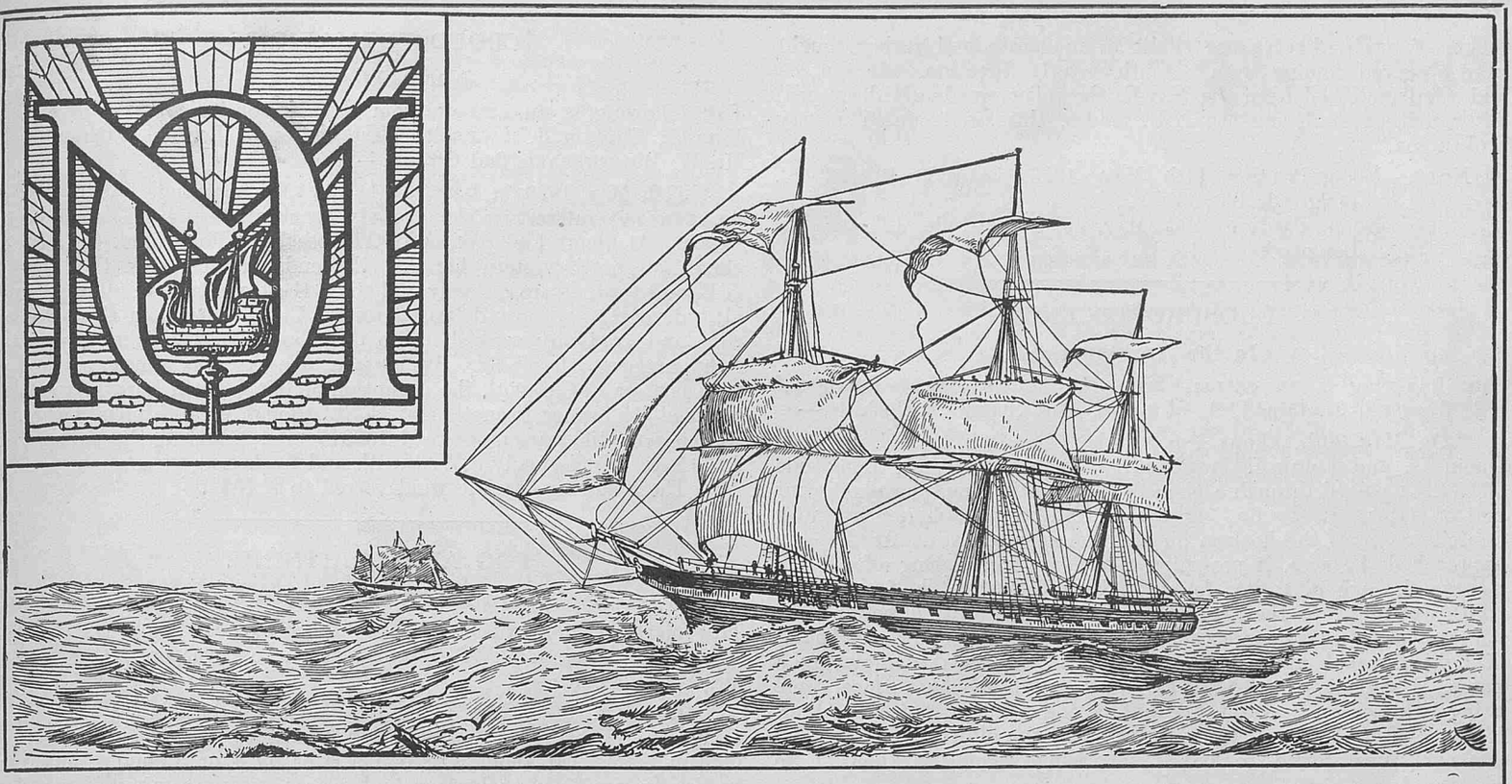

VOL. III. No. 29. THE MARINE OBSERVER. MAY 1926.

TABLE OF PRINCIPAL CONTENTS.

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.

CURRENT.

In the North Atlantic.

THE following is an extract from the Meteorological Report of S.S. *Manchester Importer*, Captain J. E. RILEY, Manchester to Quebec. Observers, Mr. H. SCHOFIELD, 2nd Officer, and Mr. G. S. ROBERTSON, 3rd Officer :—

" Noon, May 16th, 1925, to Noon, May 17th, 1925, from Latitude 44° 34′ N., Longitude 41° 40′ W. to Latitude 43° 50′ N., Longitude 47° 37′ W. Current set West 17·5 miles. Steaming along the northern limit of Gulf Stream, above *Westerly current* was experienced, ship steering 260° true course, apparently the curving westward of part of the Labrador current, as the temperature of sea fell from 60° to 40° during the two days."

ROLLERS IN THE ATLANTIC.

In the neighbourhood of the Equator.

THE following is an extract from the Meteorological Log of S.S. *Highland Heather*, Captain G. A. POWELL, River Plate to Havre. Observer, Mr. J. H. CABLES :—

" May 14th–21st, 1925. From approximately 10½° S. to 12° N., at intervals of anything from 5 to 15 minutes, three or four long

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rollers of swell (disturbance slight to moderate and rather rough) were observed coming from a south-easterly direction. As the sea and wind increased from the N.N.E. the rollers gradually decreased. After first encountering the N.E. trades, this swell caused a very broken sea."

