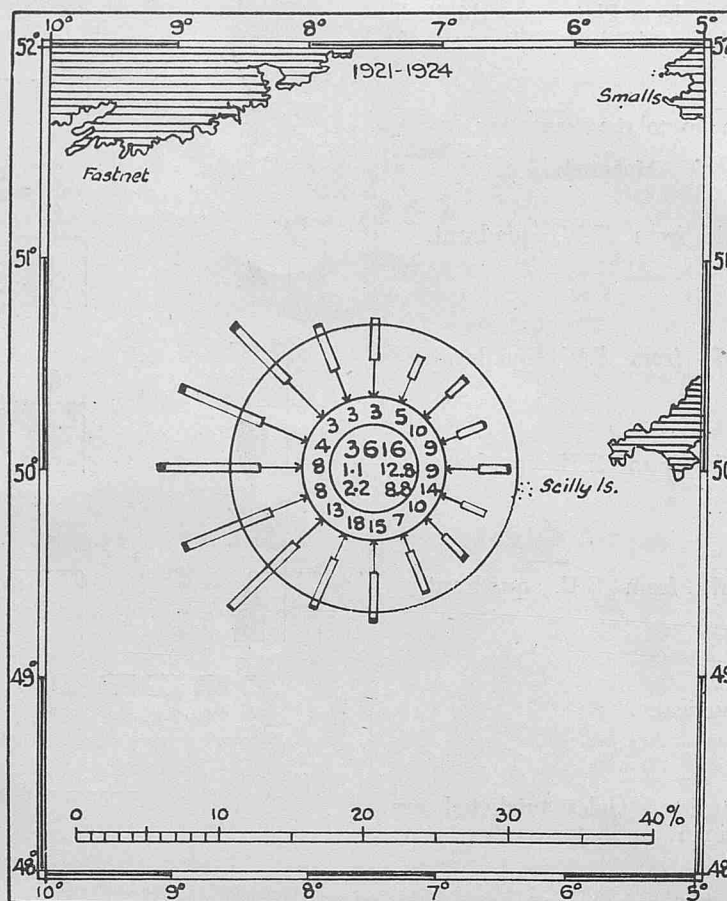
Frequency of fog per thousand observations for each 2 points of compass 1921-1924.

Latitude 48°—52° N.

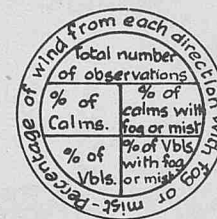
Longitude 5°—10° W.

Direction.	Frequency.
N	1
NNE	2
NE	4
ENE	3
E	4
ESE	5
SE	4
SSE	3
S	9
SSW	10
SW	12
WSW	7
W	8
WNW	4
NW	3
NNW	3
Calm	1
Var.	2
Total	85

Percentage frequency of fog and mist for area - 8.5%



Key to numbers in rose, S.W. Approaches.



The above rose of Wind, Fog and Mist is constructed from observations for all months of the year, and may prove of interest when used in conjunction with the monthly rose published in each number of "The Marine Observer" during the year.

## Special Notices regarding Personnel.

*The Marine Superintendent will be glad to receive information of special distinctions gained and retirements, &c., of Marine Observers.*

## Captain W. Marshall, C.B., D.S.O., R.D., R.N.R.

The appointment of Captain W. MARSHALL, C.B., D.S.O., R.D., R.N.R., of R.M.S. *Olympic*, as Aide-de-Camp to HIS MAJESTY THE KING has been announced.

Captain MARSHALL has been a member of the Corps of Marine Observers for a number of years.

## OBITUARY.

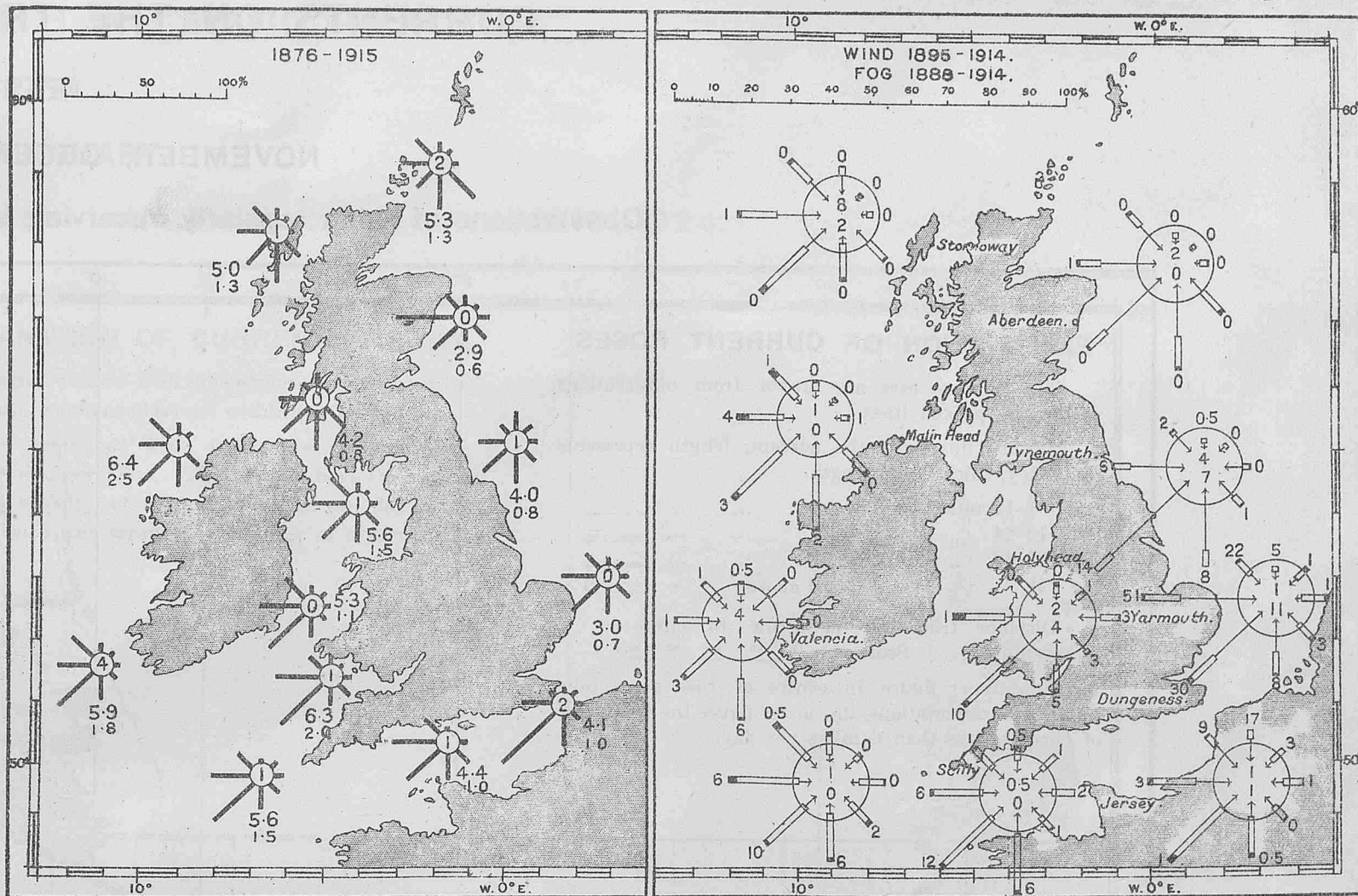
The death of Captain G. C. M. OAKLEY is noted with deep regret.

Captain OAKLEY went to sea in 1876 and in 1886 joined the service of the PACIFIC STEAM NAVIGATION COMPANY gaining command in 1901. He commanded most of this Company's mail steamers including the *Orcoma*, *Oriana* and *Ortega* and retired in 1921.

He was a member of the Corps of Marine Observers during the latter part of his active service afloat and was President of the Mercantile Marine Service Association from 1923 until he was obliged to resign on account of ill-health during the present year.



WIND AND FOG AT COAST STATIONS. GREAT BRITAIN AND IRELAND.



WIND, FOG AND MIST.

S.W. APPROACHES TO GREAT BRITAIN AND IRELAND.

Frequency of fog per thousand observations for each 2 points of compass 1921-1924.

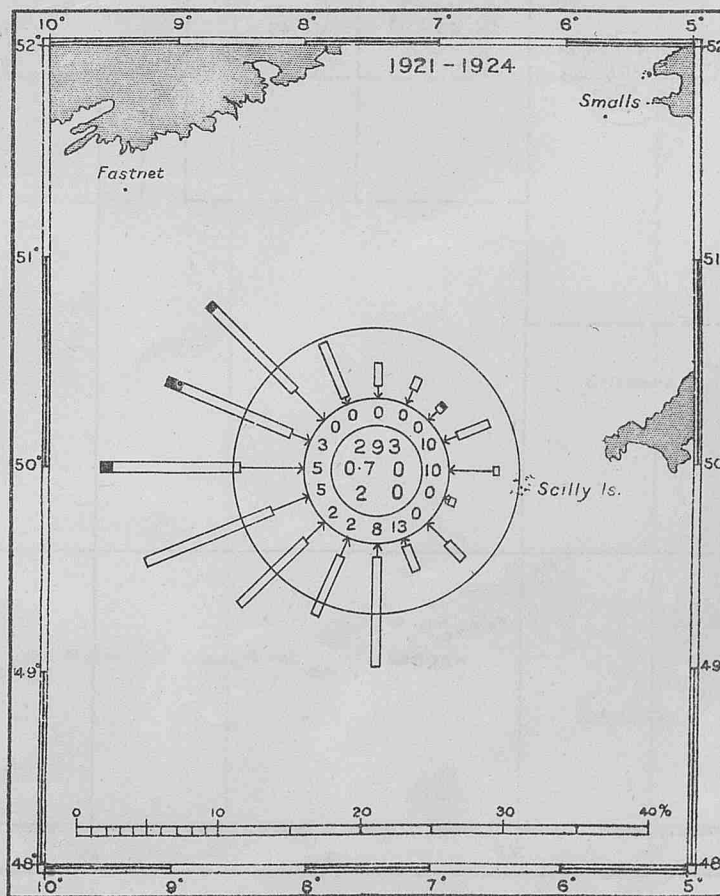
Latitude 48°-52°N.

Longitude 5°-10°W.

Direction. Frequency.

N	0
NNE	0
NE	0
ENE	3
E	3
ESE	0
SE	0
SSE	3
S	7
SSW	14
SW	20
WSW	7
W	7
WNW	3
NW	0
NNW	0
Calm	0
Var.	0
Total	67

Percentage frequency of fog and mist for area = 7%.

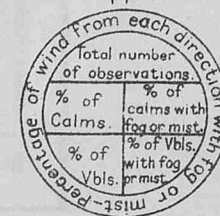


Mean and Maximum number of days with fog during the month at the different stations.

Station.	Mean.	Max.
Stornoway	0.3	3
Malin Head	0.8	3
Valencia	0.3	2
Holyhead	2.3	6
Scilly	1.8	6
Jersey	2.3	6
Dungeness	2.7	6
Yarmouth	6.1	20
Tynemouth	2.7	11
Aberdeen	0.6	3

For explanation of charts see Vol. III, N° 25, page 10, of this Journal.

Key to numbers in rose, S.W. Approaches.



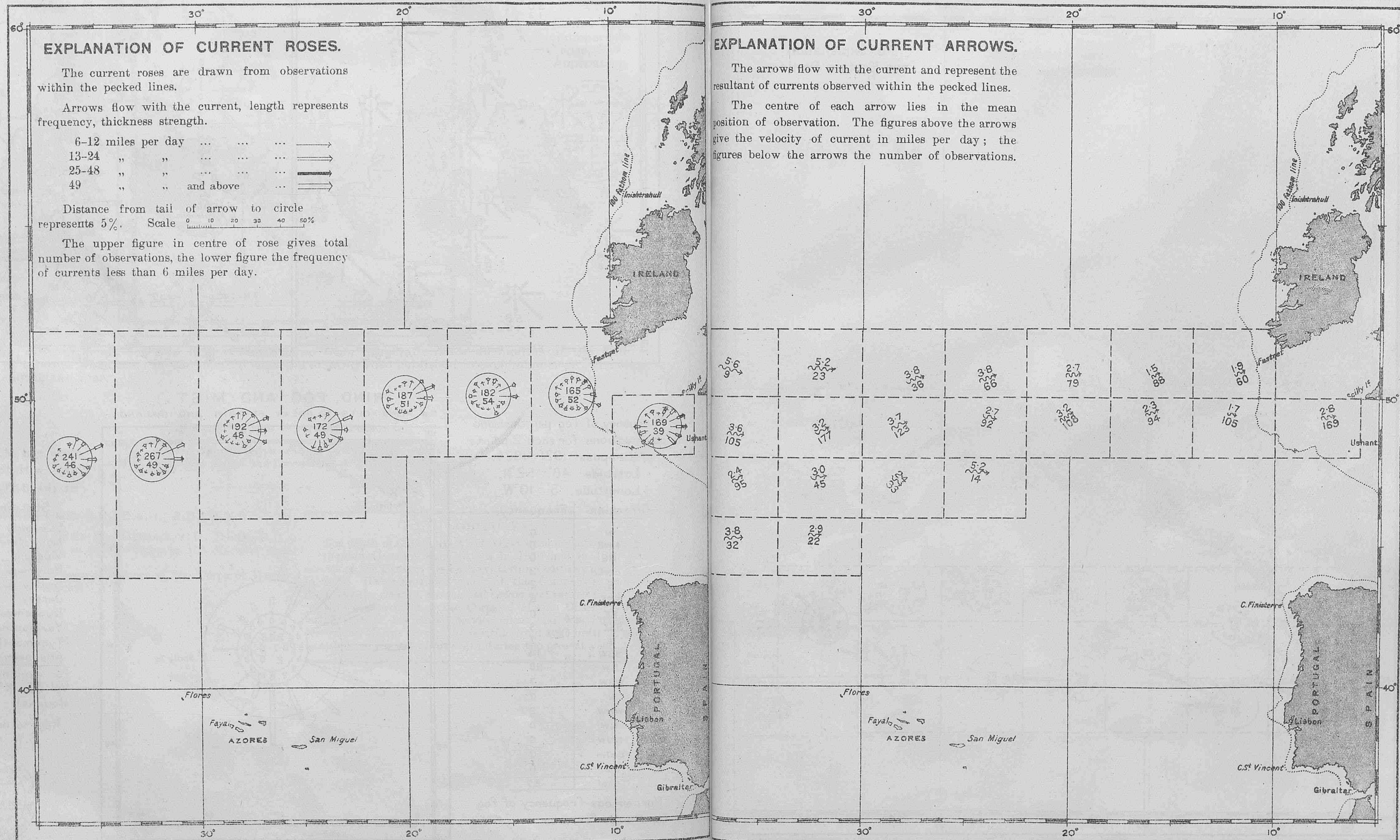


## CURRENTS ON THE TRANSNORTH ATLANTIC TRACKS

(EASTERN PORTION)

NOVEMBER, DECEMBER AND JANUARY.

Observations of ships regularly observing for the British and Dutch Meteorological Offices, 1910-1924.