NOTE.—Noon Position 14th May, 1925, Latitude 10° 22′ S., Longitude 33° 53′ W.
Noon Position 21st May, 1925, Latitude 12° 01′ N., Longitude 22° 44′ W.

PHOSPHORESCENCE.

In the Arabian Sea.

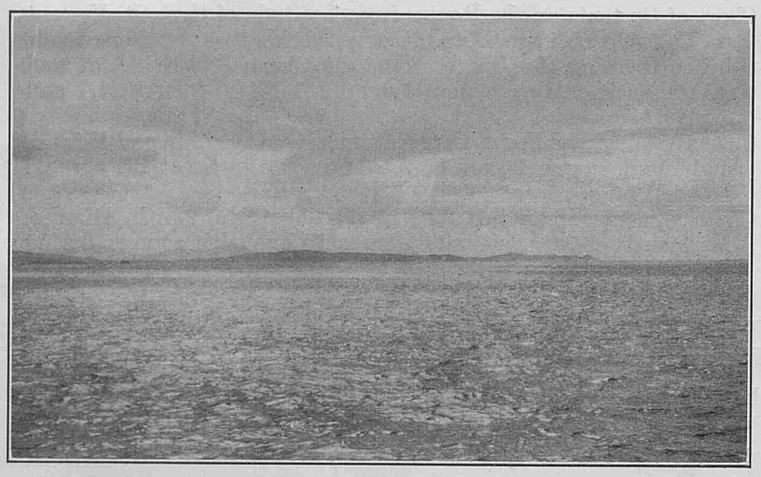
THE following is an extract from the Meteorological Report of S.S. *Koranna*, Captain J. A. MORDUE, Port Sudan to Bushire:—

"On May 30th, about 1 a.m. when standing to N'd. between Quoin Is. and Larak I. in about Latitude 26° 40′ N., Longitude 56° 33′ E., passed through a phenomenal, scintillating, phosphorescent belt of water. It was first sighted as a line of phosphorescent water stretching across the horizon ahead from east to west. As the ship approached the area, it presented a curious, scintillating effect. On passing through it, it was found to be a belt about half a mile in width extending to the horizon in an east and west direction. The effect at close quarters was as though thousands of powerful beams of light directed upwards from under water, each illuminating a patch of some twenty to thirty square yards of sea surface, were being switched on and off alternately, independently of each other. If any one of these patches were watched, the intervals of light and darkness were found to be of surprising regularity about 1 to 1½ seconds.

"The belt gradually receded astern and the display continued until it was lost over the horizon to the southward. There was a moderate, westerly breeze blowing at the time, with a clear sky, whilst the gentle ripples and small wavelets gave the surface of the sea sufficient movement to enhance the most startlingly bizarre effect of phosphorescence I have ever witnessed."

CLOUD AND SEA PHOTOGRAPH.

North Coast of Ireland.



THE above photograph was taken by Mr. H. S. KNIGHT, 3rd Officer, S.S. *Montclare*, Captain G. S. WEBSTER, at 2 p.m. G.M.T. on May 15th, 1925, in vicinity of Fanad Head, North Coast of Ireland. Wind, south, force 6. Sea moderate. Barometer 29·76 in. Air 53° F. Water 51° F.

NOTE.—The ship was off a weather shore and according to the Admiralty "Charts of Tidal Streams for the British Isles and adjacent waters" the tide would be setting to the eastward. The height of the camera above the sea must also be considered in taking into consideration the appearance of the sea surface. In connection with the observation of sea and swell asked for in Vol. II., No. 19, page 110, photographs taken at the same time as measured observation of sea and swell will be of great value.

CLOUD FORMATION.

North Atlantic.

THE following is an extract from the Meteorological Log of S.S. *Songster*, Captain J. JACKSON, West Indies to London. Observer, Mr. W. WEATHERALL, 2nd Officer:—

"11th May, 1925, in Latitude 41° 23′ N., Longitude 25° 00′ W., an extremely interesting cloud study occurred during the afternoon watch. At about 1.40 p.m. A.T.S. I observed a long bank of Ci-St. clouds on north-western horizon, the ends of the bank then bore N.E. and west. It rose slowly and when the top edge had an angular altitude of 12°, a most delicate form of Ci-Cu. rose from the upper edge and gradually worked up to the observer's zenith in rows at right angles to the Ci-St. By 3.0 p.m. the sky was almost covered with coarser Ci-Cu., with the exception of the western horizon which retained its former formation of Ci-St., though of a thinner nature. At 3.0 p.m. the barometer read 1023·0 mb., attached thermometer 292°·5.A. Wind steady S.W. by W. and freshening somewhat.

"The following day the wind veered to N.N.W."

FOG AND LIGHTNING.

In the Mediterranean.

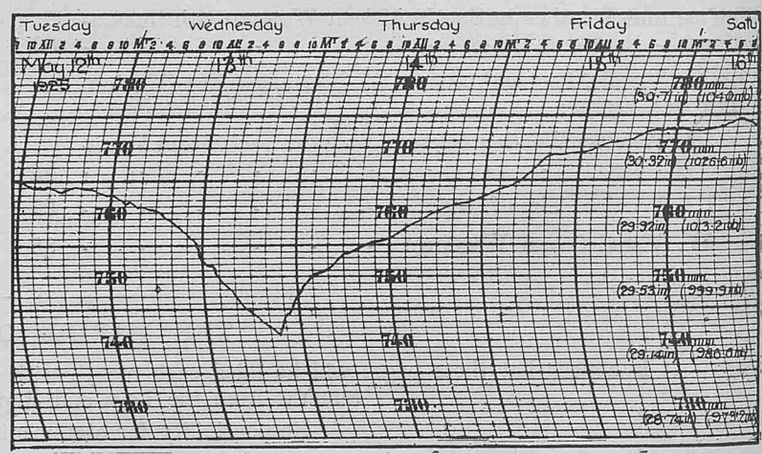
THE following is an extract from the Meteorological Log of S.S. *Clan Mackinnon*, Captain R. W. MACKIE, Malta to Liverpool. Observer, Mr. W. F. ISAAC:—

"1st May, 1925. At 3.50 a.m. (A.T.S.), Latitude 37° 14′ N., Longitude 11° 54′ E. A vivid flash overhead, apparently of sheet lightning, followed about 30 seconds later by 4 or 5 smaller flashes to N.N.E. low down on horizon took place; within a minute fog had lifted for a good 3 mile area and stars (hitherto none had been seen since 9 p.m. previous evening) were observed brilliantly overhead. About 10 minutes later fog again came down but was very thin and patchy, finally clearing an hour later. Wind at time S.S.W.2."

PAMPERO.

La Plata River.

THE following is an extract from the Meteorological Report of S.S. *Eemland*, Captain C. D. VAN NOPPEN, Amsterdam to Buenos Aires. Observer, Mr. G. C. VAN HUIZEN:—



"When we came down the La Plata river on the 13th of May, 1925, the barometer was falling.

"Stripes of Cirrus were observed, while the sky grew very cloudy. The wind was S.E. 5, and changed in the afternoon from S.E.—N.E.—west (force 8).

"In the evening the weather became a little bit better; the wind became N.E. again.

"Suddenly at 10 o'clock the wind changed to west (force 12). In less than no time there was a very high sea, accompanied by a very heavy swell.

"At 9 o'clock the barometer, which pointed 982·6 mb., began to rise very quickly.

"The next day, the 14th, the weather became a little better, though the sea remained very high.

" The barometer rose till 1029·8 mb. on the 16th. Then the weather was splendid again, a slight sea and moderate swell.

" The Royal Mail liner *Andes* must have been in the same track, the 13th."

ATMOSPHERICS IN TROPICAL REVOLVING STORMS IN EAST INDIAN WATERS AND THE DIRECTION-FINDER.

With reference to the editorial note on " Wireless Telegraphy and Tropical Revolving Storms " in Volume II, No. 20, of the Marine Observer, and the need for investigation of atmospherics at sea first, rather than application of their position or bearing in a tropical revolving storm for the purposes of the " Laws of Storms " (rules for handling ships), the following remarks are taken from a letter received from Dr. C. W. B. Normand, of the India Meteorological Department:—

" It will be recalled that the *Okara* cyclone developed in the Bay of Bengal on the 3rd and 4th May, 1923, on which dates, at 4 a.m., the positions of the centre of the disturbance were respectively, Latitude 15° 30′ N., Longitude 86° 30′ E., and Latitude 18° 30′ N., Longitude 88° 00′ E. This cyclone was severe throughout May 5th, and crossed the coast on May 6th. Without knowledge of the contemporary weather situation over the Bay of Bengal, the Wireless Research Officer at Karachi (Mr. P. J. Edmunds) observed atmospherics at 4 a.m. on May 3rd with a very pronounced direction, 115° (S. 65° E. True) within 2°, continued all day, though somewhat masked by atmospherics from other directions in the evening. By 4 a.m. on May 4th the bearing of atmospherics changed to 100° (S. 80° E. True) within 5°, but they had become less marked and finally disappeared in the evening. The direction observed by Mr. Edmunds, at Karachi on the 3rd therefore pointed practically to the storm centre; but the next morning's direction of 100° (S. 80° E. True) indicated a bearing somewhat north of that of the storm centre, while the final 36 hours of the storm's existence at sea produced no marked bearing by direction finder. Reports on subsequent occasions have been less promising. Neither the cyclone of November 1923 in the Bay of Bengal, nor the storm of December 1923 in the Arabian Sea, produced any marked directional effects on the Karachi D.F. set."

Commander John A. Slee, C.B.E., R.N. (retired), the Technical Manager of The International Marine Communication Co., Ltd., remarks as follows:—

" The great and, so far as I can see, insuperable difficulty with regard to tracking storm centres by wireless is the fact that in climatic conditions when revolving storms are likely to be forming, or to be in existence, the whole place is full of atmospheric discharges, and no man can tell whether any particular atmospheric emanates from the centre of a formed or forming storm, or from some discharge, if not entirely unconnected with the storm, at any rate many miles away from it. Unfortunately, revolving storms do not transmit call signs, and therefore cannot be identified.

" There is another point. The evidence is by no means certain that the centres of revolving storms are invariably the source of atmospherics. In the course of the last couple of years we have had three or four reports in from sea, which indicate that in all probability atmospherics arising from the centre of a revolving storm were so much more violent and continuous than those the rest of the way round the horizon that definite bearings could be obtained of a source of violent atmospherics, and a subsequent examination showed that these bearings coincided with the probable position of the storm centre.