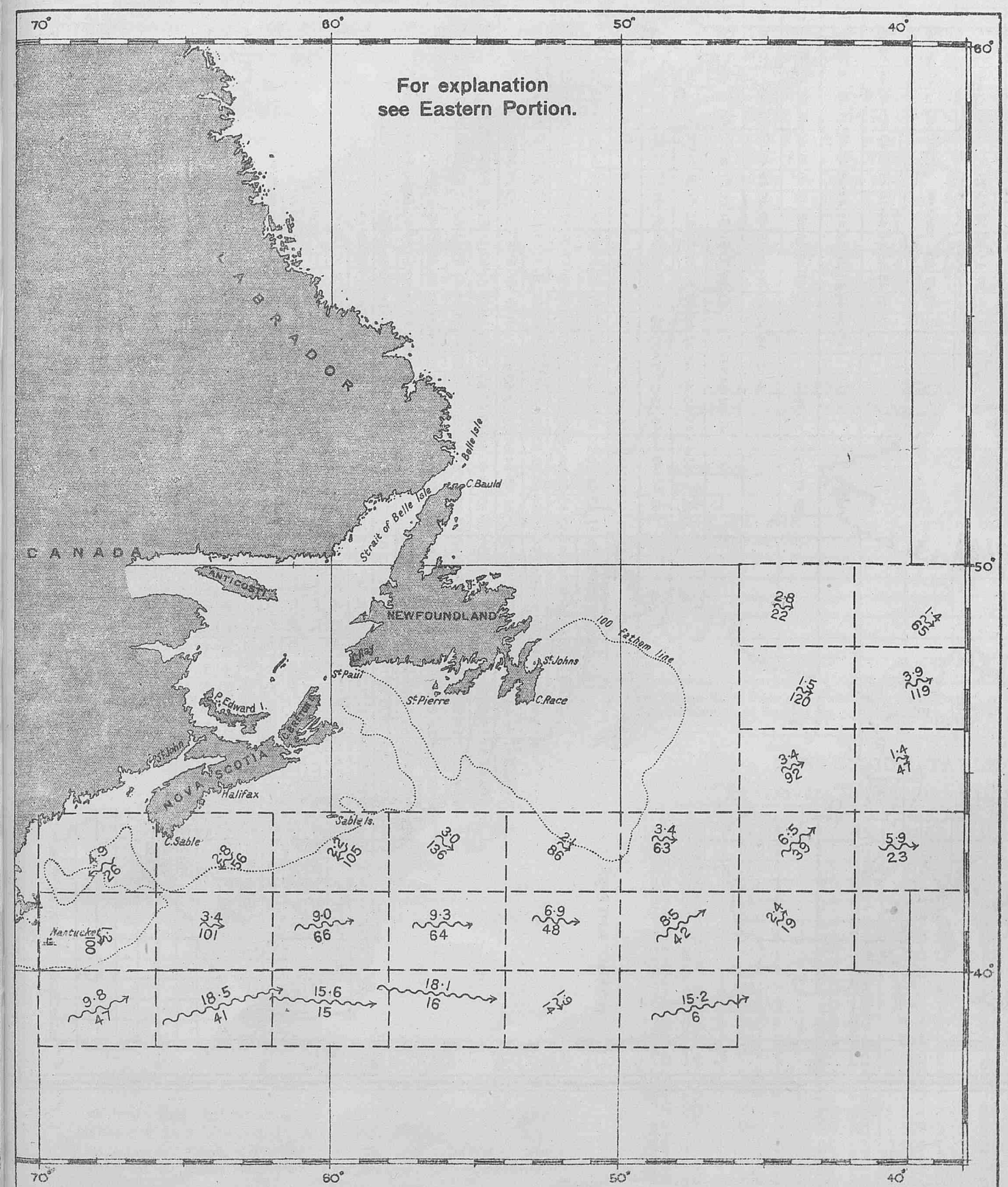
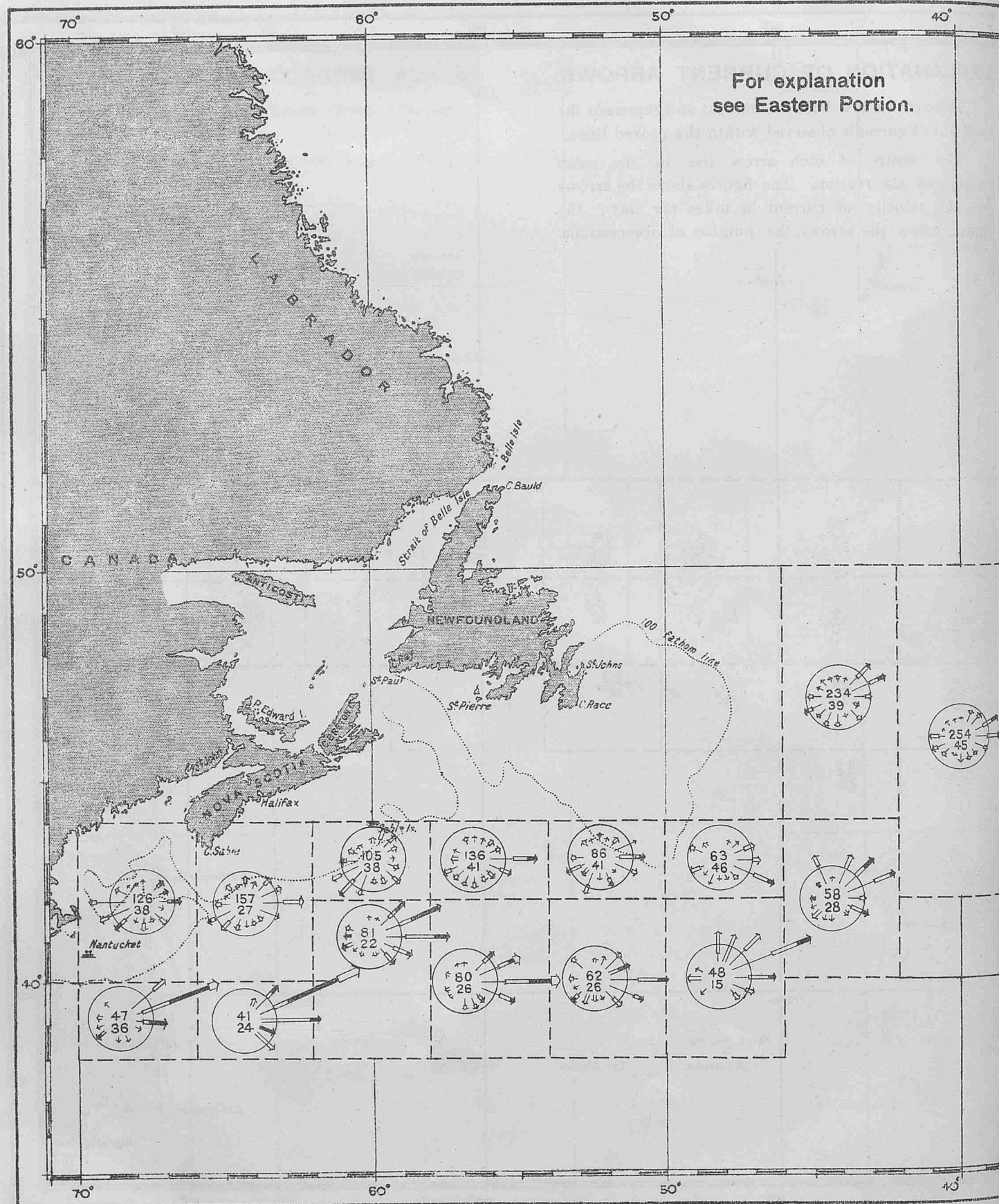


# CURRENTS ON THE TRANS NORTH ATLANTIC TRACKS

(WESTERN PORTION)

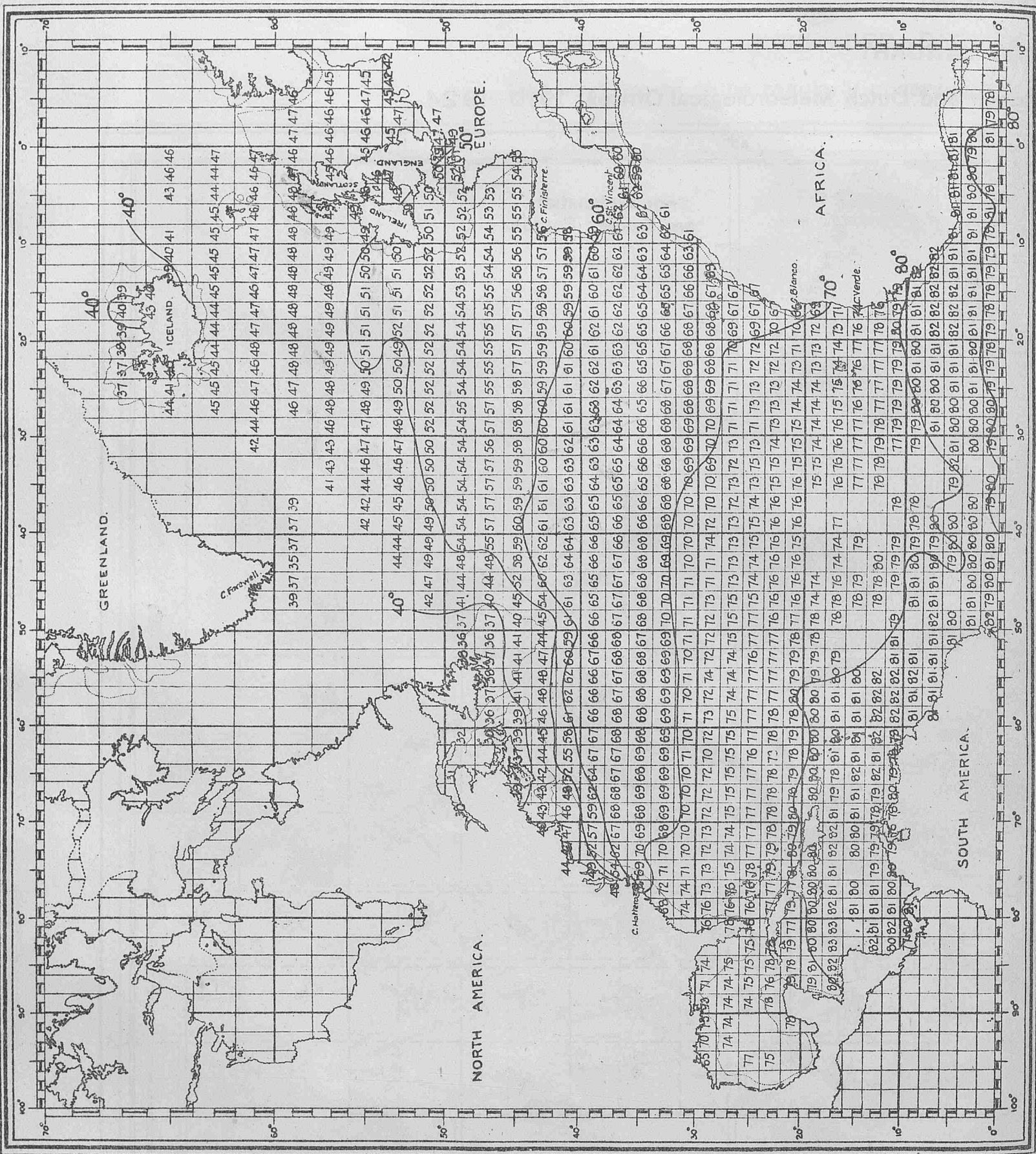
## NOVEMBER, DECEMBER AND JANUARY.

Observations of ships regularly observing for the British and Dutch Meteorological Offices, 1910-1924.





MEAN SEA SURFACE TEMPERATURES FOR MONTH OF DECEMBER COMPUTED FROM ALL AVAILABLE SOURCES DURING THE PERIOD 1855 TO 1917.





# NOTICES.

## COVER FOR MARINE OBSERVER.

Marine observers, regular recipients and subscribers to this Journal are hereby informed that a binding cover for Volume III of "The Marine Observer" may be obtained from H.M. Stationery Office, through any bookseller, price 2s.

The arrangements for assembling the numbers for binding is described in this Number, page 203.

It should be clearly understood that this cover is not the cover used for binding "Excellent" awards, which is far superior; but it will be found to be of good quality and a useful means of preserving the yearly numbers, for which a title page is issued with each December number.

## THE BAROMETER.

Before barometer readings are compared with the normal isobars shown on the Meteorological Ocean Charts, transmitted by W/T or plotted on Weather Charts, mercurial barometers should be corrected for height, gravity, temperature and index error, for which tables are given on pp. 80 to 83 and 84 to 86 of the Marine Observer's Handbook; see also pp. 177-8, Vol. II, No. 23, of this Journal. A table for converting inches to millibars is also given below.

Aneroids require to be corrected for height and index error only. They should be frequently compared, as the mechanism is liable to get out of adjustment without detection.

Readings of the barometer should be entered in the Meteorological Log as read—i.e., uncorrected—and the attached thermometer should also be recorded. A column is now given for the corrected reading, and it will be of great assistance if this is also completed.

While a difference from the pressure values shown on the charts does not necessarily mean unusual weather, when there is a divergence the mariner should be on the alert, particularly within cyclone regions.

It is strongly urged that Marine Observers, whether using Official or Ship's Barometers, for W/T reports, Meteorological Logs or Forms 911, will complete and send in the Blue Post Card, at least once every voyage, so that an effectual check may be kept on the index error.

## INVITATION TO MARINE OBSERVERS.

The Marine Superintendent will be pleased to see the Captains of Observing Ships or their Observing Officers when they are in London, between 10 a.m. and 4 p.m. at Room 319, Adastral House, Kingsway, W.C.2. Telephone No., Holborn 3434, Extension 421. Telegrams, Marine Superintendent, Weather, London. (Nearest Station, Temple, District Railway.)

Personal touch is not only conducive to efficient work, but by this means we may be better able to advance upon lines which will further the practice of Meteorology in Navigation and at the same time provide the most suitable data for the general needs of Meteorological Science.

Those Marine Observers who do not come to London wishing to discuss matters connected with Marine Meteorology, are asked to consult the Agents at the Ports.

The Marine Agencies in the British Isles are visited at least once a year by the Marine Superintendent, and it is hoped by these means to further promote voluntary co-operation between ships at sea, and with the Meteorological Office.

Usually the Marine Superintendent visits the Marine Agencies as follows:—

Southampton and Cardiff, first week of March.

Belfast and Liverpool, last week of May.

Glasgow and Liverpool, early October.

Leith, North Shields and Hull, mid November.

Marine Agencies are given about two weeks notice of exact dates.

## BLUE POSTCARD FOR BAROMETER COMPARISON.

Marine Observers will greatly assist by obtaining comparisons with Standard instruments when at suitable ports; also regularly completing and returning the Blue Postcard whether their instruments are M.O. or Ship's.

Form 913.

Barometer Error.

### TEST CARD FOR BAROMETER ERROR.

To be forwarded with Logs or Reports to

Meteorological Office,  
Air Ministry,  
Kingsway, London

Name of Ship				Ship
Captain				Capt.
In Port of				Port
Mercurial or Aneroid				Date
Maker's Name and No.				Bar. No.
Height above Mean Sea Level .....ft.				..... } Too high
Date 192 ..	Time.	Barometer readings.	Attached Therm.	..... } Too low
				At
				Date
				This counterfoil will be returned to Ship.

In British Home Ports please take three readings at 7 a.m., or 6 p.m. G.M.T. If in a colonial or foreign port, read at 3 a.m. Local Standard Time.

## CONVERSION TABLE.

To Convert Inches into Millibars.

Inch.	mb.	Inch.	mb.	Inch.	mb.
27.50	931.2	28.65	970.2	29.85	1,010.8
27.55	932.9	28.70	971.9	29.90	1,012.5
27.60	934.6	28.75	973.6	29.95	1,014.2
27.65	936.3	28.80	975.3	30.00	1,015.9
27.70	938.0	28.85	976.9	30.05	1,017.6
27.75	939.7	28.90	978.6	30.10	1,019.3
27.80	941.4	28.95	980.3	30.15	1,021.0
27.85	943.1	29.00	982.0	30.20	1,022.7
27.90	944.8	29.05	983.7	30.25	1,024.4
27.95	946.5	29.10	985.4	30.30	1,026.1
28.00	948.2	29.15	987.1	30.35	1,027.7
28.05	949.9	29.20	988.8	30.40	1,029.4
28.10	951.6	29.25	990.5	30.45	1,031.1
28.15	953.2	29.30	992.2	30.50	1,032.8
28.20	954.9	29.35	993.9	30.55	1,034.5
28.25	956.6	29.40	995.6	30.60	1,036.2
28.30	958.3	29.45	997.3	30.65	1,037.9
28.35	960.0	29.50	999.0	30.70	1,039.6
28.40	961.7	29.55	1,000.7	30.75	1,041.3
28.45	963.4	29.60	1,002.4	30.80	1,043.0
28.50	965.1	29.65	1,004.0	30.85	1,044.7
28.55	966.8	29.70	1,005.7	30.90	1,046.4
28.60	968.5	29.75	1,007.4	30.95	1,048.1
		29.80	1,009.1		

## POSTAL ARRANGEMENTS.

THE MARINE OBSERVER is published, when circumstances permit, on the first Wednesday of the month previous to that to which the number refers.

If captains of observing ships will forward to the Office the particulars required hereunder, endeavour will be made as far as mails permit to post the latest number for use on their homeward passage.

S.S..... Captain.....

Port of Call.....

Date of Homeward Departure.....

Postal Address.....

When this information is not given THE MARINE OBSERVER is addressed to the Commanding Officer, s.s. ...., c/o the owners, and captains are requested to make their own arrangements for forwarding.



# ICE CHART. WESTERN NORTH ATLANTIC.

LETTERS OF TRANSATLANTIC TRACKS INDICATE.

- (C) From 1st September to 31st January, inclusive.
- (E) From 1st December to 14th February, inclusive.

These routes are liable to alteration when, owing to abnormal ice conditions, it is considered advisable by the steamship lines who are parties to the Track agreement.

## ROUTE NOTICES.

For latest information *re* Tracks see Board of Trade "Notices to Mariners," 1st October, 1926. pp. 129-33.

## SYMBOLS USED ON THE CHART.

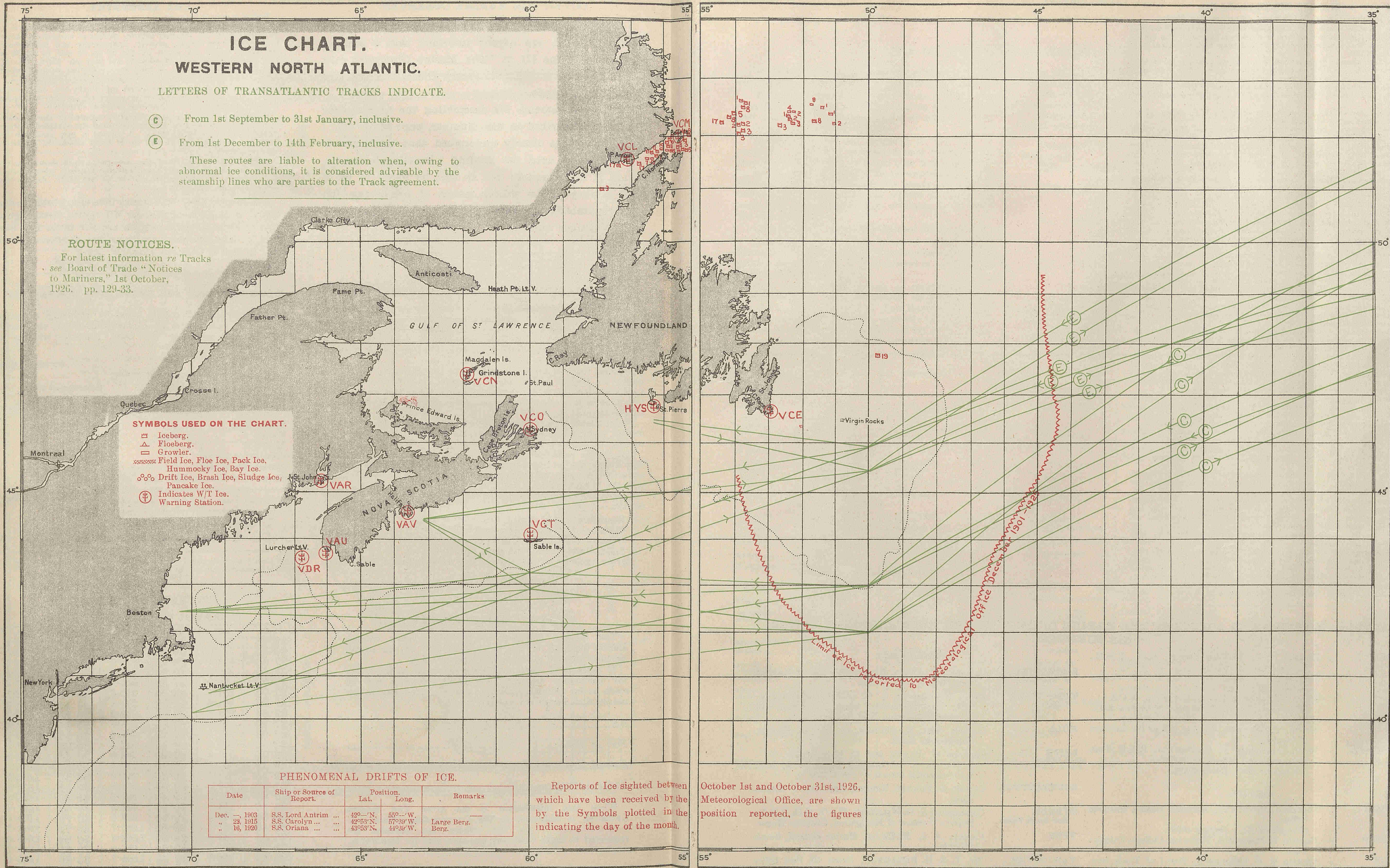
- Iceberg.
- Floeberg.
- Growler.
- Field Ice, Floe Ice, Pack Ice, Hummocky Ice, Bay Ice.
- Drift Ice, Brash Ice, Sludge Ice, Pancake Ice.
- Indicates W/T Ice.
- Warning Station.

## PHENOMENAL DRIFTS OF ICE.

Date	Ship or Source of Report.	Position.	Remarks
Dec. —, 1903	S.S. Lord Antrim ...	42°—'N. 55°—'W.	—
" 23, 1915	S.S. Carolyn ...	42°53'N. 57°39'W.	Large Berg.
" 16, 1920	S.S. Oriana ...	43°53'N. 41°39'W.	Berg.

Reports of Ice sighted between which have been received by the by the Symbols plotted in the indicating the day of the month.

October 1st and October 31st, 1926, Meteorological Office, are shown position reported, the figures





## MARINE METEOROLOGY.

## Co-operation of Shipowners, Masters and Mates.

The Director of the Meteorological Office is authorised to lend tested Instruments to Captains of British-owned ships who undertake to make 4 hourly observations and keep Meteorological Logs for the Office.

The instruments supplied for this purpose are one barometer, four thermometers with screen, two hydrometers and in some cases a Barograph and rain gauge is added to the equipment.

Tested instruments are also lent to a number of British Atlantic Liners which make special coded W/T weather reports to the Office.

The number of ships co-operating with the M.O. using official tested instruments on loan is limited.

Vessels observing regularly for the Meteorological Office to which office instruments are not lent, keep Form 911, Ship's Meteorological Report, using the ship's instruments, the barometer being compared with Standards. The number of ships regularly contributing approved forms of all descriptions to the Marine Division is limited to 500.

Captains and Officers who wish to co-operate with the Meteorological Office should apply by letter to The Director, Meteorological Office, Air Ministry, Kingsway, London, W.C.2; or in person between the hours of 10 a.m. and 4 p.m., to the Marine Superintendent at the same address or to any of the gentlemen whose names and addresses are given below acting as agents at the respective ports. A waiting list is kept of the names of ships whose commanders have offered to regularly co-operate.

Marine Observers (i.e., Captains and Officers who regularly observe for the Meteorological Office) will greatly assist if they will send in Meteorological Logs immediately on completion through the Port Meteorological Officer or Agent, at the same time notifying him of any possible instrumental defects.

Defective instruments will then be replaced and new Log Books, etc., provided.

In London and at base ports where there is not an Agency, notification of defects should be sent to headquarters on arrival, with the Meteorological Log.

Vessels making voyages of less than two months' duration are requested to retain their logs until nearly filled up, but the log should be returned in all cases at least twice yearly.

W/T Registers and Forms 911 should in all cases be sent directly to the Meteorological Office, London. The Port Meteorological Officer at Liverpool and the Visiting Officer in London board vessels co-operating with the Meteorological Office, and the agents visit ships at their ports when circumstances permit.

Postage abroad incurred on behalf of the Meteorological Office in returning logs will be refunded. Postage from British Empire ports need not be prepaid, if the envelope is marked O.H.M.S., and addressed to the Director, Meteorological Office, London.

Captains and Officers whether they observe regularly for the Meteorological Office or not are urged to report exceptional phenomena in air or sea. Reports of weather experienced in or near Tropical Cyclones or hurricanes, also abnormal currents are specially desired.

Ships on the List of Voluntary Observers to the Meteorological Office which have a mercurial barometer are indicated by the letters M.L., W.T. and M.

These are selected ships for reporting weather observations made at specified times by W/T to "All Ships," and they are invited to perform this service, which is for the benefit of all shipping fitted for W/T reception.

For sample weather report message see page 15, Vol. III, No. 25, of this Journal.

THE MARINE OBSERVER is sent monthly to all ships regularly contributing Logs, Forms and W/T Registers to the Meteorological Office. It is hoped that each ship will preserve all her copies. Personal copies of Numbers are sent to those whose special contributions are published in them. A suitable cover may be obtained from H.M. Stationery Office, price 2s.

## NOTICES.

## LATE PRESS.

## DERELICTS AND FLOATING WRECKAGE.

Date.	Position.		Description.
	Latitude, Longitude.		
BALTIC.			
9.10.26	54°51'N.	13°25'E.	Capsized sailing vessel.
17.10.26	55°52'N.	18°20'E.	Schooner <i>Urania</i> , abandoned, drifting on the balance of her cargo, in a sinking condition with open hatches, dangerous to navigation.
NORTH SEA.			
11.10.26	½ m. N.w'd. Light Whistle Buoy, Ymuiden.		Dangerous floating wreck.
11.10.26	54°30'N.	3°48'E.	Derelict awash.
11.10.26	54°47'N.	3°26'E.	Derelict.
11.10.26	57°10'N.	7°42'E.	Derelict, mast projecting.
11.10.26	52°29'N.	4°29'E.	Derelict.
12.10.26	55°40'N.	5°05'E.	Steam trawler <i>Girl Phyllis</i> drifting in sinking condition.
15.10.26	53°58'N.	7°48'E.	Derelict, bottom up, dangerous.
15.10.26	57°35'N.	3°05'E.	Upright floating mast.
19.10.26	55°12'N.	6°50'E.	Wreck, the half deck of fishing boat.
ENGLISH CHANNEL.			
17.10.26	49°05'N.	3°54'W.	Drifting wreck, bottom up, very dangerous.
NORTH ATLANTIC.			
1.10.26	23°55'N.	69°25'W.	Wreckage about 30 feet long, apparently the side of a wooden vessel.
2.10.26	33°35'N.	76°16'W.	Wreckage, apparently the side of a vessel 60 or 70 feet long, covered with marine growth.
2.10.26	47°38'N.	8°10'W.	Large spherical light and whistle buoy, apparently black and rusty, with heavy growth, no light observed but whistle sounded as buoy was passed, dangerous to navigation.
5.10.26	50°45'N.	11°19'W.	Boom, 15 feet long, 3 feet diameter, dangerous to navigation.
5.10.26	47°21'N.	32°29'W.	Mast projecting 6 feet out of water.
6.10.26	49°09'N.	22°46'W.	Black cylindrical buoy marked 7A.
7.10.26	42°43'N.	48°09'W.	Submerged object.
8.10.26	49°06'N.	20°55'W.	Can-shaped buoy.
17.10.26	47°54'N.	5°59'W.	Red whistle buoy adrift.
20.10.26	48°25'N.	8°14'W.	Spar, about 20 feet long, 3 feet diameter, dangerous to navigation.
21.10.26	47°46'N.	6°25'W.	Black drifting whistle buoy.
GULF OF MEXICO.			
18.10.26	12 m. S.E. of Maysi Point.		Schooner, abandoned.

## NAUTICAL OFFICERS AND AGENTS OF THE MARINE DIVISION OF THE METEOROLOGICAL OFFICE, AIR MINISTRY.

LONDON ... Captain L. A. BROOKE SMITH, R.D., R.N.R.,  
Marine Superintendent.  
Commander J. Hennessy, R.D., R.N.R., Senior  
Nautical Assistant.  
Room 319, Adastral House, Kingsway, W.C.2.  
(Telephone No.: Holborn 3434 Extension 421).  
Nearest station Temple, District Railway.  
Mr. W. T. GRIEVES, Visiting Officer for the Port  
of London.

LIVERPOOL ... Lieut. Commander M. CRESSWELL, R.N.R., Port  
Meteorological Officer, Dock Office.  
(Telephone No.: Bank 8959).

## Agents.

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(Telephone No.: Belfast 4090).

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SOUTHAMPTON Captain D. FORBES, Nautical Academy, 1, Albion Place.

SYDNEY, New South Wales. Commander G. D. WILLIAMS, D.S.O., R.D., R.N.R., Deputy Director of Navigation, Customs House.

TYNE ... Captain J. J. MCEWAN, Marine School, South Shields.

VANCOUVER, British Columbia. Mr. T. S. H. SHEARMAN, Room 40, Post Office Building.



# LIST OF VOLUNTARY OBSERVING SHIPS

i

The following is a complete list of ships regularly contributing observations to the Meteorological Office.

The names of the Captains and Officers, as ascertained from logs and reports received, are given with the date and description of last log, register or report received up to the time of going to press.

Marine Observers are requested to take this as complete and grateful acknowledgment for the work they have contributed, as it has been found necessary to reduce as far as possible the correspondence of the Marine Superintendent, which was largely composed of letters acknowledging logs and reports, in order that more time may be devoted to obtaining results from the data received.

Only in special cases will individual letters be sent.

Excellent awards will be made at the end of the financial year. The names of Commanders and Officers gaining these awards will be published in a special list in THE MARINE OBSERVER.

Ships not contributing logs or reports within a reasonable period will automatically be removed from the list and the free issue of THE MARINE OBSERVER discontinued; it is, therefore, earnestly requested that changes of service, probable periods of lay up or transfer of Commanders may be notified whenever possible.

A waiting list is kept of the names of vessels whose Commanders have offered to regularly co-operate.

The number of voluntary observing ships is limited to a maximum total of 500.

Commanders are requested to point out any errors which may occur in the list.

Unless otherwise stated, vessels on the following list are s.s.

M.L. = Equipped with tested Instruments for keeping Meteorological log.

W.T. = Equipped with tested Instruments for making coded W/T reports to the Meteorological Office, London.

No. = Keeps Ship's Meteorological Report Form 911 with ship's instruments. Letter M after No. indicates ship's barometer Mercurial; A. ship's barometer Aneroid.

C.C. = Equipped with tested Instruments for making Cross Channel Telegraphic Reports to the Meteorological Office, London.

The numbers which appear before the names of ships equipped for making coded W/T reports to the Meteorological Office, London, are used for the purpose of identification when the observations are re-transmitted in synoptic messages by Wireless or Cable.

Name of Vessel.	Captain.	Observing Officers.	Official Meteorological Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 15.10.26.	Date Received.
<i>Aba</i> ...	Hughes, J. ...	J. Doyle, L. B. Silvester, S. J. Bristowe.	M.L.	Elder Dempster ...	Met. Log. 28.4.25 to 25.9.26 ...	14.10.26.
<i>Abinsi</i> ...	Millson, H. E. ...	H. H. Burke ...	No. A.	A. Holt ...	Form 911 21.7.26 to 29.8.26 ...	1.9.26.
<i>Achilles</i> ...	Hill, R. ...	D. MacTavish ...	" A.	Harrison ...	" 8.10.25 to 19.10.25 ...	18.11.25.
<i>Actor</i> ...	Haylett, E. ...	A. Frew, J. McKay, G. Penston.	M.L.	"	Met. Log. 12.5.26 to 2.7.26 ...	14.8.26.
<i>Adda</i> ...	Toft, J. T. ...	E. C. Davis ...	No. M.	Elder Dempster ...	Form 911 2.9.26 to 15.9.26 ...	12.10.26.
<i>50 Adriatic</i> ...	Beadnell, F. E., Capt., R.N.R.	R. G. Roberts, O. V. Lucas ...	W.T.	White Star ...	W.T. Reg. 20.9.26 to 9.10.26 ...	11.10.26.
<i>Aeneas</i> ...	Wallace, W. K. ...	J. M. Anderson ...	No. A.	A. Holt ...	Form 911 25.7.26 to 12.9.26 ...	16.9.26.
<i>Aqapenor</i> ...	Ramsay, J. ...	S. G. Ellams ...	" A.	"	" 21.3.26 to 9.4.26 ...	17.5.26.
<i>Aidan</i> ...	Whayman, W. R. ...	J. J. West ...	" A.	Booth ...	" 13.8.26 to 11.9.26 ...	16.9.26.
<i>Alban</i> ...	Whayman, W. ...	C. D. Lane, A. T. Douglas ...	" A.	"	" 2.7.26 to 23.8.26 ...	6.9.26.
<i>Albania</i> ...	Gronow, S. ...	L. Harper ...	" A.	Cunard ...	" 6.12.25 to 22.12.25 ...	4.1.26.
<i>Alipore</i> ...	Harrison, R., D.S.O., R.D., Commr., R.N.R.	D. N. Stafford ...	" M.	P. and O. ...	" 29.8.25 to 22.9.25 ...	24.9.26.
<i>Almanzora</i> ...	Mackenzie, G. A. ...	A. H. Phillipson ...	" A.	R.M.S.P. ...	" 2.6.26 to 24.8.26 ...	14.9.26.
<i>Alondra</i> ...	Prendergast, J. J. ...	H. Peters ...	" A.	Yeoward ...	" 31.7.26 to 12.9.26 ...	14.9.26.
<i>Ampelco</i> ...	Vandenkerckhove, A. ...	A. Aspeslagh ...	" A.	American Petroleum ...	" 11.9.26 to 2.10.26 ...	4.10.26.
<i>Antiochus</i> ...	Dunlop, S. K. ...	E. T. Bayes ...	" A.	A. Holt ...	" 16.8.26 to 31.8.26 ...	4.10.26.
<i>Aorangi</i> ...	Crawford, R. ...	J. W. Bray, G. H. Kime, H. A. Titchfield, E. Anderson.	M.L.	Canadian-Australasian	Met. Log. 14.6.26 to 6.8.26 ...	13.9.26.
<i>Appam</i> ...	Yardley, H. A., D.S.C.	Prendergast, Dutton, W. Page	"	Elder Dempster ...	" 7.5.26 to 19.8.26 ...	10.9.26.
<i>30 Aquitania</i> ...	Charles, Sir J. T. W., K.B.E., C.B., R.D., Commr., R.N.R.	J. L. Croasdaile, J. Locke, D. MacLean.	W.T.	Cunard ...	" 23.12.25 to 23.5.26 ...	5.6.26.
<i>62 Arabic</i> ...	Davies, J. ...	R. Walker, H. G. Morgan, W. Clements.	W.T.	White Star ...	W.T. Reg. 5.9.26 to 20.9.26 ...	22.9.26.
<i>Arafura</i> ...	Gordon, A. S. ...	J. T. Heddle, G. C. Smith, O. B. Godfrey.	M.L.	Eastern and Australian	" 26.9.26 to 11.10.26 ...	14.10.26.
<i>Archimedes</i> ...	Downs, E. B. ...	J. M. Edgar ...	No. A.	Lamport & Holt ...	Form 911 21.4.26 to 13.5.26 ...	17.5.26.
<i>Ariguani</i> ...	Scudamore, J. H. H., D.S.O., R.D., Commr., R.N.R.	G. Dobson, S. A. Sapworth, G. McKee, W. E. Butcher.	M.L.	Elders & Fyfes ...	Met. Log. 20.4.26 to 14.5.26 ...	17.5.26.
<i>Armada Castle</i> ...	Millard, L. A., Knight, A.	"	"	Union Castle ...	Met. Log. 7.4.26 to 28.6.26 ...	1.9.26.
<i>Arracan</i> ...	Willis, M. ...	R. McInnes, M. S. Stuart, C. C. Weir.	"	P. Henderson ...	" 22.3.26 to 9.6.26 ...	16.7.26.
<i>Arundel</i> ...	Short, H. ...	Mr. Hill ...	C.C.	Southern Rly. ...	" 10.4.26 to 8.8.26 ...	18.8.26.
<i>Arundel Castle</i> ...	George, J., O.B.E. ...	C. S. Keen ...	No.	Union Castle ...	Telegraphic Report 14.10.26 ...	14.10.26.
<i>Astronomer</i> ...	Richards, J. ...	H. Thomas, J. Glen, — Winstanley.	M.L.	Harrison ...	Met. Log. 26.2.26 to 20.6.26 ...	13.7.26.
<i>Athenic</i> ...	Davies, E. ...	W. Hill ...	No. A.	White Star ...	" 18.2.26 to 16.6.26 ...	24.6.26.
<i>Atreus</i> ...	Salter, G. H. ...	J. C. Podmore ...	" A.	A. Holt ...	Form 911 21.9.26 to 5.10.26 ...	8.10.26.
<i>Atsuta Maru</i> ...	Arakida, R. ...	K. Murazumi ...	" A.	Nippon Yusen Kaisha	" 7.7.26 to 19.7.26 ...	6.8.26.
<i>Auditor</i> ...	Owen, W. T. ...	T. E. Steel ...	" M.	Harrison ...	" 23.7.26 to 10.8.26 ...	16.8.26.
<i>Ausonia</i> ...	Stafford, W., D.S.C., R.D., Lt.-Commr., R.N.R.	E. R. B. Freeman ...	" A.	Cunard ...	" 27.8.26 to 29.9.26 ...	4.10.26.
<i>Avon</i> ...	Adam, C., R.D., Commr., R.N.R.	E. S. Dunch ...	" M.	R.M.S.P. ...	" 19.9.26 to 9.10.26 ...	11.10.26.
<i>Balfour</i> ...	Dott, J. ...	S. W. Keay ...	No. A.	Canadian Pacific	" 24.3.26 to 2.7.26 ...	17.7.26.
<i>Balranald</i> ...	Townshend, W. P., Commr., R.N.R.	"	M.L.	P. & O. Branch ...	" 3.9.26 to 1.10.26 ...	6.10.26.