" Unfortunately all these documents have been stowed away now and it will take me a long time to dig them out; but, in addition to those that I have quoted, there was one which was so remarkable that it has remained firmly in everybody's memory. In this case the only direction in which atmospherics were not prevalent coincided with the probable direction of the storm centre.

" So that as a result we are face to face with these difficulties. First, it is extremely difficult to observe the direction of atmospherics arising from a storm centre, because of the prevalence of exactly similar sounding atmospherics in other directions; and, secondly, we cannot be certain that the storm centre is invariably a source of atmospherics."

COMMANDER A. J. COAD, R.N.R.

By one of his Officers.

Amongst the Senior Officers of the Merchant Service who were members of our Corps retiring last year there was a *man* who should not be allowed to pass into the obscurity of his moorings without a tribute from Marine Observers.

Alfred John Coad commenced his sea career at the age of 16 as an apprentice in the barque *Lanoma*, 648 tons, Captain Barwood, owned by T. B. Walker, but running under Devitt and Moore's flag in the Tasmanian Wool trade, London and Launceston, out round the Cape of Good Hope and home by Cape Horn.

He completed 4 years in this vessel during part of the time under the command of Captain Whittingham. A smart little craft!

Basil Lubbock wrote in his " Colonial Clippers " in 1921 of T. B. Walker—" He was a shipmaster of the old school and took great pride in his ships and kept them in most liberal fashion. One of his customs was to keep his officers and apprentices on board whilst the ships were at home. Thus the Walker apprentices had a most valuable training in docking and undocking, shifting ship, refitting rigging, bending and unbending sail, etc." This custom might not appeal to the youngster of the present day when steam and modern competition make the spells in home ports short, but it certainly reflects itself well in the subject of these notes.

Basil Lubbock also says (1921) that he believed Captain Barwood was still living in Tasmania and that Captain Whittingham was lost in the *Lanoma*.

Upon passing for 2nd Mate young Coad was appointed to Walker's composite barque *Araunah*, 455 tons, Captain Findlay, and made one voyage in the Launceston trade; he was then transferred to the barque *Corinth*, 614 tons, Captain Littler, with whom he made 3 voyages.

His next vessel was the ship *Barossa*, of 968 tons, Captain Walker, a son of the owner, employed in the trade to Adelaide.

Successful in passing his Board of Trade examinations, he was fortunate in his next appointment, for it commenced his long connection with the firm of Anderson Anderson, who for many years were with F. Green & Co., the managers of the Orient Line.

He gained the berth of 2nd Mate of the beautiful ship *Hesperus* and made one voyage to Melbourne under the command of Captain Harry, who will be remembered in later years by all who took part in the Orient pleasure cruises, as a wonderfully well-informed guide and organizer who could be relied upon to pacify the disgruntled with his ready " Leave it to me." On his second voyage in the *Hesperus* the commander was Captain Cook, late of Dickie Green's famous Blackwall Line ship *Melbourne*. At the end of this voyage *Hesperus* was taken over by Devitt and Moore and converted into a training ship under Lord Brassey's scheme, and Coad then joined the service of the Orient Steam Navigation Company, being appointed 4th officer of R.M.S. *Cuzco* on July 2nd, 1890. He had served 11½ years in sail.

He served in a number of the company's ships, including the *Austral* and *Omrah*, in both of which he was Chief Officer, and gained command of his first mail steamer, the *Cuzco*, on June 29th, 1899. Rapid promotion for a mail service and even for the Orient Line where recurring building programmes and appointments of Commanders to nautical advisory and administrative posts ashore have been the means of maintaining a flow of promotion.

He commanded the following ships:—

Cuzco	1899
Austral	1899
Ormuz (1)	1900
Orient	1901
Ophir	1906
Otranto	1909
Orama	1911
Orsova	1914
Osterley	1917
Ormuz (2)	1921
Ormonde	1924
Oronsay	1925

He was Commodore of the Line for the last 8 years of his service,

The Master of the *Oronsay*, 1925.

COMMANDER A. J. COAD, R.N.R.

and as he said to me a short while ago, "Winding up with R.M.S. *Oronsay*, 20,000 tons, the finest ship in my mind afloat."

He was advanced in the Royal Naval Reserve to the rank of Commander (retired list) on January 22nd, 1908.

In his capacity as Master in both the second Boer and Great Wars, Captain COAD rendered fine War Service for King and Country.

During the 2nd Boer War he commanded H.M. Transports *Orient* and *Austral*, chartered from the ORIENT COMPANY by the Admiralty, and carried troops to South African Ports from and to England, New Zealand, Australia, and St. Helena.

The writer, who was to have the honour of serving later under Captain COAD, then an officer in a transport, well remembers the smart appearance of these ships amongst the great fleet of vessels assembled in Table Bay, and *Orient's* boat under sail was the admiration of the whole fleet, outsailing all others in her trips to the Clock Tower, Alfred Docks, to land or bring off the Captain on his visits to Sir EDWARD CHICHESTER, the P.N.T.O., and some years later it was my pleasure to sail the same boat in very different circumstances.

He commanded the *Orsova* and *Osterley* during the Great War and was almost constantly at sea carrying troops. The *Orsova* was torpedoed off Plymouth, the port engine being destroyed; the ship settled so that the main deck was all but awash; by good seamanship with the aid of tugs he beached her in Cawsand Bay, so preserving this beautiful ship for the reconstruction of the Empire's peace communications.

It is a great source of pleasure to me to be able to place on record my esteem, which is shared by so many others, for this true British Seaman, who has won the regard not only of his brother officers, men and employers, but a very large ocean travelling public which include all classes, from emigrants to Royalties.

In the sea service we are probably inclined to look up to our seniors in a way that the landsman can scarcely realise, and there is a bond between a good captain and his officers and crew, of trust begot by circumstances which make reliance far more imperative than is the case on shore. It was my privilege to serve as Captain COAD'S Chief Officer for about two years. A strict disciplinarian who knows his job, usually has a happy ship, and of many happy ships that I have served in there was none happier than R.M.S. *Otranto* under Captain COAD.

We were one of the very few British merchantmen manned with white crews which, owing to the firemen's and seamen's strike of 1911, were able to take a place at the Royal Review at Spithead, which took place after the Coronation of HIS MAJESTY KING GEORGE V, a fact which is significant of Captain COAD'S capacity to keep a contented and loyal ship's company. His pride in his ship and crew was great.

Possessed of a fine bearing and true courtesy, a lovable man to his shipmates, he was also liked and respected by passengers, for he ever set an example in carrying out that inestimable maxim, especially for the officers of passenger ships—"Be courteous to all and familiar to none." As officers often do, COAD'S not infrequently discussed him, and all who served under him agreed that he was their *beau-ideal* of a Mail Ship Captain.

He was a member of the Corps of British Voluntary Marine Observers from 1901 up to his retirement in 1925, the ships under his command contributing no less than 48 Meteorological Logs. His contribution to Marine Meteorology has been the encouragement he gave to his officers.

In bidding him farewell from active service afloat we hope that he may be blessed with many years of health and happiness, to enjoy the peace of retirement so well earned in the moorings which he had long prepared at the point of landfall that he so often made at his homecoming and that he may enjoy to the full the sport which he loves on the moors of Cornwall.

L. A. B. S.

ARCTIC ICE.

BY COMMANDER C. I. SPEERSCHNEIDER, R.D.N.R., CHIEF OF NAUTICAL DEPARTMENT, DANISH STATE METEOROLOGICAL INSTITUTE.

WE know well that around the poles of the earth it is so cold that the sea is covered always with ice and the snow will not melt away entirely during the summer. Consequently, there will always be ice in the Polar Seas, of greater or smaller extent according to the season. During the winter the ice will increase and in the course of the summer it will decrease, the smallest amount occurring as a rule in September–October. Yet it is not only in the seas that the ice dominates, but also the Polar Lands are to some degree covered with ice, because of the snow which falls there during the summer when the sun never sets. This snow will be reduced to a granulous mass, which later becomes ice owing to the pressure of the succeeding layers; such ice may be designated as land-ice. For the accumulation of the land-ice it is of very great importance that the mass should be plastic, *i.e.*, of a thick fluid nature, enabling it to flow like rivers towards the edges of the land, and especially through the valleys debouching into the fjords. The outer parts of these outflows are called glaciers, and it is stated that some of them may move forward with a speed of 125 feet in 24 hours. Where the glaciers terminate in the sea they will break off at intervals (the glacier calves), often in pieces of enormous dimensions, which will form icebergs; these may reach a height of 330 feet above the water, and cover an area of up to 84,000 square yards. You will get an idea of the enormity of these ice masses, when you remember that the area of the greatest ice-covered land in the Northern regions, Greenland, is 870,000 square miles, out of which 715,000 square miles are covered with ice. This inland ice is an enormous desert of snow and ice, rising to 8,900–11,500 feet and extending more than 1,250 miles in a north and south direction, permitting only near the coasts scattered high mountain peaks to protrude (called "Nunataks").

It is necessary to distinguish three different sorts of ice, the **land-ice** forming icebergs, originates from the land; the **sea-ice**, which is created in the sea, and **river-ice**, which latter is of quite subordinate consequence; it originates especially from the Northern Russian, Siberian and American rivers. In the Antarctic, river-ice does not exist at all.

Icebergs are found only in the Polar Sea, where glaciers are also found in the vicinity; in the Bering Sea no icebergs appear, nor in the Polar Basin; in the offing at Spitsbergen only rather small icebergs are found. The real domain of the icebergs is the waters east of Greenland, and especially on both sides of the Davis Strait. From these places the currents will carry the icebergs towards the great Newfoundland Banks, where they are found—often in enormous numbers—in the spring and in the early part of the summer, especially along the east side of the Banks. Here they meet warm water coming from the south, and will disintegrate. Only very seldom will a single great iceberg drift far out into the Atlantic. Among such abnormal drifts may be mentioned that of the last remnants of an iceberg, which was met only 550 miles west of Ireland. In 1902 a small piece of ice was seen the same day by two different boat-parties west of Scotland near the Island of Mull. Such pieces of ice have been carried eastward from the Great Banks by the Atlantic drift, but, as mentioned, such occurrences are very rare.

Near the west coast of Greenland icebergs have been measured, seldom surpassing 330 feet in height above water; from 70 great icebergs measured only four reached that height. However, only one-eighth of the volume of the icebergs protrudes above water, but this portion of the floating mountain is something of the finest to be seen, having often towers and spires, clefts and crevices, in which small cascades glisten in the sunshine; the colour of the ice changes from multitudes of light blue or greenish shades to the cleanest white, sea birds enliven the colossus, and at the waterline seas excavate big dark bluish green grottos.