## THE MARINE OBSERVER

Name of Vessel	Captain.	Observing Officers.	Official Meteorological Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 15.10.26.	Date Received.
51 Baltic ...	White, E. R., Commr. R.N.R.	H. R. Wilkinson, H. C. Gray, F. E. Patchett.	W.T.	White Star ...	W.T. Reg 6.9.26 to 25.9.26 ...	30.9.26.
Bambra ...	Turner, J. E. ...	H. W. Norris, J. E. Turner, F. Humble.	M.L.	State Service, Australia	Form 911 6.9.26 to 26.9.26 ...	30.9.26.
Bampton Castle ...	Hutchings, A. H. ...	J. W. S. Brooks ...	No.	Union Castle ...	Met. Log. 25.11.25 to 3.5.26 ...	15.6.26.
Banbury Castle ...	Singeisen E. A., D.S.C., R.D., Capt., R.N.R.	... ..	"	"	" 12.3.26 to 3.7.26 ...	16.7.26.
Banffshire ...	Wynne, R. H. ...	W. F. Lockhead ...	No. A.	Turnbull Martin ...	Form 911 2.7.26 to 4.8.26 ...	6.9.26.
Baron Murray ...	Edgar, J. E. ...	W. P. G. Arthur, H. Thompson	" A.	Hogarth & Sons ...	" 8.5.26 to 10.6.26 ...	21.9.26.
Barpeta ...	Beytagh, L. S. F. ...	W. P. Page ...	" M.	British India ...	" 29.7.26 to 20.8.26 ...	20.9.26.
Baychimo ...	Cornwall, S. A. ...	E. J. Hankin ...	" A.	Hudson's Bay Co. ...	" 20.4.26 to 4.6.26 ...	28.7.26.
Baymaud ...	Roellmer, G. ...	... ..	" M.	"	"	"
Beaufort ...	Rice, W. V., D.S.O., D.S.C., Commr., R.N.	C. R. Brent ...	M.L.	His Majesty's Ship ...	Met. Log. 16.4.26 to 29.8.26 ...	14.9.26.
59 Belgenland ...	Howell, T. ...	C. Murray, J. Cross ...	W.T.	Red Star ...	W.T. Reg. 6.9.26 to 25.9.26 ...	28.9.26.
Benalder ...	Cole, J. H., D.S.C. ...	T. S. Rawlingson ...	No. A.	Ben Line ...	Form 911 5.9.26 to 25.9.26 ...	28.9.26.
Bendigo ...	Nicholl, R. N. C. ...	H. J. Cholerton ...	" M.	P. & O. Branch ...	" 18.7.26 to 11.8.26 ...	26.8.26.
31 Berengaria ...	Rostron, Sir A. H., K.B.E., R.D., Capt., R.N.R.	J. A. Myles, W. C. A. Robson, E. W. Connell ...	W.T.	Cunard ...	W.T. Reg. 23.7.26 to 3.9.26 ...	5.10.26.
Berrima ...	Short, C. E. ...	T. Ferguson ...	No. M.	P. & O. Branch ...	Form 911 24.7.26 to 12.8.26 ...	8.9.26.
Bintang ...	Morzer Bruyns, M. F. ...	A. Kref ...	" M.	Nederland ...	" 10.8.26 to 28.8.26 ...	28.9.26.
Bogota ...	Good, W. J. ...	W. Billington ...	" A.	R.M.S.P. Co. ...	" 21.5.26 to 19.9.26 ...	21.9.26.
Bolingbroke ...	Dott, J. F. ...	C. A. Mott ...	M.L.	Canadian Pacific ...	Met. Log. 23.1.26 to 31.8.26 ...	8.9.26.
Borda ...	McQueen, D. ...	... ..	No. M.	P. & O. Branch ...	Form 911 9.5.26 to 28.6.26 ...	30.6.26.
Bothwell ...	Holland, R. ...	G. Mowatt ...	" A.	Canadian Pacific ...	" 25.8.26 to 22.9.26 ...	28.9.26.
Brandon ...	Rothwell, A. J. ...	T. Beck ...	" A.	"	" 25.7.26 to 25.8.26 ...	27.8.26.
Brecon ...	Sargent, A. H., R.D., Lt.-Commr., R.N.R.	... ..	" A.	"	" 29.6.26 to 27.7.26 ...	3.8.26.
Brenda ...	McCormie, G. ...	F. E. Bevis ...	" A.	"	" 1.6.26 to 30.6.26 ...	3.7.26.
Brighton ...	Lamont, A. ...	F. R. Ness ...	" C.	Scottish Fishery Board	Telegraphic Report 13.10.26 ...	13.10.26.
British Advocate ...	Hill, A. ...	Mr. Munton ...	No. M.	Southern Railway	Form 911 21.6.26 to 22.8.26 ...	27.8.26.
British Engineer ...	Taylor, R. J. ...	G. H. Wylie, T. Copeman ...	" M.	British Tankers	" 26.1.26 to 9.3.26 ...	12.4.26.
British Soldier ...	Joures, T. W. ...	E. L. W. Evans ...	" A.	"	" 19.7.26 to 13.8.26 ...	8.9.26.
Bronte ...	Putt, R. O. ...	H. J. Crangle ...	" A.	"	" 12.9.26 to 24.9.26 ...	9.10.26.
Browning ...	Crappier, J. S. ...	W. Jones, H. L. Rudd ...	" A.	Lamport & Holt ...	Form 911 29.3.26 to 1.7.26 ...	5.7.26.
Bruyere ...	Connorton, W. A. ...	A. B. Murray ...	" A.	"	" 20.1.26 to 12.2.26 ...	22.3.26.
Burna ...	Denson, W. ...	R. Mowbray ...	" A.	"	"	"
Cambria C.S. ...	Cattanach, J. C. ...	... ..	" A.	Henderson ...	Met. Log. 20.6.26 to 24.8.26 ...	29.9.26.
Cambria ...	Sherwood, C. A., D.S.C.	A. J. English, B. C. Farrow, D. F. St. John.	M.L.	Eastern Tel. Co. ...	"	"
Cameronia ...	Telfer, J. E. ...	V. S. Phillips ...	C.C.	L.M. & S. Rly. ...	Telegraphic Report 9.10.26 ...	9.10.26.
Camito ...	Smart, R. W. ...	C. Paton ...	No. A.	Anchor ...	Form 911 1.8.26 to 21.8.26 ...	1.9.26.
Canadian Importer	Forrester, W. T., O.B.E.	W. T. Broome, H. J. Perrett, P. C. Congdon, F. Dudgeon.	M.L.	Elders & Fyfe ...	Met. Log. 25.1.26 to 14.6.26 ...	16.6.26.
Canadian Inventor	Forson, A. ...	... ..	No.	Canadian Govt. Mercantile Marine.	"	"
Canadian Miller	Boulton, F. W. ...	D. Grey ...	No. A.	"	Form 911 25.8.26 to 4.9.26 ...	22.9.26.
Canadian Scottish	McConechy, W. T. ...	C. E. Moore, H. Ruegg ...	" A.	"	" 14.3.26 to 23.6.26 ...	15.7.26.
Canadian Skirmisher	Wallace, C. ...	A. E. Webster ...	" A.	"	" 9.5.26 to 10.6.26 ...	27.7.26.
Canadian Winner	Millar, W. H. ...	R. J. Watson ...	" A.	"	" 24.7.26 to 4.9.26 ...	16.9.26.
35 Carnarvon Castle	Hocking, N. P. ...	R. Girling, J. Cochrane ...	" M.	"	" 12.6.26 to 15.7.26 ...	13.8.26.
Carnarvon Castle	Brown, F. G., R.D., Capt., R.N.R.	L. R. Simpson, W. M. Stewart, P. L. Williams.	W.T.	Cunard ...	W.T. Reg. 20.9.26 to 9.10.26 ...	11.10.26.
34 Caronia	Hague, J. W., Commr., R.N.R.	... ..	M.L.	Union Castle ...	Form 911 25.7.26 to 13.8.26 ...	20.8.26.
52 Cedric	Hossack, W. H., R.D., Capt., R.N.R.	R. F. Bovey, T. Asheroft, D. Butler.	W.T.	Cunard ...	W.T. Reg. 5.9.26 to 25.9.26 ...	29.9.26.
53 Celtic	Hickson, V. W., Lt.-Commr., R.N.R.	P. Conway, E. A. A. Crowley, J. Farrell.	"	White Star ...	Form 911 3.9.26 to 24.9.26 ...	29.9.26.
Centaur	Berry, G. ...	A. Thompson, G. T. Kavanagh, J. Peters.	"	"	W.T. Reg. 30.8.26 to 19.9.26 ...	21.9.26.
Ceramic	Rose, A. F. ...	L. Johnstone, E. Potts ...	No. M.	A. Holt & Co. ...	Form 911 29.8.26 to 19.9.26 ...	21.9.26.
Chancellor	Roberts, J., C.B.E., D.S.O., R.D., Capt., R.N.R.	D. W. Chamberlain ...	" A.	White Star ...	W.T. Reg. 12.9.26 to 3.10.26 ...	6.10.26.
Change	Gibbins, W. ...	... ..	No. A.	"	Form 911 12.9.26 to 4.10.26 ...	7.10.26.
China ...	Gambrill, F. C. ...	L. R. Bull ...	" A.	"	" 15.6.26 to 20.8.26 ...	28.9.26.
Chindwara	Cossey, W. F. ...	J. Thomas, D. D. Tyer, J. A. Allan.	M.L.	Harrison ...	" 20.4.26 to 24.5.26 ...	26.5.26.
Chindwin	Brisley, P. L. ...	D. A. C. Butler ...	No. M.	Yuill & Co. ...	Form 911 23.7.26 to 14.8.26 ...	21.9.26.
City of Baroda	Esslemont, C. ...	W. Welch ...	" M.	"	Met. Log. 23.4.26 to 11.8.26 ...	22.9.26.
City of Benares	Houghton, W. ...	A. Beaton, J. Cook, W. H. Dalton.	M.L.	"	Form 911 30.4.26 to 23.6.26 ...	25.6.26.
City of Brisbane	Anderson, W. W. ...	C. G. Inglis ...	No. A.	"	" 29.8.25 to 17.12.25 ...	11.1.26.
City of Canterbury	Seaborne, F. O., D.S.C.	R. W. Watkin ...	" A.	"	Met. Log. 19.9.25 to 31.5.26 ...	4.6.26.
City of Chester	Bremner, D. M. ...	E. Womersley ...	" A.	"	Form 911 10.8.26 to 27.8.26 ...	20.9.26.
City of Edinburgh	Letton, F. W. ...	H. Asher, W. Speakman, H. A. Hazell.	M.L.	"	" 24.5.26 to 4.6.26 ...	18.6.26.
City of Hong Kong	Wyper, J. ...	N. G. Fraser ...	No. M.	"	" 5.9.26 to 16.9.26 ...	25.9.26.
City of London	Walton, H. L., O.B.E., R.D., Commr., R.N.R.	A. M. Westlake ...	" A.	"	Met. Log. 11.4.26 to 18.8.26 ...	20.9.26.
City of Marseilles	Martin, D. ...	J. J. McTigue ...	" A.	"	Form 911 3.7.26 to 30.7.26 ...	9.9.26.
City of Rangoon	Brown, G. ...	W. A. MacAdams, G. F. L. Coates.	" A.	"	" 1.9.26 to 11.9.26 ...	25.9.26.
City of Yokohama	Dunning, T. W. J. ...	A. Gibb, V. S. Turner, A. H. Cosker, G. Lawrey.	M.L.	"	" 8.3.26 to 2.4.26 ...	12.4.26.
Clan Alpine	McDonald, W. D. ...	R. A. Fulton ...	No. A.	"	" 25.2.26 to 18.3.26 ...	22.3.26.
Clan Lamont	Lennox, W. J. ...	G. Short ...	" A.	"	Met. Log. 14.12.25 to 4.6.26 ...	28.6.26.
Clan Lindsay	Urquhart, P., D.S.C.	P. de Gruchy ...	" A.	"	Form 911 25.5.26 to 23.7.26 ...	3.8.26.
Clan Macbeth	Worthington, J. H.	T. E. Woodall ...	" A.	"	" 7.8.26 to 26.8.26 ...	5.10.26.
Clan Macfadyen	Young, A. H., R.D., Lieut.-Commr., R.N.R.	W. Hurst ...	" A.	"	Form 911 26.8.26 to 10.9.26 ...	20.9.26.
Clan Macgillivray	Stenson, F. J., R.D., Capt., R.N.R.	J. W. Charles ...	" A.	"	" 31.8.26 to 20.9.26 ...	25.9.26.
	West, W. F. ...	A. J. Brewer ...	" A.	"	" 14.7.26 to 11.8.26 ...	16.8.26.
					" 21.7.26 to 9.8.26 ...	1.9.26.
					" 9.5.26 to 9.9.26 ...	14.9.26.