It is dangerous to approach an iceberg with a boat or a ship, for, without warning, often the iceberg will turn over to seek another position of equilibrium. This process will usually be accompanied by breaking off of smaller or greater pieces of ice, which will be scattered over an extended area of the sea by the sudden movement of the ice masses.

Sea ice is frozen salt water; this does not congeal at 32° F. like fresh water, but at a lower temperature. Oceanic water with a salinity of 35 per mille has, for instance, its freezing point at 28·6° F. When the water congeals, the salt is disengaged, but if the freezing goes on very quickly, the salt will not be able to escape, but settles among the ice crystals.

Even under favourable conditions the ice formation in the sea will continue very slowly; an ice layer of several feet will be a hindrance for further freezing, for the ice is a bad conductor. It has been calculated that at a temperature of 9° F. below the freezing point of the sea water, an ice layer of 28 inches will be formed in 100 days, and 39 inches in all in 200 days. If the temperature be 36° F. below the freezing point, a thickness of 56 inches will be reached in 100 days, and 79 inches in 200 days. According to NANSEN the thickness of one winter's ice in the Polar Sea will scarcely surpass 39 to 59 inches, for, when the thickness has reached a certain point, the cooling from above and heating from below through relatively warm water layers will balance one another, and the thickness of the ice will not increase. However, the thickness may be increased by other means—even during summer time—when a heavy snowfall melts and again freezes as a nearly salt-free upper layer. In this manner, and also when the ice floes are pushed over one another, the thickness of the ice may increase. In the Polar Sea itself the extended icefields and big hummocks are formed in this way, their extent and height increasing by aid of the tremendous screwings, which are not occasioned by the press of the winds only, but also on account of changes of temperature. Such ice masses MAKAROFF has measured up to 43 feet in height.

At the South Pole the ice is not quite of the same structure, consisting mainly of snow congealed by pressure.

As the Polar ice to a wide degree follows the courses of the great ocean currents, these currents ought to be mentioned in order that the yearly movement of the ice may be understood. We suppose that the Gulf Stream—which bears its name wrongly, because this current does not derive from the Mexican Gulf, and consequently now, often is called the Antilles Stream—ceases running at the Newfoundland Banks, where it is mixed up with cold water from the Labrador current. From the Great Banks the westerly and south-westerly winds will cause a drift current north-eastward, called the Atlantic drift, a branch of which flows south and west of Iceland, then bending southward along the south-east Coast of Greenland. The main drift continues along the Norwegian Coast, but not closely along the coast —where the Baltic current flows north-west—but at a distance of about 50 miles from that coast; and continues partly along the west Coast of Spitsbergen, which it keeps free of ice for a great part of the year, and partly into the Barents Sea, north of Norway, where even this drift will force the edge of the ice towards the northern part of that sea. Along the east Coast of Spitsbergen flows an ice-carrying current southward, and also along the east Coast of Greenland flows an ice-carrying current, which carries the main portion of the ice masses of the Polar Sea; it rounds Cape Farewell and flows some distance into the Davis Strait along the west Coast of Greenland. In the western portion of the Davis Strait, the Labrador current flows southward, carrying the icebergs from the Davis Strait towards the Newfoundland Banks. In the Bering Sea the current flows northward and keeps the polar ice away from the Pacific Ocean.

It will be seen that, as a principal rule, ice-carrying currents follow the east Coasts, whereas the west Coasts are kept free of ice for great parts of the year by relatively warm north-going currents.

The North Polar Sea is filled with ice, which is carried towards lower latitudes by currents. The main outflow for the polar ice masses is along the east Coast of Greenland, and consequently the 310 miles wide sea between Greenland and Spitsbergen is covered with southward drifting ice in summer as well as winter. About one-third of all the ice, which is packed together in the Polar Basin, will be carried this way. Another but far smaller stream of ice flows west of Greenland through the Baffin Bay, and a third stream flows between Spitsbergen and Novaya Zemlya, and it has been calculated that 26 billion cubic yards are carried away each year from the Polar Sea to lower latitudes.

Through the Bering Strait the Polar Sea has no outflow; still ice is formed in the Bering Sea each winter, but it begins to recede northward in May.

Now, we ought to look a little closer upon the outflows from the Polar Sea, in order that we may understand how the ice does appear in those Arctic waters, where there may be a question of navigation in the summer time.

The **Kara Sea**, which is situated east of Novaya Zemlya, is the thoroughfare for ships bound for the great Russian and Siberian rivers Ob and Yenisei; however, this sea may be ice-filled all the year round, but usually the southern part will be open in August, for which reason the navigation is suspended until that month.

The Barents Sea is the water north of Norway; here the ice extends farthest in March–April, but it will never reach the Norwegian Coast. During the spring and summer the edge of the ice recedes northward and eastward until it stops at the northern part of Novaya Zemlya in September. Accordingly, the Coasts of Novaya Zemlya may be reached, and in some years even Frans Joseph Land, but this is exceptional.

The west Coast of **Spitsbergen** is almost always free of ice. A rather warm current from the south keeps the ice off. It is a general rule in the northern seas that the west Coasts are rather free of ice, whereas the east Coasts are blockaded. In April and May the ice comes from the east round the southern point of Spitsbergen, and it may now block the west Coast a few months, but September is free of ice and forms the forerunner for the ice-free winter season.