## LIST OF VOLUNTARY OBSERVING SHIPS

iii

Name of Vessel.	Captain.	Observing Officers.	Official Meteoro- logical Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 15.10.26.	Date Received.
<i>Clan Macindoe</i> ...	Low, A. ...	J. G. Baillie ...	No. A.	Clan ...	Form 911 22.7.26 to 17.8.26 ...	12.10.26.
<i>Clan Mackellar</i> ...	Scotland, A. ...	D. McAllister ...	" A.	" ...	28.6.26 to 20.7.26 ...	9.8.26.
<i>Clan Mackinnon</i> ...	McLean, J. G. ...	W. F. Isaac, S. Y. Strange, J. E. Clayton.	M.L.	" ...	Met. Log. 25.3.26 to 14.7.26 ...	19.7.26.
<i>Clan Macphee</i> ...	Gourlay, J. B. ...	D. S. Rae, J. O. Woodall, J. J. Millar.	"	" ...	" 6.9.25 to 14.5.26 ...	24.6.26.
<i>Clan Macnaughton</i> ...	Thomson, W. ...	A. J. Storkey, D. MacDiarmid	No. M.	" ...	Form 911 19.6.26 to 29.6.26 ...	14.8.26.
<i>Clan Macnaghtart</i> ...	Gray, J. N. ...	W. J. Henderson ...	" A.	" ...	" 19.4.26 to 23.5.26 ...	26.5.26.
<i>Clan MacTavish</i> ...	Higgins, C. J. ...	" ...	" A.	" ...	" ...	" ...
<i>Clan Macwhirter</i> ...	Waterhouse, J. ...	R. W. Roberts ...	" A.	" ...	Form 911 16.6.26 to 7.7.26 ...	3.8.26.
<i>Clan Macwilliam</i> ...	Williamson, A. ...	T. B. Cranwill ...	" A.	" ...	" 12.6.26 to 27.7.26 ...	8.10.26.
<i>Clan Malcolm</i> ...	Neill, G. A. ...	S. M. Werrey Easterbrook, H. V. Wightman, H. M. Macrone	M.L.	" ...	Met. Log. 5.5.26 to 5.9.26 ...	25.9.26.
<i>Clan Morrison</i> ...	Porterfield, W. M. ...	L. C. Higgins ...	No. A.	" ...	Form 911 18.8.26 to 3.9.26 ...	28.9.26.
<i>Clan Murdoch</i> ...	Miller, W. ...	P. McMillan ...	" A.	" ...	" 24.3.26 to 14.4.26 ...	17.5.26.
<i>Clan Ranald</i> ...	Laird, C. ...	T. O. Marr ...	" A.	" ...	" 3.8.26 to 25.8.26 ...	9.9.26.
<i>Clan Ross</i> ...	Smith, W. P. ...	D. B. Edgar ...	" A.	" ...	" 12.7.26 to 2.8.26 ...	20.9.26.
<i>Clan Sinclair</i> ...	George, L. S. ...	J. Brittain ...	" A.	" ...	" 28.8.25 to 6.9.26 ...	10.9.26.
<i>Clan Urquhart</i> ...	Gibb, A. F. W. ...	E. P. Smith ...	" A.	" ...	" 3.8.26 to 31.8.26 ...	20.9.26.
<i>Colonia, C.S.</i> ...	Carlton, G. F., O.B.E., Commr., R.N.R.	W. E. Allen, R. E. Coad, F. B. Bolingbroke ...	M.L.	Telegraph Construction & Maintenance.	Met. Log. 13.6.26 to 24.9.26 ...	30.9.26.
<i>Colonian</i> ...	Gittins, R. P. ...	T. A. Schofield-Miller ...	No. A.	Leyland ...	Form 911 26.8.26 to 22.9.26 ...	28.9.26.
<i>Comorin</i> ...	Borland, J. Mc. I., C.B., D.S.O., R.D., Capt., R.N.R.	E. A. O. Chambers ...	" M.	P. & O. ...	" 24.8.26 to 23.9.26 ...	28.9.26.
<i>Concordia</i> ...	Telfer, J. H. ...	T. Philip, J. McIntosh, J. Mackay.	M.L.	Anchor Donaldson ...	Met. Log. 3.4.26 to 20.8.26 ...	27.8.26.
<i>Corinthia</i> ...	Hart, F. ...	F. Kean, M. Bennett, F. G. Rogers.	"	White Star ...	" ...	" ...
<i>Cornish City</i> ...	James, D. P. ...	" ...	No. A.	Reardon Smith ...	" ...	" ...
<i>Cornwall</i> ...	Haines, F. P. ...	T. Hains ...	" A.	Federal ...	Form 911 10.4.26 to 25.5.26 ...	28.5.26.
<i>Crawford Castle</i> ...	Morgan, A. O., R.D., Commr., R.N.R.	J. E. R. Wilford ...	" A.	Union Castle ...	" 19.6.26 to 17.7.26 ...	21.7.26.
<i>Cristales</i> ...	Isaacson, J. M. ...	S. Browne, R. Southerland, D. M. Baker.	M.L.	Elders & Fyffes ...	Met. Log. 17.3.26 to 19.7.26 ...	21.7.26.
<i>Culebra</i> ...	Mackay, A. S., R.D., Commr., R.N.R.	P. Cooper, H. V. Todd, C. A. Payne, F. G. Dawson.	"	R.M.S.P. Co. ...	" 11.1.26 to 14.6.26 ...	22.6.26.
<i>Cumberland</i> ...	Deith, G. T. ...	E. F. Hopkins ...	No. A.	Federal ...	Form 911 18.2.26 to 19.6.26 ...	22.6.26.
<i>Cuthbert</i> ...	Barlow, F. P. ...	S. E. Adams ...	" A.	Booth ...	" 11.6.26 to 26.8.26 ...	1.9.26.
<i>Cyclops</i> ...	Cosker, W. ...	H. L. Cole ...	" A.	A. Holt ...	" 1.8.26 to 1.10.26 ...	8.10.26.
<i>Dardanus</i> ...	Williams, D. T. ...	C. F. Morgan ...	" M.	" ...	" 19.5.26 to 22.8.26 ...	26.8.26.
<i>Darian</i> ...	Masters, W. ...	" ...	" A.	Leyland ...	" 19.9.26 to 1.10.26 ...	4.10.26.
<i>Darro</i> ...	Matthews, G. P. ...	W. Halder Campe ...	" M.	R.M.S.P. Co. ...	" 22.8.26 to 14.9.26 ...	11.10.26.
<i>Demerara</i> ...	Willan, F. C. L. ...	J. J. C. Blake ...	" M.	" ...	" 8.8.26 to 30.9.26 ...	4.10.26.
<i>Demosthenes</i> ...	Orriss, F. A. ...	J. F. Cruickshank ...	" M.	Aberdeen ...	" 8.7.26 to 27.8.26 ...	1.9.26.
<i>Deseado</i> ...	Hannam, F. S. ...	C. C. Dingle, L. D. Jennings	" M.	R.M.S.P. Co. ...	" 26.6.26 to 21.8.26 ...	26.8.26.
<i>Desna</i> ...	Green, J. ...	J. W. Smith ...	" M.	" ...	" 10.7.26 to 3.9.26 ...	9.9.26.
<i>Deucalion</i> ...	Findlay, J. ...	W. L. Michie, R. Wilson ...	" A.	A. Holt ...	" 20.5.26 to 17.6.26 ...	19.7.26.
<i>Dieppe</i> ...	Marmery, S. ...	Mr. Parsons ...	C.C.	Southern Railway ...	Telegraphic Report 22.9.26 ...	22.9.26.
<i>Dimboola</i> ...	Roy, C. M. ...	S. J. Griffith ...	No. A.	Melbourne S.S. Co. ...	Form 911 10.7.26 to 4.8.26 ...	6.9.26.
<i>Discoverer</i> ...	Ling, J. T. ...	C. C. Heaton ...	" M.	Harrison ...	" 26.6.26 to 19.8.26 ...	21.9.26.
<i>Discovery, R.R.S.</i> ...	Stenhouse, J. R., D.S.O., D.S.C., O.B.E., R.D., Commr., R.N.R.	T. W. Goodchild ...	M.L.	Discovery Expedition	Met. Log. 8.5.25 to 11.7.26 ...	30.9.26.
<i>Domala, M.V.</i> ...	Kitson, A. G. ...	R. W. Smith ...	No. M.	British India ...	Form 911 19.7.26 to 11.8.26 ...	13.9.26.
<i>Domina, C.S.</i> ...	Campos, V., O.B.E., Lt.-Commr., R.N.R.	" ...	M.L.	Telegraph Construction & Maintenance.	" ...	" ...
<i>61 Doric</i> ...	Jones, T. ...	W. F. Dennison ...	W.T.	White Star ...	Form 911 3.9.26 to 26.9.26 ...	28.9.26.
<i>Doric Star</i> ...	Thomas, R. T. ...	L. McDermott ...	No. M.	Blue Star ...	" 28.6.26 to 15.7.26 ...	26.7.26.
<i>Dorington Court</i> ...	Clarke, E. J. ...	E. W. Blomberg ...	" A.	Haldin & Co. ...	" 20.8.26 to 27.9.26 ...	4.10.26.
<i>Dromore Castle</i> ...	Vincent, E. S., R.D., Commr., R.N.R.	D. H. McDougall ...	" A.	Union Castle ...	" 11.4.26 to 17.5.26 ...	31.5.26.
<i>Dryden</i> ...	Major, T. W. ...	G. W. Major ...	" M.	Lampart & Holt ...	" 12.6.26 to 29.6.26 ...	26.7.26.
<i>Duendes</i> ...	Cox, F. D. ...	R. W. Hanson ...	" M.	P.S.N. Co. ...	" 3.4.26 to 14.8.26 ...	17.8.26.
<i>Dundrum Castle</i> ...	Weller, H. E. ...	W. S. Byles ...	" A.	Union Castle ...	" 4.8.26 to 30.8.26 ...	14.9.26.
<i>Dunrobin</i> ...	Ramsay, J. D. ...	C. H. Kendall ...	" A.	Glen & Co. ...	" 7.9.26 to 20.9.26 ...	4.10.26.
<i>Duquesa</i> ...	Ellis, F., D.S.C. ...	E. W. Denman ...	" M.	Furness Withy ...	" 12.8.26 to 7.10.26 ...	12.10.26.
<i>Durenda</i> ...	Wilson, W. ...	K. G. Pullman ...	" M.	British India ...	" 1.1.26 to 9.1.26 ...	1.2.26.
<i>Edinburgh Castle</i> ...	Wilford, T. H. ...	" ...	No.	Union Castle ...	Met. Log. 8.1.26 to 24.1.26 ...	29.5.26.
<i>Egyptian Prince</i> ...	Ord, T. ...	" ...	"	Prince ...	" ...	" ...
<i>Elmina</i> ...	Williams, T. E., Allen, E. E.	J. A. McGough, G. Shorter, E. Moger.	M.L.	Elder Dempster ...	" 2.6.26 to 5.10.26 ...	11.10.26.
<i>El Paraguay</i> ...	Smith, F. C. ...	J. Allerton ...	No. M.	Houlder Bros. ...	Form 911 29.7.26 to 21.9.26 ...	25.9.26.
<i>Elpenor</i> ...	Leslie, G., D.S.C., R.D., Lt.-Commr. R.N.R.	M. Robertson ...	M.L.	A. Holt ...	Met. Log. 28.3.26 to 28.8.26 ...	8.9.26.
<i>Elysia</i> ...	Duncan, A. R. ...	A. Laidlaw, C. Jenkins, J. A. C. A. Leitch	"	Anchor ...	" 10.7.26 to 16.9.26 ...	3.10.26.
<i>Empress of Asia</i> ...	Holland, A. T., Lovegrove, A. V. R., D.S.O., R.D., Capt. R.N.R.	R. H. Foley, L. Johnston, L. C. Hogg, T. M. W. Golby, W. T. Miller	"	Canadian Pacific ...	" 27.5.26 to 6.9.26 ...	8.10.26.
<i>Empress of Canada</i> ...	Robinson, S., C.B.E., R.D., Commr. R.N.R.	W. S. Halliday, L. C. Barry, J. W. Thomas.	"	" ...	" 20.2.26 to 30.5.26 ...	28.6.26.
<i>Empress of France</i> ...	Griffiths, E. ...	E. Roberts, F. Chodzko, W. Ewens.	"	" ...	" 27.1.26 to 13.4.26 ...	19.4.26.
<i>Empress of Russia</i> ...	Hosken, A. J. ...	J. H. Reid ...	"	" ...	" 7.3.26 to 14.6.26 ...	6.9.26.
<i>Empress of Scotland</i> ...	Latta, R. G. ...	B. Grant, W. Bacon, F. G. Hutchings.	"	" ...	" 14.11.25 to 20.4.26 ...	26.4.26.
<i>Endeavour</i> ...	Commr. S. A. Geary- Hill, D.S.O., R.N.	R. M. Southern, G. S. Norri- ington, E. V. B. Baker, E. H. B. Baker, J. Tonlesse.	"	His Majesty's Ship ...	" 3.3.26 to 30.6.26 ...	17.7.26.
<i>Essequibo</i> ...	Kite, E. ...	J. L. Forster ...	No. M.	R.M.S.P. Co. ...	Form 911 15.7.26 to 30.8.26 ...	13.9.26.
<i>Eumaeus</i> ...	Read, J. W. ...	W. J. Ryan ...	" A.	A. Holt ...	" 28.6.26 to 7.8.26 ...	10.8.26.
<i>Euripides</i> ...	Roberts, T. V. ...	H. S. Cox, G. R. Fisher, G. Perry.	M.L.	Aberdeen ...	Met. Log. 17.7.25 to 16.4.26 ...	23.4.26.



Name of Vessel.	Captain.	Observing Officers.	Official Meteorological Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 15.10.26.	Date Received.
<i>Eurybates</i> ...	Carnon, C. G. ...	C. Napier ...	No. A.	A. Holt ...	Form 911 6.8.26 to 25.8.26 ...	29.9.26.
<i>Explorer</i> ...	Lamont, A. ...	Scientific Staff ...	M.L.	Scottish Fishery Board ...	Met. Log. 2.3.25 to 17.10.25 ...	29.12.25.
<i>Ferndale</i> ...	Daniel, F. ...	D. Jones ...	No. M.	Commonwealth Govt. ...	Form 911 26.7.26 to 24.8.26 ...	4.10.26.
	Harvey J.R., O.B.E., Lt.-Commr., R.N.	K. Collins ...	M.L.	His Majesty's Ship ...	Met. Log. 16.4.26 to 31.7.26 ...	18.8.26.
<i>Fitzroy</i> ...	Lockhart, C. S. Lt.-Commr., R.N.					
<i>Flandria</i> ...	Bakker, F. J. ...	T. Doornbosch ...	No. M.	Holland Lloyd ...	Form 911 23.7.26 to 11.9.26 ...	14.9.26.
<i>Flinders</i> ...	Law, E. F. B., Lt.-Commr., R.N.	D. W. Deane ...	M.L.	His Majesty's Ship ...	Met. Log. 27.3.26 to 24.7.26 ...	6.8.26.
<i>Francisco</i> ...	Collins, F. ...	C. Walker ...	No. A.	Ellerman Wilson ...	Form 911 23.1.26 to 5.2.26 ...	15.2.26.
<i>Freya</i> ...	Angus, W. ...	T. R. Ness ...	" A.	Scottish Fishery Board ...	" 1.9.26 to 20.9.26 ...	8.10.26.
<i>Gaika</i> ...	Whitfield, — ...	C. H. Williams ...	No.	Union Castle ...	" ...	"
<i>Galtymore</i> ...	Southerland, — ...		No. M.	Furness Withy ...	" ...	"
<i>Garret</i> ...	Visser, C. W. ...	C. J. Vandenboom ...	" M.	Rotterdam Lloyd ...	Form 911 22.5.26 to 11.8.26 ...	9.9.26.
<i>Garthpool, Ship</i> ...	Wylie, W. ...		No.	Marine Navgn. Co. ...	" ...	"
<i>Gascoyne</i> ...	Rutt, W. N. ...	R. Simpson ...	" A.	Dalgity & Co. ...	Form 911 19.1.26 to 24.2.26 ...	30.3.26.
<i>Gelria</i> ...	Bakker, T. J. ...	T. van der Mast ...	" M.	Holland Lloyd ...	" 23.5.26 to 15.7.26 ...	26.7.26.
<i>Glenamoy, M.V.</i> ...	Homan, C. E. ...	R. H. Bishop ...	" A.	Glen Line ...	" 19.8.26 to 16.9.26 ...	11.10.26.
<i>Glenapp, M.V.</i> ...	Roberts, W. E. ...	S. W. Bell ...	" A.	" ...	" 14.11.25 to 27.12.25 ...	4.1.26.
<i>Glenshane</i> ...	Beer, E. ...	R. A. Dale ...	" A.	" ...	" 22.3.26 to 8.7.26 ...	12.7.26.
<i>Gloucestershire</i> ...	Robin, E. ...	M. W. Simmons ...	" A.	Bibby ...	" 8.5.26 to 19.7.26 ...	21.7.26.
<i>Gorgon</i> ...	Hughes, J. W. ...	A. E. Bowit ...	" A.	A. Holt & Co. ...	" 23.6.26 to 10.7.26 ...	23.8.26.
<i>Gourko</i> ...	Aspinall, A. E. ...	G. B. Bray, S. N. Stokes, J. D. Birch.	No.	Ellerman Wilson ...	Met. Log. 16.5.25 to 1.11.25 ...	10.12.25.
<i>Haliartus</i> ...	Marsh, L. V. ...	W. H. Upton ...	No. A.	R. P. Houston ...	Form 911 11.4.26 to 8.5.26 ...	7.6.26.
<i>Harmonides</i> ...	Hughes, W. F. ...	S. S. Davidson ...	" A.	" ...	" 15.7.26 to 3.8.26 ...	23.8.26.
<i>Harmony, Auxy.</i> ...	Jackson, J. C. ...	A. W. Bush ...	" A.	Moravian Mission ...	" 4.8.26 to 27.9.26 ...	14.10.26.
<i>Hatarana</i> ...	Denne, G. H. A. ...	F. Wells, C. Parkes, W. T. Barnes.	M.L.	British India ...	" 12.6.25 to 27.2.26 ...	29.3.26.
	Beedle, T. S.					
<i>Hauraki, M.V.</i> ...	Frew, J. D. ...		No. M.	Union S.S. Co. N.Z. ...	" 22.6.26 to 11.7.26 ...	20.9.26.
<i>Henry Holmes, C.S.</i> ...	Bicker Caarten, A.	M. A. Green ...	" M.	W. I. & Panama Telegraph Co. ...	" 9.8.26 to 28.8.26 ...	14.9.26.
<i>Herald</i> ...	Harvey, J.R., O.B.E., Commr., R.N.	W. C. Jenks ...	M.L.	His Majesty's Ship ...	Met. Log. 25.9.25 to 25.12.25	24.2.26.
<i>Herefordshire</i> ...	Mann, R. P. ...	H. R. Mackay ...	No. A.	Bibby ...	Form 911 25.4.26 to 3.7.26 ...	12.7.26.
<i>Hermimus</i> ...	Roberts, T. V. ...	G. P. McCraith ...	" A.	Shaw, Savill & Albion ...	" 5.9.26 to 24.9.26 ...	12.10.26.
<i>Herschel</i> ...	Davies, G. W. ...	J. M. Edgar ...	" A.	Lampont & Holt ...	" 14.10.25 to 15.12.25	29.12.25.
<i>Hertford</i> ...	Urquhart, D. ...	A. Robertson ...	" A.	Federal ...	" 18.8.26 to 7.9.26 ...	4.10.26.
<i>Hibernia</i> ...	Tanner, E. B. ...	R. Woodall ...	C.C.	L.M. & S. Rly. ...	Telegraphic Report, 13.10.26	13.10.26.
<i>Highland Enterprise</i> ...	Pond, R. H. ...	J. H. Tifton ...	No. A.	Nelson ...	Form 911 12.12.25 to 11.2.26 ...	10.3.26.
" <i>Glen</i> ...	Jones, T. J. ...	W. Jealous ...	" A.	" ...	" 29.3.26 to 26.5.26 ...	31.5.26.
" <i>Heather</i> ...	Powell, G. A. ...	J. H. Fitton, J. Hardy ...	" A.	" ...	" 13.12.25 to 24.6.26 ...	14.7.26.
" <i>Laddie</i> ...	Alford, C. ...	E. F. Smart ...	" A.	" ...	" 8.6.26 to 3.8.26 ...	16.8.26.
" <i>Piper</i> ...	Collings, D. ...	J. S. Collins, S. E. Jackson	M.L.	" ...	Met. Log. 25.4.26 to 16.9.26 ...	23.9.26.
	W. T. Breen.					
" <i>Pride</i> ...	Robinson, R. H. ...	W. Williams ...	No.	" ...	Form 911 30.7.26 to 2.10.26 ...	7.10.26.
" <i>Prince</i> ...	Brown, J. B. ...	S. A. Wheaton ...	No. A.	Prince ...	" 25.8.26 to 5.9.26 ...	22.9.26.
" <i>Rover</i> ...	Ashby Graves, F. ...	C. C. Legg ...	" A.	Nelson ...	" 25.5.26 to 19.7.26 ...	30.7.26.
" <i>Warrior</i> ...	Robinson, R. H. ...	J. O. Simons ...	" M.	" ...	" 25.3.26 to 19.5.26 ...	26.5.26.
<i>Hildebrand</i> ...	Maddrell, J. ...	A. Allan ...	" A.	Booth ...	" 22.5.26 to 8.7.26 ...	13.7.26.
<i>Hobsons Bay</i> ...	Kydd, O. J. ...	R. Pearce, A. Badman, T. Morrison, H. Hendy.	M.L.	Commonwealth Govt. ...	Met. Log. 30.3.26 to 11.7.26 ...	17.7.26.
<i>54 Homeric</i> ...	Holme, A. ...	H. G. Morgan, J. A. Heenan, J. W. Best.	W.T.	White Star ...	W.T. Reg. 19.9.26 to 1.10.26 ...	4.10.26.
<i>Hororata</i> ...	Holland, E. ...	E. R. Kemp ...	No. A.	New Zealand S.S. Co. ...	Form 911 10.4.26 to 15.8.26 ...	17.8.26.
<i>Hubert</i> ...	Pym, J. H. ...	S. G. Edwards ...	" A.	Booth ...	" 8.7.26 to 2.9.26 ...	4.10.26.
<i>Huntingdon</i> ...	Ashworth, W. ...	R. Cox ...	" A.	Federal ...	" 29.8.26 to 13.9.26 ...	4.10.26.
<i>Hurunui</i> ...	Burton Davies, J. ...	J. C. Tuckett, F. G. Capon, F. Pover, G. R. Hogg.	M L	New Zealand S.S. Co. ...	Met. Log. 21.6.25 to 6.7.26 ...	14.7.26.
<i>Ingoma</i> ...	Barrow, R. K. ...	A. M. Hughes ...	No. M.	Harrison ...	Form 911 15.8.26 to 28.9.26 ...	4.10.26.
<i>Iris, C.S.</i> ...	Hughes, H. R. ...	W. Oliver, D. Bruce, D. Mac Donald, T. Vickers.	M.L.	Pacific Cable Board ...	Met. Log. 23.1.26 to 25.4.26 ...	5.10.26.
<i>Iroquois</i> ...	Jackson, A. L.	H. L. Jenkins ...	"	His Majesty's Ship ...	" 26.4.26 to 23.8.26 ...	29.9.26.
<i>Ixion</i> ...	Williams, R. J. ...	W. Angus ...	No. A.	A. Holt ...	Form 911 23.6.26 to 21.7.26 ...	16.8.26.
<i>Javanese Prince</i> ...	Naylor, E. ...	T. H. Sessions ...	" A.	Prince ...	" 24.7.26 to 7.8.26 ...	14.9.26.
<i>Jervis Bay</i> ...	Chaplin, W. R. ...	R. W. Laycock ...	" M.	Commonwealth Govt. ...	" 14.7.26 to 1.8.26 ...	23.8.26.
<i>John Pender, C.S.</i> ...	Smythe, T. W. ...	A. E. Everall ...	" A.	Eastern Tel. Co. ...	" 18.5.26 to 11.6.26 ...	29.6.26.
<i>Justin</i> ...	Evans, L. ...	R. C. Holmes ...	" A.	Booth ...	" 11.8.26 to 1.10.26 ...	14.10.26.
<i>Kaisar-i-Hind</i> ...	Manley, G. ...	A. H. Cole ...	" M.	P. & O. ...	" 28.8.26 to 15.9.26 ...	20.9.26.
<i>Kamo Maru</i> ...	Shiratori, S. ...	H. Yesaki ...	" A.	Nippon Yusen Kaisha ...	" 14.8.26 to 14.9.26 ...	12.10.26.
<i>Kangaroo</i> ...	Norris, H. C. ...	R. J. Sinclair, V. L. Gilbert, E. Hutchinson.	M.L.	State Service Australia ...	Met. Log. 8.3.26 to 21.7.26 ...	20.9.26.
<i>Karapara</i> ...	Baird, S. K. ...		No. M.	British India ...	" ...	"
<i>Kashmir</i> ...	Stringer, R.H., O.B.E., R.D., Commr., R.N.R.	T. C. Fairburn ...	" M.	P. & O. ...	Form 911 12.9.26 to 1.10.26 ...	5.10.26.
<i>Kathlamba</i> ...	Mordue, J. A. ...		" A.	Ellerman Bucknall ...	" 26.6.26 to 16.7.26 ...	3.8.26.
<i>Kellett</i> ...	Maxwell, P. S. E., Commr., R.N.	W. H. Dickenson ...	M.L.	His Majesty's Ship ...	Met. Log. 14.4.26 to 11.8.26 ...	26.8.26.
<i>Kenilworth Castle</i> ...	Chave, Sir B., K.B.E., Attwood, J. Owen, S.	H. L. Idles, T. M. Gordon ...	"	Union Castle ...	" 17.1.26 to 11.7.26 ...	15.7.26.
<i>Kent</i> ...	Downton, M. M. ...	F. M. Knight ...	No. A.	New Zealand S.S. Co. ...	Form 911 28.7.26 to 31.8.26 ...	8.9.26.
<i>Khiva</i> ...	Cooper, — ...		M.L.	P. & O. ...	" ...	"
<i>Khyber</i> ...	Hester, C. W., R.D., Commr., R.N.R.	C. B. Roche ...	M.L.	P. & O. ...	" 16.6.26 to 19.7.26 ...	23.7.26.
<i>Kin Ora</i> ...	McIntosh, A. ...	E. A. Hickling ...	M.L.	Shaw Savill & Albion ...	" 27.2.26 to 9.4.26 ...	13.4.26.
<i>Kildonan Castle</i> ...	Imlah, C. B. ...	G. H. Pickering ...	No. A.	Union Castle ...	" 2.1.26 to 21.2.26 ...	1.3.26.
<i>Kidano Maru</i> ...	Gotoh, M. ...	M. Hara ...	" A.	Nippon Yusen Kaisha ...	" 12.9.25 to 6.10.25 ...	13.11.25.
<i>Knight Companion</i> ...	Reed, G. C. ...	J. J. Daniel ...	" M.	A. Holt ...	" 14.6.26 to 20.7.26 ...	20.8.26.
<i>Korno</i> ...	Dossor, W. A. ...	J. J. Collier, H. Redfern, S. Duckells, A. Snowden, J. C. Nettleship, C. Williams.	M.L.	Ellerman Wilson ...	Met. Log. 7.11.25 to 4.4.26 ...	3.6.26.
<i>Kweiyang</i> ...	Byers, G. ...	W. McDonald, T. Hackett ...	" A.	China Nav. Co. ...	" 25.3.26 to 4.8.26 ...	27.9.26.
<i>Kvoegle</i> ...	Coalstad, C. ...	C. B. Odman, E. W. Hughes	No. A.	Commonwealth Light-house Service.	Form 911 17.8.25 to 9.11.25 ...	14.12.25.
<i>37 Laconia</i> ...			W.T.	Cunard ...	" ...	"
<i>Lady Denison Pender, C.S.</i> ...	West, G. W. ...	F. Lawrence ...	No. A.	Eastern Tel. Co. ...	" 9.5.26 to 7.7.26 ...	7.8.26.
<i>Laguna</i> ...	Kirkwood, J. H. ...	W. P. Boon ...	" A.	Pacific S.N. Co. ...	" 11.9.26 to 4.10.26 ...	11.10.26.
<i>Lahore</i> ...	Gordon, L. M., R.D., Commr., R.N.R.	A. D. Dennis ...	" M.	P. & O. ...	" 26.2.26 to 27.4.26 ...	17.5.26.

## LIST OF VOLUNTARY OBSERVING SHIPS

V

Name of Vessel.	Captain.	Observing Officers.	Official Meteorological Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 15.10.26.	Date Received
<i>Lalande</i> ...	Hamill, H. ...	R. S. Hagley ...	No. A.	Lampport & Holt ...	Form 911 30.3.26 to 12.4.26 ...	15.6.26.
<i>Lancashire</i> ...	de Legh, P. ...	R. Cuming ...	" A.	Bibby ...	29.7.26 to 29.8.26 ...	2.9.26.
36 <i>Lancastrius</i> ...	Malin, R. G., Lt.-Commr., R.N.R.	R. P. Campbell, L. R. Sharp, F. G. Russell	W.T.	Cunard ...	W.T. Reg. 13.9.26 to 2.10.26 ...	6.10.26.
<i>Laomedon</i> ...	Beswick, W., D.S.C., Lt.-Commr., R.N.R.	A. Yarwood ...	No. A	A. Holt ...	Form 911 12.9.26 to 3.10.26 ...	6.10.26.
<i>La Paz, M.V.</i> ...	Dunn, R. E. ...	W. L. Jones ...	" M.	Pacific S.N. Co. ...	" 23.7.26 to 8.8.26 ...	30.8.26.
<i>Laplace</i> ...	Shaw, W. ...	R. B. Langley ...	No. A.	Lampport & Holt ...	" 6.5.26 to 31.5.26 ...	10.6.26.
55 <i>Lapland</i> ...	Thomas, A. J. ...	E. Cornelli, F. Good, J. C. Flett.	W.T.	Red Star ...	Met. Log. 1.1.26 to 8.5.26 ...	17.5.26.
<i>Lassell, M.V.</i> ...	Hickman, V. T. ...	F. J. Durrant ...	No. A.	Lampport & Holt ...	W.T. Reg. 23.8.26 to 11.9.26 ...	20.9.26.
<i>Leicestershire</i> ...	English, G. L. ...	J. Cullen, W. A. Kent, D. Y. Sharrock, J. Logan.	M.L.	Bibby ...	Form 911 21.9.26 to 9.10.26 ...	11.10.26.
<i>Leighton, M.V.</i> ...	Lindesay, J. M. ...	H. A. Bolding ...	No. A.	Lampport & Holt ...	Met. Log. 22.8.26 to 9.10.26 ...	11.10.26.
<i>Leitrim</i> ...	Robertson, A. ...	H. G. Letts ...	" A.	Dowie, J., & Co. ...	Form 911 20.2.26 to 9.3.26 ...	29.3.26.
<i>Loch Katrine</i> ...	Shillito, B. ...	K. Whitaker ...	" M.	R.M.S.P. Co. ...	Met. Log. 9.4.26 to 19.6.26 ...	1.7.26.
<i>London Commerce</i> ...	Young, H. J., D.S.C.	H. P. Longland ...	" A.	Furness Withy ...	Form 911 2.3.26 to 3.4.26 ...	19.4.26.
<i>London Importer</i> ...	Williamson, J. M. ...	J. S. Williams, W. Stanley ...	M.L.	Pacific S.N. Co. ...	" 10.7.26 to 7.9.26 ...	10.9.26.
<i>Loriga, M.V.</i> ...	Makin, F. W. ...	W. N. Anders ...	No. A.	"	" 24.6.26 to 21.9.26 ...	28.9.26.
<i>Losada, M.V.</i> ...	Meldrum, G. W. ...	E. Baxter ...	" M.	"	" 13.3.26 to 16.4.26 ...	22.4.26.
					Met. Log. 12.6.26 to 2.9.26 ...	17.9.26.
					Form 911 16.10.25 to 2.4.26 ...	13.8.26.
					" 21.6.26 to 12.8.26 ...	16.8.26.
<i>Macedonia</i> ...	Dayas, T. C. E. ...	E. R. Bodley ...	" M.	P. & O. ...	" 1.7.26 to 7.10.26 ...	12.10.26.
<i>Macharda</i> ...	Tyers, W. O. ...	D. M. Fulton ...	" M.	Brocklebank ...	Form 911 14.9.26 to 25.9.26 ...	4.10.26.
<i>Mahana</i> ...	Kershaw, W. A. R. ...	F. M. Smith, H. C. Smith, J. C. K. Rogers.	" A.	Shaw, Savill & Albion	Met. Log. 15.4.26 to 10.8.26 ...	30.8.26.
<i>Maharaja</i> ...	Elliott, G. F. ...	T. E. Turner ...	No. M.	Asiatic S.N. Co. ...	Form 911 18.4.26 to 25.5.26 ...	14.6.26.
<i>Mahia</i> ...	Williams, G. ...	R. Naeff ...	No.	Shaw, Savill & Albion	Form 911 20.3.26 to 23.6.26 ...	15.7.26.
<i>Maihar</i> ...	Rowe, J. P. ...	C. Shaw, H. T. Scoins, G. Henshaw.	M.L.	Brocklebank ...	Form 911 25.4.26 to 4.6.26 ...	6.7.26.
<i>Maimyo</i> ...	Scurr, T. W. ...	H. M. Drummond ...	No. A.	Burns Philp ...	W.T. Reg. 9.9.26 to 23.9.26 ...	27.9.26.
<i>Maiwara</i> ...	Brown, T. M. ...	W. Pearson, J. Paine, A. Young, W. T. Fitzgerald.	M.L.	White Star ...	Met. Log. 3.3.26 to 15.6.26 ...	10.8.26.
58 <i>Majestic</i> ...	Metcalfe, G. R. ...	F. C. Vogelmann, T. R. Lang, W. O. L. Wilding.	"	Canadian-Australasian	" 11.3.25 to 19.2.26 ...	4.5.26.
<i>Makambo</i> ...	McLean, J. ...	O. C. Bray, J. M. Hood, A. Foster.	"	Burns Philp & Co. ...	Form 911 8.9.26 to 22.9.26 ...	25.9.26.
<i>Makura</i> ...	Worrall, L. C. H. ...	J. H. Round ...	No. M.	Brocklebank ...	" 29.7.26 to 12.8.26 ...	28.9.26.
<i>Malabar</i> ...	Adamson, F. L. ...	R. Humble ...	" M.	British India ...	" 1.8.26 to 2.9.26 ...	28.9.26.
<i>Malakuta</i> ...	Sharpe, G. ...	W. S. Donald ...	" M.	Shaw, Savill & Albion	Form 911 3.8.26 to 4.10.26 ...	8.10.26.
<i>Malancha</i> ...	Gray, T. N. ...	Falconer, H. ...	No.	Manchester Liners ...	" 12.9.26 to 24.9.26 ...	7.10.26.
<i>Malda</i> ...	Stott, C. H. ...	E. Hale ...	" A.	"	Met. Log. 3.10.25 to 20.7.26 ...	27.7.26.
<i>Mamari</i> ...	Everest, J. E. ...	W. L. Lavers ...	" A.	"	Form 911 26.6.26 to 11.8.26 ...	20.8.26.
<i>Manchester Brigade</i> ...	Riley, J. E. ...	J. H. Emmitt, H. Anderton, B. M. Brown.	M.L.	"	" ...	...
<i>Manchester Corporation</i> ...	Struss, F. D. ...	E. W. Jeffries ...	No. A.	"	Form 911 19.9.25 to 8.5.26 ...	31.5.26.
<i>Manchester Hero</i> ...	Foale, J. R. ...	H. Dobson ...	" A.	"	Form 911 5.9.26 to 2.10.26 ...	14.10.26.
<i>Manchester Merchant</i> ...	Dormer, A. E. ...	...	M.L.	"	" 20.5.26 to 23.7.26 ...	26.7.26.
<i>Manchester Regiment</i> ...	Cochran, G. N. ...	R. Penston, K. Leadbetter ...	No. M.	Brocklebank ...	" 10.11.25 to 25.11.25 ...	4.1.26.
<i>Manipur</i> ...	Mantua ...	J. Paice ...	" M.	P. & O. ...	" 24.4.26 to 17.5.26 ...	20.5.26.
<i>Mantua</i> ...	Maxwell Brown, W. E. ...	G. S. Gracie ...	" A.	Elders & Fyffes ...	Met. Log. 2.4.25 to 25.8.25 ...	1.12.25.
<i>Manzanar</i> ...	Stewart, A. ...	R. H. W. Jackson ...	" M.	Canadian Pacific ...	Form 911 20.3.26 to 30.8.26 ...	2.9.26.
<i>Marburn</i> ...	Mortimer S. ...	J. A. Street ...	M.L.	Burns Philp ...	" 20.6.26 to 14.9.26 ...	20.9.26.
<i>Marella</i> ...	Brown, A. M. ...	F. Eglin, H. Brown, J. Ford	"	Eljerman Wilson ...	Form 911 6.7.26 to 9.8.26 ...	20.9.26.
<i>Marengo</i> ...	Williams, J. C. R. D., Commr. R.N.R.	J. Strachan, P. Wright, H. E. Evans.	"	British India ...	Met. Log. 28.2.26 to 14.7.26 ...	22.7.26.
<i>Margha</i> ...	Milne, R. A., R.D., Commr. R.N.R.	W. Mann ...	No. A.	Burns Philp & Co. ...	Form 911 5.6.26 to 8.7.26 ...	6.9.26.
<i>Marsina</i> ...	Williams, G. E. ...	H. W. Thompson, J. Hart, S. P. Stockholm, Turnbull.	No. A.	Brocklebank ...	Met. Log. 28.3.26 to 1.8.26 ...	13.9.26.
<i>Mastrah</i> ...	Mallett, R. ...	K. L. Thompson ...	M.L.	Shaw, Savill & Albion	Form 911 1.2.26 to 3.3.26 ...	8.3.26.
<i>Matakana</i> ...	Thurston, H. P. ...	H. H. Armstrong, H. Willington, J. Richardson.	No. M.	British India ...	" 29.4.26 to 27.5.26 ...	31.5.26.
<i>Mataram</i> ...	Williams, J. D. ...	Bacon, A. E. ...	" M.	Union S.S. Co. of N.Z.	W.T. Reg. 19.9.26 to 3.10.26 ...	6.10.26.
<i>Matheran</i> ...	Sandeman, W. ...	G. Earl ...	" M.	Cunard ...	Form 911 2.5.26 to 28.6.26 ...	7.7.26.
<i>Mathura</i> ...	Hanna, R. G. ...	C. G. Eustace ...	" M.	White Star ...	W.T. Reg. 29.8.26 to 18.9.26 ...	20.9.26.
<i>Matiana</i> ...	Davey, A. H. ...	E. R. Taylor, A. Mackellar, J. A. Quarrie.	W.T.	Canadian Pacific ...	Form 911 31.7.26 to 15.9.26 ...	20.9.26.
<i>Matungani</i> ...	Diggle, E. G., R.D., Capt., R.N.R.	S. C. Cramb ...	No. A.	A. Holt ...	Form 911 16.11.25 to 3.3.26 ...	13.3.26.
32 <i>Mauretania</i> ...	Mallett, R. ...	H. A. Billiard, N. E. Banks, A. W. C. Robinson.	W.T.	Atlantic Transport ...	" 15.10.25 to 21.11.25 ...	25.11.25.
<i>Media</i> ...	Trant, E. L., R.D., Commr. R.N.R.	J. Shearer, N. J. P. Roberts	No. A.	"	Form 911 28.8.26 to 17.9.26 ...	20.9.26.
56 <i>Megantic</i> ...	Notley, A. H. ...	L. S. Evans ...	" A.	West Australia Nav. Co.	Met. Log. 10.11.25 to 1.5.26 ...	6.7.26.
22 <i>Melita</i> ...	Evans, D. L. ...	R. Day ...	" A.	Scottish Fishery Board	Form 911 1.9.26 to 10.10.26 ...	14.10.26.
<i>Memnon</i> ...	Pollard, W. F., D.S.O., R.D., Capt., R.N.R.	R. Walker, A. Mansey, G. H. Sewell.	W.T.	Canadian Pacific ...	W.T. Reg. 4.9.26 to 29.9.26 ...	4.10.26.
21 <i>Mstagama</i> ...	Freer, A., Commr., R.N.R.	B. J. Bennie, W. J. McPhedran, J. H. Oxtan.	M.L.	Atlantic Transport ...	Form 911 13.9.26 to 2.10.26 ...	5.10.26.
<i>Minderoo</i> ...	Richardson, E. ...	J. H. Hennessey ...	No. A.	"	" 14.8.26 to 21.8.26 ...	30.8.26.
<i>Mima</i> ...	MacKenzie, G. G. ...	L. Hammersley, F. W. Roberts	W.T.	Eastern Tel. Co. ...	" 5.5.26 to 17.5.26 ...	22.6.26.
23 <i>Minnedosa</i> ...	McQueen, D. S. ...	H. E. McCartney ...	No. M.	P. & O. ...	Form 119 7.4.26 to 23.5.26 ...	10.6.26.
<i>Minneltonka</i> ...	Gates, T. F., C.B.E.	J. W. Guier ...	" M.	"	"	"
<i>Minnewaska</i> ...	Claret, F. H., C.B.E., Commr. R.N.R.	A. G. Watts ...	" M.	"	"	"
<i>Mirror, C.S.</i> ...	Gibson, L. ...	Wylie, J. T. J. ...	No.	"	"	"
<i>Mississippi</i> ...	Burleigh, C. W., D.S.O., R.D., Capt., R.N.R.	G. E. Owen ...	No. M.	"	"	"
<i>Moldavia</i> ...	Edwards, W. ...	F. Mugford ...	" A.	"	"	"
<i>Mongolian Prince</i> ...						