Along the north coast the ice begins to disappear in June, but still there will be a risk that the polar ice may close in again to the Coast. In August and September the land will be rather free of ice, even if the polar ice is not far away, but in October the ice will again set in against the Coast.

The east Coast is, so to say, all the year round encumbered with impenetrable ice; only very seldom the Norwegian sealers have been able to circumnavigate the islands, although of later years this has been done every year; it may be regarded as impossible from September onward.

As already mentioned, the main outflow of the polar ice takes place along the **east coast of Greenland,** so that this coast is almost always encumbered with ice, decreasing later as it proceeds southward. Easterly winds may press the ice hard upon the coast, whereas westerly winds may scatter the ice and drive it far seawards. In May the ice in some years has extended nearly half-way to Norway.

Along the outer edge of the ice is a wide belt of open ice; in the northerly region further in are found extended ice-fields, up to 30 miles in width, and often separated by broad channels. Owing to the action of the polar storms the ice will often screw, and screwed-up ice to the height of 26 to 33 feet is a normal feature in those parts.

In the course of the summer as a rule the ice belt will gradually diminish, and in the autumn the whole coast from the south point of Greenland northward as far as between Angmagsalik and Scoresby Sound may be free of ice. The land floe in Scoresby Sound may, for instance, break in the last half of July and further north the ice may break in the beginning of August, but shortly afterwards the new ice only will commence to appear.

Off Angmagsalik lies a close ice belt during the whole winter, in the spring and in the first part of the summer, hindering navigation. In June the ice may commence to spread; in July the Colony may be reached in some years, but better in August, and in September as a rule the Coast will be free of ice. October is the month with least ice, and only quite occasionally ice has been seen in this month, but it is now so dark and so stormy that navigation to the Colony is impossible. On the average the ice will appear from the north on the 6th November, and it will remain all the winter. Still, essential deviations may occur and the ice may appear far later; for instance, in 1925 it did not show off Angmaksalik until the 9th December.

It has often happened that ships have been driven into the ice off the east Coast of Greenland and have been exposed to very serious screwings, but regarding the great number of vessels that have been beset by the ice, amazingly few disasters have occurred. Only to mention some of the most momentous ice drifts in this century, I shall state the following:—

In 1901 the Norwegian steamer *Laura* was beset in the ice in those parts, and not until August 22nd did she reach open water. In 1903 the sealer *Sostrene* was beset and got free again August 27th. In 1906 and 1907 it was impossible for *Laura* to penetrate to the coast through the close-packed ice. In 1907 *Laura* froze into the ice in August and drifted southward; after great efforts the steamer got free in the last part of September, but she had been carried as far south as Latitude 69°. In 1911 *Laura* drifted in the ice, exposed to heavy screwings. On an average the ice drifted 5·8 miles per diem; often the ship was close to the land, but she was always carried away from the coast. On the 9th of September the edge of the ice was reached.

From these and other reports it will be seen that as a rule the ships will get free of the ice off Scoresby Sound, where the current, which is more easterly in this place, in connection with the outflowing water from Scoresby Sound, contributes to a dispersing of the ice.

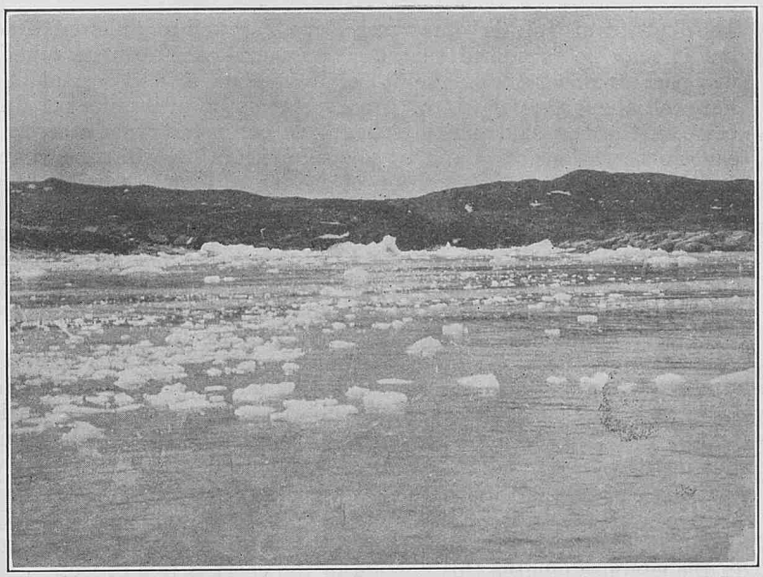
From the efforts of expeditions and others to reach the east Coast

of Greenland, it shows that the mean date for reaching land south of Shannon Island is July 20th, and north of that island a little later. From 23 cases, in which the coast was reached, this occurred 4 times in the last half of June, 5 times in the first half of July, 7 times in the last half of July and 7 times in the first half of August.