## THE MARINE OBSERVER

Name of Vessel.	Captain.	Observing Officers.	Official Meteorological Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 15. 10. 26.	Date Received.
24 Montcalm ...	Hamilton, G. ...	H. McFadyen, J. Lewis ...	W.T.	Canadian Pacific ...	W.T. Reg. 12.9.26 to 1.10.26 ...	4.10.26.
25 Montclare ...	Webster, G. S., R.D., Lt.-Commr., R.N.R.	R. Fegan, H. S. Knight, A. Harrison.	"	" " ...	19.9.26 to 8.10.26 ...	11.10.26.
Montferland ...	Van Noppen, C. D.	W. Slooten ...	No. M.	Holland Lloyd ...	Form 911 19.9.26 to 8.10.26 ...	11.10.26.
27 Montnairn ...	Turnbull, J., C.B.E., R.D., Capt., R.N.R.	F. E. Williams, F. Chodzko, F. Hindle.	W.T.	Canadian Pacific ...	W.T. Reg. 1.4.26 to 26.6.26 ...	3.7.26.
Montoro ...	Donaldson, A. ...	K. Morris ...	No. A.	Burns, Philp & Co. ...	Form 911 2.9.25 to 19.10.25 ...	14.12.25.
26 Montrose ...	Landy, E. ...	A. Watt, R. Woods, J. Patrick.	W.T.	Canadian Pacific ...	W.T. Reg. 5.9.26 to 23.9.26 ...	27.9.26.
20 Montroyal ...	Sibbons, H. ...	R. Antrobus ...	"	" " ...	29.8.26 to 16.9.26 ...	20.9.26.
Moresby ...	Edgell, J. A., O.B.E., Capt., R.N.	W. H. Martin ...	M.L.	His Majesty's Australian Ship.	Form 911 3.7.26 to 22.7.26 ...	26.7.26.
Morvada ...	Mills, T. L., O.B.E., R.D., Commr., R.N.R.	A. J. Norris ...	No. M.	British India ...	Met. Log. 15.4.26 to 12.8.26 ...	30.9.26.
Mulbera ...	Steadman, W. R. ...	F. Broomhead ...	" M.	" " ...	Form 911 11.7.26 to 1.10.26	5.10.26.
Nagara ...	Buret, T. J. C. ...	F. A. C. Thacker ...	" M.	R.M.S.P. Co. ...	" 5.9.26 to 15.9.26 ...	25.9.26.
Nagoya ...	Davis, H. C., D.S.O., R.D., Commr., R.N.R.	L. Porter ...	" M.	P. & O. ...	" 16.1.26 to 19.3.26 ...	26.3.26.
Nellore ...	Hignett, A. H., R.D., Lt.-Commr., R.N.R.	S. H. Baldwin ...	" M.	P. & O. ...	" 30.5.26 to 27.8.26 ...	2.9.26.
Nestor ...	Owen, R. D., O.B.E.	D. Rees, F. J. Silva, D. W. Stroud.	M.L.	A. Holt ...	" 20.3.26 to 12.6.26 ...	14.7.26.
Newby Hall ...	Edge, T. P. ...	R. H. Stewart, G. E. M. Jenkins, R. M. Redhead, D. F. Galloway.	"	Ellerman ...	Met. Log. 24.1.26 to 30.5.26 ...	4.6.26.
Newfoundland ...	Westgarth, W. A., D.S.C.	" " " " " "	"	Furness Withy ...	" 18.12.25 to 15.5.26 ...	10.6.26.
Niagara ...	Showman, A. C. ...	A. P. Cousin, D. McKenzie, T. Haulton.	"	Canadian-Australian ...	" " " " " "	" " " " " "
Ningchow ...	Mawson, J. ...	G. H. Oldridge ...	No. A.	A. Holt ...	Met. Log. 2.6.26 to 16.9.26 ...	8.10.26.
Norna ...	Wright, J. W. ...	T. Mather ...	" A.	Scottish Fishery Board	Form 911 10.9.26 to 21.9.26 ...	30.9.26.
Norseman, C.S. ...	Barter, H. O., R.N., Commr., R.N.R.	E. Pearce ...	" M.	Western Tel. Co. ...	" 3.9.26 to 30.9.26 ...	5.10.26.
Northwestern Miller	Nuttall, E. L. ...	N. Macdonald ...	" A.	Furness Withy ...	" 6.5.26 to 16.6.26 ...	13.7.26.
Nova Scotia ...	Furieux, S. ...	" " " " " "	" A.	" " " " " "	" 18.7.26 to 18.8.26 ...	23.8.26.
Nubian ...	Watmough, T. M. ...	H. R. Gaskill ...	" A.	Leyland ...	" 4.8.26 to 30.8.26 ...	2.9.26.
Oaklands Grange ...	Routledge, R. ...	E. J. Longhead ...	" A.	Houlder Bros. ...	" 23.12.25 to 24.1.26 ...	23.1.26.
42 Ohio ...	Clarke, E., R.D., Commr., R.N.R.	D. R. Miller, E. A. E. Littlewood. — Peterson	W.T.	R.M.S.P. Co. ...	" 15.4.26 to 15.5.26 ...	25.5.26.
57 Olympic ...	Marshall, W., C.B., D.S.O., A.-d.-C., R.D., Capt., R.N.R.	H. J. C. Day, A. Fisher, J. Law, A. W. Robinson.	"	White Star ...	W.T. Reg. 19.9.26 to 10.10.26 ...	14.10.26.
Orama ...	Staunton, H. G., C.B.E., R.D., Commr., R.N.R.	T. L. Shurrock, T. Fox Russell, C. K. Blake.	M.L.	Orient ...	Form 911 23.7.26 to 12.9.26 ...	15.9.26.
Oranian ...	Hoskins, W. ...	W. Lawton ...	No. A.	Leyland ...	W.T. Reg. 2.9.26 to 16.9.26 ...	20.9.26.
Orari ...	Robinson, F. W. ...	F. Longhead, C. Wilkinson, W. Tarr.	M.L.	New Zealand S.S. Co. ...	" 23.9.26 to 7.10.26 ...	11.10.26.
Orbita ...	Warner, G. E., R.D., Capt., R.N.R.	C. V. Fletcher, H. H. Treweeks, A. Chamberlin.	No.	R.M.S.P. Co. ...	Form 911 2.9.26 to 7.10.26 ...	11.10.26.
43 Orca ...	Le Brecht, H. A. ...	" " " " " "	W.T.	" " " " " "	Met. Log. 7.3.26 to 8.6.26 ...	21.6.26.
Orcoma ...	Dominy, R. H., C.B.E., Commr., R.N.R.	R. Griffiths, R. Gill, T. Naylor.	M.L.	Pacific S.N. Co. ...	Form 911 1.6.26 to 15.8.26 ...	23.8.26.
Orduna ...	Smith, W. E., D.S.O., R.D., Capt., R.N.R.	H. G. Whittle, S. Robbins, J. E. P. Matthews, D. P. Larham.	No.	R.M.S.P. Co. ...	Met. Log. 15.9.25 to 9.6.26 ...	17.6.26.
Orestes ...	Hanney, T. W. ...	T. Berry ...	No. A.	A. Holt ...	W.T. Reg. 12.9.26 to 3.10.26 ...	7.10.26.
Oriana ...	Ross, J. ...	W. Pearce, R. D. Eckford, W. Salmon.	M.L.	Pacific S.N. Co. ...	Form 911 11.9.26 to 3.10.26 ...	7.10.26.
Orita ...	Splatt, W. A. ...	T. R. Scott, D. W. Hutchinson, R. W. Hanson, G. R. Bubb.	"	" " " " " "	Met. Log. 22.5.26 to 4.8.26 ...	12.8.26.
Ormonde ...	Knowles, C. H., D.S.O., Commr., R.N.	A. M. Hughes ...	"	His Majesty's Ship ...	W.T. Reg. 5.9.26 to 26.9.26 ...	4.10.26.
Ormuz ...	Wyatt, A. G. N., Lieut. Commr., R.N.	" " " " " "	"	" " " " " "	Form 911 4.9.26 to 27.9.26 ...	4.10.26.
Oronsay ...	O'Sullivan, F. R. ...	F. J. L. Butler, W. Wickham, — Addison.	"	Orient ...	W.T. Reg. 12.7.26 to 14.8.26 ...	20.9.26.
Oroya ...	Owens, A. L., R.D., Lt.-Commr., R.N.R.	— Hatch, — Rice, W. Elliot	"	" " " " " "	Met. Log. 11.5.26 to 19.7.26 ...	3.8.26.
Orsova ...	Pearce, A. ...	G. Lewis ...	No. M.	Pacific S.N. Co. ...	" 17.2.26 to 29.5.26 ...	9.6.26.
Ortega ...	Cameron, E. P., R.D., Commr., R.N.R.	L. J. Vesty, R. J. Galpin, J. F. Castle-Bartley.	M.L.	Orient ...	" 10.5.26 to 19.5.26 ...	26.5.26.
Orvieta ...	Barkley, E. ...	" " " " " "	No.	Pacific S.N. Co. ...	" 27.5.26 to 2.8.26 ...	9.8.26.
Osterley ...	Matheson, C. G., D.S.O., R.D., Capt., R.N.R.	J. Goldsworthy, A. Hawker, G. L. Carter, J. L. Skilling.	M.L.	Orient ...	Met. Log. 2.5.26 to 5.8.26 ...	14.9.26.
Otake ...	Sarson, M. J. ...	H. Tanner, N. A. Whinfield, S. Burnnand.	No.	" " " " " "	" 24.1.26 to 27.4.26 ...	20.5.26.
Otira ...	McNish, R. ...	" " " " " "	No. A.	New Zealand S.S. Co. ...	" 21.3.26 to 25.6.26 ...	30.6.26.
Otranto ...	Elford H. E. ...	E. J. Riccard ...	" M.	Shaw, Savill & Albion	" 21.2.26 to 25.5.26 ...	31.5.26.
Ovid ...	Simmer, G. L., R.D., Commr., R.N.R.	R. H. Rogerson ...	" M.	Orient ...	" " " " " "	" " " " " "
Oxfordshire ...	Groom, A. C. B. ...	" " " " " "	" A.	Shakespear Shipping Co. ...	" 19.3.26 to 7.4.26 ...	7.5.26.
Pacific Shipper, M.V.	Crumplin, W. E. ...	F. C. Brooks ...	" A.	Bibby Bros. ...	" 29.1.26 to 10.4.26 ...	15.4.26.
Pacuare ...	Newman, G. W. A.	G. Davis ...	" A.	Furness Withy ...	" 10.5.26 to 19.5.26 ...	26.5.26.
Pakeha ...	Harvey, A. E. ...	M. C. Cruickshank ...	" A.	Elders & Fyffes ...	" 27.5.26 to 2.8.26 ...	9.8.26.
Pareora ...	W. P. Clifton Mogg	E. T. Baker, A. Black, A. Lockhart	M.L.	Shaw, Savill & Albion	Met. Log. 3.8.26 to 16.8.26 ...	8.9.26.
Paris ...	Evans, J. O. ...	N. Turner ...	No. A.	Hain S.S. Co. ...	Form 911 26.9.25 to 28.2.26 ...	8.3.26.
Patia ...	Cook, C. L. ...	Mr. Biles ...	C.C.	Southern Rly. ...	Form 911 13.7.26 to 6.9.26 ...	10.9.26.
Patrician ...	Maxwell Brown, W. E.	J. Kinsley ...	No. A.	Elders & Fyffes ...	Telegraphic Report. 15.10.26 ...	15.10.26.
Patrol, C.S.	Pugh, —	" " " " " "	" M.	Harrison ...	Form 911 1.8.26 to 6.9.26 ...	13.9.26.
	Welsh, T. K. ...	H. F. P. Albrecht ...	M.L.	Eastern Extension (A. & C.) Telegraph Co.	Met. Log. 8.7.25 to 3.2.26 ...	1.4.26.

## vii

Name of Vessel.	Captain.	Observing Officers.	Official Meteorological Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 15.10.26.	Date Received.
<i>Persic</i> ...	Bulman, J. B. ...	R. Conway ...	No. A.	White Star ...	Form 911 27.9.25 to 4.11.25 ...	17.3.26.
<i>Peshawur</i> ...	Hester, C. W., R.D., Commr., R.N.R.	D. G. Baillie, J. K. Crone, R. D. Whyte-Mackay.	M.L.	P. & O. ...	Met. Log. 16.1.26 to 2.7.26 ...	9.7.26.
<i>Philadelphum</i> ...	Baker, J. A. ...	W. T. Godwin ...	No. A.	Leyland ...	Form 911 9.10.25 to 1.11.25 ...	16.11.25.
<i>Polycarp</i> ...	Evans, T. G. ...	C. W. Sneathurst ...	" A.	Booth ...	8.6.25 to 29.7.26 ...	4.8.26.
<i>Port Adelaide</i> ...	Hayter, F. W. ...	R. W. Linklater, G. Lovegrove, J. L. Porter.	M.L.	Commonwealth & Dominion.	Met. Log. 6.2.26 to 11.6.26 ...	21.6.26.
" <i>Albany</i> ...	Robinson, C. A. ...	E. A. Leavett, A. G. Newbury, W. Eastoe, N. A. Crowe.	"	" " "	" 14.11.25 to 13.4.26...	21.4.26.
" <i>Auckland</i> ...	Durham, R. S. ...	R. B. Stannard ...	"	" " "	Form 911 4.3.26 to 20.7.26 ...	26.7.26.
" <i>Bowen</i> ...	Gilling, W. ...	W. R. Johnston ...	No. A.	" " "	" 21.7.26 to 27.8.26 ...	20.9.26.
" <i>Caroline</i> ...	Renaut, F. A. ...	H. H. Smith, E. Fenton, C. Chamberlin, A. T. C. Cooper.	M.L.	" " "	Met. Log. 3.10.25 to 11.4.26 ...	19.4.26.
" <i>Darwin</i> ...	Sawbridge, I. R. ...	E. T. N. Lawrey, G. F. Pannett.	No. A.	" " "	Form 911 23.4.26 to 6.6.26 ...	24.6.26.
" <i>Dunedin</i> ...	Lea, W. H. ...	E. G. Jones ...	M.L.	" " "	" 7.1.26 to 1.5.26 ...	19.5.26.
" <i>Hacking</i> ...	Hoad, A. C. ...	F. W. Elgar ...	"	" " "	" 1.8.26 to 14.8.26 ...	30.8.26.
" <i>Hobart</i> ...	Craven, R. ...	G. Langford ...	"	" " "	" 6.3.26 to 25.6.26 ...	8.7.26.
" <i>Hunter</i> ...	Cottell, S. C. ...	A. Cooper, C. F. Post, J. T. Weldin.	"	" " "	Met. Log. 30.10.25 to 2.4.26 ...	14.4.26.
" <i>Melbourne</i> ...	Kearney, F. J. ...	D. G. H. Bradley, J. A. Fairbairn, A. G. Starkey.	M.L.	" " "	" 4.5.26 to 5.9.26 ...	8.9.26.
" <i>Napier</i> ...	Jones, C. N. ...	A. R. Martin...	No. A.	" " "	Form 911 8.7.26 to 20.8.26 ...	26.8.26.
" <i>Nicholson</i> ...	Jack, J. ...	J. L. Lewis, A. McDonald, P. A. Munday, C. Jolly.	M.L.	" " "	Met. Log. 20.2.26 to 18.7.26 ...	24.7.26.
" <i>Pirie</i> ...	Kippons, T. ...	H. C. Jeffery, W. G. Jones, N. M. Muzzill, S. Hearn.	"	" " "	" 6.4.26 to 6.9.26 ...	13.9.26.
" <i>Sydney</i> ...	Higgs, W. G. ...	G. L. H. Dean, K. D. Morgan, H. G. Boys Smith.	"	" " "	" 26.6.26 to 29.7.26 ...	5.8.26.
" <i>Victor</i> ...	Swan, L. H. ...	W. Howe, W. Renouf, W. J. Watson.	"	" " "	" 6.9.25 to 2.6.26 ...	7.6.26.
" <i>Wellington</i> ...	Farmer, F. ...	P. H. Pedrick ...	No. A.	" " "	Form 911 22.3.26 to 24.7.26 ...	6.8.26.
<i>President Jackson</i> ...	Griffith, J. ...	B. Christensen, A. L. Herre...	" A.	Pacific Mail S.S. Co. ...	" 19.4.26 to 21.5.26 ...	22.7.26.
<i>President Jefferson</i> ...	Nichols, F. R. ...	B. Christensen ...	"	Admiral Oriental Line	" 3.8.26 to 30.8.26 ...	4.10.26.
<i>President Wilson</i> ...	Nelson, H. ...	A. M. Quinlan ...	No.	Dollar ...	" 24.3.26 to 14.5.26 ...	3.7.26.
<i>Protea</i> , H.M.S.A.S.	Woodhouse, A. F. B., Lt.-Commr., R.N.	R. J. Whitley ...	No. M.	South African Naval Service.	" 1.8.26 to 14.9.26 ...	12.10.26.
<i>Purphus</i> ...	Read, J. W. ...	" " " " " " " "	" A.	A. Holt ...	" 4.9.26 to 14.9.26 ...	22.9.26.
<i>Ranpura</i> ...	King, A. M., D.S.C.	H. C. Slinn ...	" M.	P. & O. ...	" 21.7.26 to 26.8.26 ...	1.9.26.
60 <i>Regina</i> ...	{ Smith, R. G. ... Jones, T. ...	G. W. Couch, R. H. Shaw, C. Cochrane, A. R. M. Naughton.	{ W.T.	White Star-Dominion	Met. Log. 2.5.26 to 9.10.26 ...	13.10.26.
<i>Reindeer</i> ...	Langdon, C. ...	" " " " " " " "	C.C.	G.W. Railway ...	Telegraphic Report 15.5.26 ...	15.5.26.
<i>Remuera</i> ...	Cameron, J. J. ...	P. McCullum, P. Shakespeare	No. A.	New Zealand S.S. Co.	Form 911 13.3.26 to 19.4.26 ...	27.7.26.
<i>Rhodesian Transport</i> ...	Fowler, W. H. ...	F. F. Feint ...	" A.	Houlder Bros. ...	" 22.4.26 to 19.8.26 ...	25.8.26.
<i>Rimutaka</i> ...	Hemming, F. A. ...	F. Bishop ...	M.L.	New Zealand S.S. Co.	Met. Log. 31.5.25 to 29.3.26 ...	1.4.26.
<i>Risaldar</i> ...	Park, G. ...	A. J. Cavallo, H. Hardwick, C. M. Knight.	"	Asiatic S.N. Co. ...	" 11.10.25 to 9.4.26 ...	11.5.26.
<i>Romney</i> ...	Syms, G. ...	J. W. McMullan ...	No. A.	Lampot & Holt ...	Form 911 27.4.26 to 7.7.26 ...	13.8.26.
<i>Rotorua</i> ...	Hunter, J. B. ...	D. F. Clegg, E. Lawrence, R. H. Cockerill.	M.L.	N.Z.S. Co. ...	Met. Log. 13.2.26 to 29.5.26 ...	8.6.26.
<i>Royal Fusilier</i> ...	Dawson, J. ...	J. Fraser ...	No. A.	London & Edinburgh S.S. Co.	Form 911 15.8.26 to 7.10.26 ...	11.10.26.
<i>Royal Transport</i> ...	Dove, J. ...	R. W. Wass ...	" A.	Houlder Bros. ...	" 24.1.26 to 24.7.26 ...	6.8.26.
<i>Ruapehu</i> ...	McKellar, A. W., R.D., Capt., R.N.R.	- E. Russell, O. M. Watts, W. J. Glassborow.	M.L.	New Zealand S.S. Co.	Met. Log. 16.4.26 to 10.8.26 ...	16.8.26.
<i>Sachem</i> ...	" " " " " " " "	" " " " " " " "	No.	Furness Withy	" " " " " " " "	" " " " " " " "
<i>St. Albans</i> ...	Smith, G. L. ...	J. W. Kavanagh, J. F. Heddle, H. J. Jeans, W. McIntyre.	M.L.	Eastern and Australian	" " " " " " " "	" " " " " " " "
<i>St. Helier</i> ...	Mulhall, W. ...	C. Bell ...	C.C.	G.W. Railway ...	Telegraphic Report 14.10.26 ...	14.10.26.
<i>St. Julien</i> ...	Langdon, C. H. ...	C. Joy ...	"	" " " " " " " "	" 29.9.26 ...	29.9.26.
<i>St. Patrick</i> ...	Bearpark, E. W. ...	F. C. Smith ...	No. A.	Rankin Gilmour ...	Form 911 27.4.26 to 5.8.26 ...	17.8.26.
<i>Salaga</i> ...	Sola, P., D.S.O. ...	C. V. Evans ...	" A.	Elder Dempster ...	" 12.6.26 to 29.8.26 ...	9.9.26.
38 <i>Samaria</i> ...	McNeill, S.G.S., R.D., Capt., R.N.R.	H. L. Pryse ...	W.T.	Cunard ...	" 24.7.26 to 13.9.26 ...	15.9.26.
<i>Sandown Castle</i> ...	Jackson, C. R. ...	P. G. MacIver ...	No. A.	Union Castle ...	" 16.12.25 to 23.2.26...	26.2.26.
<i>Saxoline</i> ...	Rodgers, C. S. ...	B. Johnsén ...	" A.	Hunting & Son ...	" 18.2.26 to 9.3.26 ...	29.3.26.
<i>Saxon</i> ...	Knight, A. ...	E. G. Broodbank ...	" A.	Union Castle ...	" 25.6.26 to 16.8.26 ...	20.8.26.
<i>Scindia</i> ...	Matthews, W. ...	R. S. Paton ...	" A.	Anchor ...	" 8.5.26 to 16.7.26 ...	12.8.26.
<i>Scholar</i> ...	Egerton, J. J. ...	" " " " " " " "	M.	Harrison ...	" " " " " " " "	" " " " " " " "
<i>Scotia</i> ...	Prichard, S.D. ...	O. W. L. Jones ...	C.C.	L.M. & S. Rly. ...	Telegraphic Report 25.9.26 ...	25.9.26.
<i>Scottish Bard</i> ...	McDonnell, S. ...	J. W. Lilley ...	No. A.	Tankers Ltd. ...	Form 911 31.1.26 to 15.2.26 ...	9.3.26.
33 <i>Seythia</i> ...	Prothero, W. ...	G. Overton, J. C. Munro, P. G. Britten.	W.T.	Cunard ...	W.T. Reg. 28.8.26 to 14.9.26 ... Form 911 27.8.26 to 15.9.26 ...	21.9.26. 22.9.26.
<i>Sheaf Lance</i> ...	Earl, C. ...	" " " " " " " "	No.	W. A. Souter ...	" " " " " " " "	" " " " " " " "
<i>Sheaf Mount</i> ...	Grutes, C. V. ...	C. A. Goolie ...	No. A.	" " " " " " " "	Form 911 10.6.26 to 8.7.26 ...	22.7.26.
<i>Sheaf Spear</i> ...	Whitfield, G. A., O.B.E.	W. H. Grisewood, N. Thompson.	M.L.	" " " " " " " "	Met. Log. 18.3.26 to 20.6.26 ...	26.6.26.
<i>Socrates</i> ...	Taylor, F. C. ...	W. E. Jordan ...	No. A.	Lampot & Holt ...	Form 911 30.8.26 to 18.9.26 ...	11.10.26.
<i>Sokaboemi</i> ...	Z. W. Flach ...	C. van Reenen ...	" M.	Rotterdam Lloyd ...	" 2.5.26 to 30.7.26 ...	12.8.26.
<i>Somerset</i> ...	Barnett, H. ...	J. J. Youngs ...	" M.	N.Z.S. Co. ...	" 15.12.25 to 21.1.26 ...	26.1.26.
<i>Somersetshire</i> ...	Poster, W. L. ...	R. G. Leitch, H. G. Walton, P. H. Potter.	M.L.	Bibby ...	Met. Log. 2.5.26 to 25.8.26 ...	3.9.26.
<i>Somme</i> ...	Miles, F. R., Commr., R.D., R.N.R.	J. Watson ...	No. A.	R.M.S.P. Co. ...	Form 911 1.5.26 to 23.7.26 ...	13.8.26.
<i>Spectator</i> ...	Harding, C. H. J. ...	D. Fraser, J. G. F. Betson ...	" A.	Harrison ...	" 20.11.25 to 20.2.26...	26.2.26.
<i>Spero</i> ...	{ Norton, W. J. ... Montgomery, H. ...	T. E. Fea ...	M.L.	Ellerman Wilson ...	Met. Log. 12.12.25 to 14.6.26...	1.7.26.
<i>Stockwell</i> ...	Thowless, E. ...	W. Gibson ...	No. A.	Brocklebank ...	Form 911 11.8.26 to 23.8.26 ...	27.8.26.
<i>Stuart Prince</i> ...	Kemp, E. J. ...	W. Venn ...	" A.	Prince ...	" 18.2.26 to 6.3.26 ...	26.4.26.
<i>Swua Maru</i> ...	Okuno, Y. ...	" " " " " " " "	" A.	Nippon Yusen Kaisha	" 23.8.26 to 20.9.26 ...	11.10.26.
<i>Sylvafield</i> ...	Biddick, E. ...	" " " " " " " "	" A.	Hunting & Son ...	" 3.9.26 to 22.9.26 ...	8.10.26.
<i>Tainui</i> ...	Elford, H. C. ...	P. S. Horwood ...	" A.	Shaw, Savill & Albion	" 16.8.26 to 21.9.26 ...	25.9.26.
<i>Tairoa</i> ...	Summers, W. G. ...	S. A. Bannister ...	" A.	" " " " " " " "	" 30.3.26 to 12.5.26 ...	17.5.26.
<i>Tahiti</i> ...	Hill, T. V. ...	D. Amenlove ...	"	Union S.S. Co. of N.Z.	" 12.8.26 to 2.9.26 ...	28.9.26.
<i>Taiping</i> ...	{ Hamilton, H. E. ... Frame, A. M. ...	A. M. Frame, T. G. Stratford, W. Bailey, L. A. Baile	M.L.	Yuill & Co. ...	Met. Log. 22.1.26 to 17.5.26 ...	19.7.26.
<i>Tanda</i> ...	Pilcher, E. ...	R. Lloyd Harry, B. Dun, H. Jeans, F. Colvin.	M.L.	E. & A. S.S. Co. ...	Met. Log. 3.3.26 to 30.5.26 ...	10.7.26.



Name of Vessel.	Captain.	Observing Officers.	Official Meteorological Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 15.10.26.	Date Received.
<i>Tambora</i> ...	Huisman, N. ...	H. Van Manen ...	No. M.	Rotterdam Lloyd ...	Form 911 15.2.26 to 31.3.26 ...	15.4.26.
<i>Teiresias</i> ...	Wilkinson, W. H. ...	W. Stanger ...	" A.	A. Holt & Co. ...	" 25.6.26 to 7.10.26 ...	12.10.26.
<i>Tekoa</i> ...	Barnett, H. ...	D. M. Lambert ...	" M.	New Zealand S.S. Co. ...	" 17.6.26 to 22.7.26 ...	26.7.26.
<i>Telamon</i> ...	Duggan, C. ...	G. Bevan ...	" A.	A. Holt ...	" 20.4.26 to 21.6.26 ...	3.7.26.
<i>Teucer</i> ...	Hodgson, R. N. ...	R. T. Harries ...	" A.	" ...	" 29.7.26 to 14.8.26 ...	13.9.26.
<i>Themistocles</i> ...	Jernyn, W. M. ...	R. J. Buckland ...	" M.	Aberdeen ...	" 3.6.26 to 22.7.26 ...	3.8.26.
<i>Theseus</i> ...	Jones, E. ...	W. A. Fyffe ...	" A.	A. Holt ...	" 4.8.26 to 14.8.26 ...	17.8.26.
<i>Titan</i> ...	Wilkinson, T. G. ...	D. MacLavith, D. T. Williams, G. W. Best, C. G. Bailey ...	M.L.	" ...	Met. Log. 20.10.25 to 11.3.26...	18.3.26.
<i>Tongariro</i> ...	White Parsons, V.C. ...	J. J. Youngs, E. Quick ...	No. M.	New Zealand S.S. Co. ...	Form 911 11.6.26 to 17.7.26 ...	4.9.26.
<i>Transylvania</i> ...	Bone, D. W. ...	" ...	" A.	Anchor ...	" 5.9.26 to 26.9.26 ...	30.9.26.
<i>Traveller</i> ...	Worthington, B. ...	R. H. Rowe ...	" M.	T. & J. Harrison ...	" 7.8.26 to 13.9.26 ...	5.10.26.
<i>Trematon</i> ...	Evans, B. ...	R. Gregory, J. Toms, J. Bell ...	M.L.	Hain S.S. Co. ...	Met. Log. 2.9.25 to 8.2.26 ...	2.3.26.
<i>Turakina</i> ...	Hamilton, E. S. ...	A. N. Marshall, G. S. Shepherd ...	No. M.	New Zealand S.S. Co. ...	Form 911 9.2.26 to 4.5.26 ...	26.5.26.
<i>Tuscana</i> ...	Gemmell, W. J. ...	J. Hamilton ...	" A.	Anchor ...	" 29.8.26 to 19.9.26 ...	28.9.26.
<i>Tyndareus</i> ...	Scott, J. R. ...	A. G. Phillips, C. E. Mock, A. R. McDavid. ...	M.L.	A. Holt ...	Met. Log. 7.1.26 to 9.6.26 ...	6.8.26.
<i>Ulimaroa</i> ...	Wylie, W. J. ...	J. S. Airey ...	No. M.	Huddart Parker, Ltd. ...	Form 911 31.7.26 to 24.8.26 ...	4.10.26.
<i>Ulysses</i> ...	Gordon, A. L. ...	F. H. Barley ...	" A.	A. Holt ...	" 5.7.26 to 20.7.26 ...	26.8.26.
<i>Umvolosi</i> ...	Barnes, E. W. ...	" ...	" A.	Bullard King ...	" 20.8.26 to 7.9.26 ...	4.10.26.
<i>Valacia</i> ...	Doyle, M. ...	N. Grayson ...	" M.	Cunard ...	" 8.1.26 to 19.5.26 ...	31.5.26.
<i>Vardulia</i> ...	Fear, E. T. C. ...	L. D. W. Rand ...	" A.	" ...	" 9.9.26 to 21.9.26 ...	4.10.26.
<i>Verbania</i> ...	Pooley, T. S. M. ...	W. Bradley ...	" A.	" ...	" 4.4.26 to 7.5.26 ...	11.5.26.
<i>Vigilant</i> ...	Simpson, E. S. S. ...	J. Hunter ...	" A.	Scottish Fishery Board ...	" 1.9.26 to 28.9.26 ...	4.10.26.
<i>Waitapu</i> ...	Norton, A. ...	W. Johnson ...	" A.	Canadian-Australasian Union S.S. Co. of N.Z. ...	" 14.7.26 to 18.8.26 ...	20.9.26.
<i>Watuna</i> ...	Chave, Sir B., K.B.E. ...	H. A. Deller ...	M.L.	Union Castle ...	Form 911 7.5.26 to 23.5.26 ...	7.6.26.
<i>Walmer Castle</i> ...	Seutt, W. ...	T. W. Worthingham, G. R. Millard, K. M. Morrison, N. A. Pope. ...	No. A.	British India ...	Met. Log. 6.3.26 to 30.7.26 ...	3.8.26.
<i>Warfield</i> ...	Steel, R. ...	C. M. Quick ...	No. A.	" ...	Form 911 16.8.26 to 18.9.26 ...	11.10.26.
<i>War Nizam</i> ...	Moncrieff, T. ...	J. Row ...	" A.	British Tankers ...	" 17.8.26 to 28.9.26 ...	6.10.26.
<i>Welshman</i> ...	Rollerson, W. ...	W. A. Fletcher ...	" M.	White Star-Dominion ...	" 20.4.26 to 25.5.26 ...	31.5.26.
<i>Westmoreland</i> ...	Upton, H. C. ...	R. G. Kers ...	M.L.	Federal ...	" 18.9.25 to 3.4.26 ...	3.5.26.
<i>William Scoresby</i> ...	Mercer, G. M., D.S.C. ...	" ...	"	Falkland Islands Government. ...	" ...	"
<i>R.S.S. Windsor Castle</i> ...	Lt.-Commr., R.N.R. Strong, H., R.D., Commr., R.N.R. ...	F. Wilbraham, C. L. Lovegrove, J. Montgomery, F. Norfolk ...	No.	Union Castle ...	Met. Log. 1.6.26 to 20.9.26 ...	2.10.26.
<i>Winifredian</i> ...	Harrocks, W. ...	A. Crone ...	No. M.	Leyland ...	Form 911 22.5.26 to 21.6.26 ...	29.6.26.
<i>Woodarra</i> ...	Hudson, H. T. ...	L. D. Graham, G. Hyland, H. Goater, J. Wallace ...	M.L.	British India ...	Met. Log. 20.3.26 to 8.9.26 ...	15.9.26.
<i>Yorkshire</i> ...	Adamson, B. W. ...	R. S. Evans, W. T. Walmsley, S. Hay, J. C. Goldsworthy ...	No.	Bibby ...	Form 911 3.7.26 to 14.9.26 ...	17.9.26.
<i>Zeeland</i> ...	Harvey, H. ...	W. N. Jenkins ...	No. M.	Red Star ...	" 12.9.26 to 2.10.26 ...	11.10.26.
<i>Conway H.M.S.</i> ...	Broadbent, H. W., R.D. Capt., R.N.R. ...	The Senior Cadets... ...	Cadets' M.L.	" ...	Cadets' Met. Log. 10.5.26 to 24.7.26 ...	29.7.26.
<i>Pangbourne Nautical College.</i> ...	Tracy, A. F. G., Commr., R.N. ...	" " ...	"	" ...	Cadets' Met. Log. 2.5.26 to 24.7.26... ...	6.8.26.
<i>Worcester, H.M.S.</i> ...	Sayer, M. B., O.B.E., R.D., Capt., R.N.R. ...	" " ...	"	" ...	Cadets' Met. Log. 7.5.26 to 28.7.26... ...	31.7.26.
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<i>Double Headed Shot</i> ...	" ...	" ...	"	" ...	Lighthouse Register 1.7.25 to 31.12.25 ...	21.4.26.
<i>Inagua</i> ...	" ...	" ...	"	" ...	Lighthouse Register 1.7.25 to 31.12.25 ...	9.3.26.
<i>Sombrero</i> ...	" ...	" ...	"	" ...	Lighthouse Register 1.1.26 to 30.6.26 ...	5.8.26.
<i>Watling Island</i> ...	" ...	" ...	"	" ...	Lighthouse Register 18.7.25 to 16.1.26 ...	8.3.26.
<i>Cape Pembroke (Falkland Is.).</i> ...	" ...	" ...	"	" ...	Lighthouse Register 1.1.26 to 30.6.26 ...	18.8.26.

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Name of Vessel.	Captain.	Observing Officer.	Line.	Last Case of Water Samples, Reports, etc., Received up to 30.9.26.	Date Received.
<i>Darro</i> ...	Matthews, G. P. ...	W. Halder-Campe ...	R.M.S.P. Co. ...	Water Samples ...	...
<i>Deseado</i> ...	Hannam, F. S. ...	C. C. Dingle ...	" ...	" ...	...
<i>Hildebrand</i> ...	Maddrell, J. ...	A. Allan ...	Booth ...	" ...	10.9.26.
<i>Pacuare</i> ...	Harvey A. E. ...	H. G. Cruickshank ...	Elders & Fyffes ...	" ...	15.9.26.

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### ERRATA.

Volume III, No. 27, p. 49.

Column 2, twenty-ninth line from top, second group, for LLLGG read lllgg.

Volume III, No. 27, p. 53.

Column 2, fifteenth and seventeenth lines from top, delete words (except Sweden).

Volume III, Nos. 27 and 30.

Charts of Currents Trans-North Atlantic Tracks, EXPLANATION OF CURRENT ROSES. For 49-72 miles per day read 49 miles per day and above.