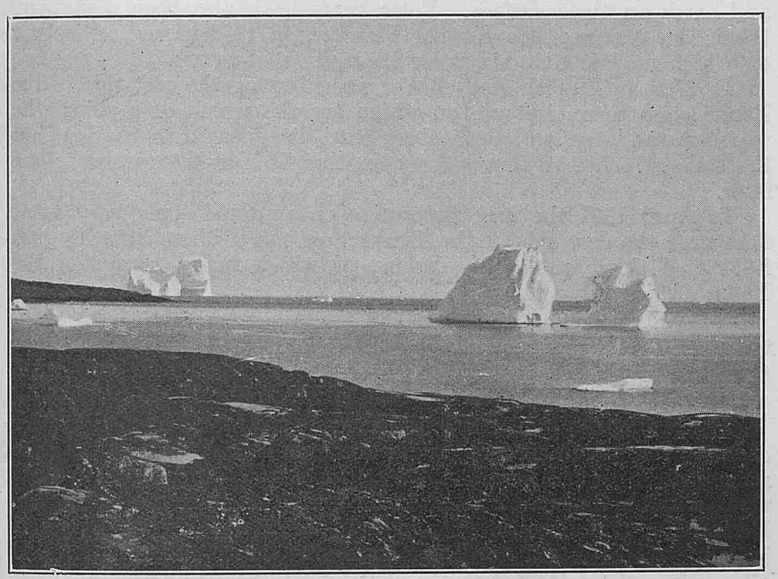
The ice belt along the east Coast of Greenland may get so broad that the ice extends to **Iceland.** For every year, when it is quite free of ice here, there will be four years with ice remaining for a shorter or longer period, most frequently for only a few days; however, it may happen that the ice remains more than three months. During the latter years very little ice has appeard at the coasts of Iceland. The months in which the ice most frequently is met with are March–June, hardly ever September–December, and in October no ice at all has been observed near Iceland in the last 100 years. The ice will first touch land at the north-west point of Iceland, then extends eastward along the north Coast, and may in odd years fill the east Coast; only very seldom the ice has extended along the south Coast.

The current, that follows the east Coast of Greenland in a southerly direction, rounds Cape Farewell and continues for some distance into the Davis Strait, along the west Coast of Greenland, after which it turns westward in the Strait. The current carries the Polar ice along from the east Coast; this ice is now called the "storis."* As the south-east Coast is generally rather free of ice during the autumn, the same period will also be free of ice off the west Coast of Greenland.

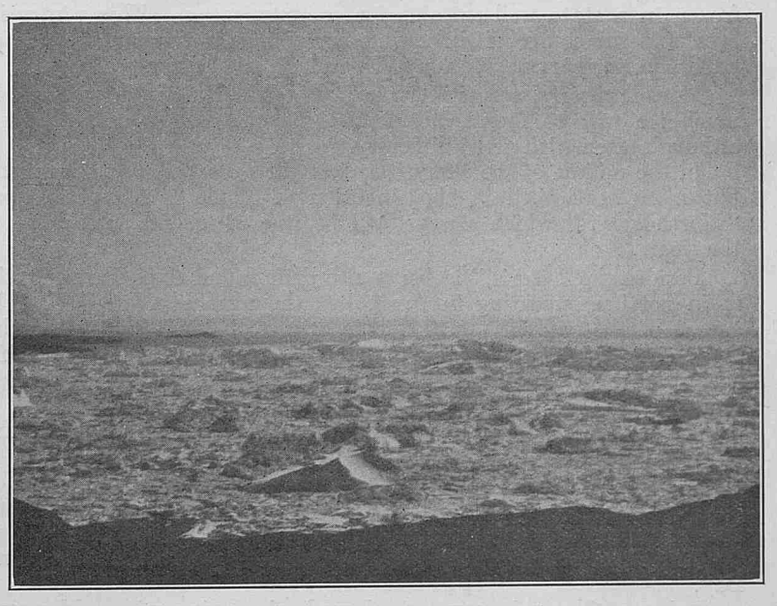
* Literally translated, "great ice."



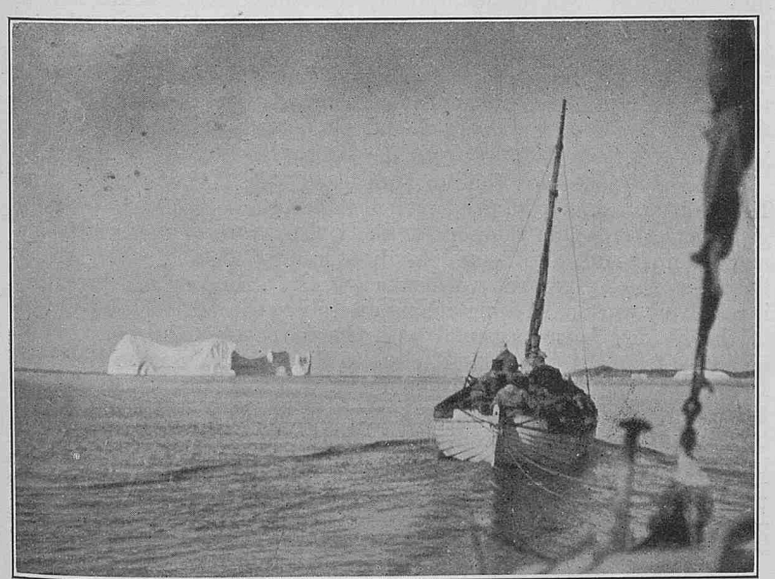
Spoils of icebergs after a pouring-out of the Jakobshavn glacier-fjord.
D. la Cour photo, 1925.
Compare the hummocks of ice with the houses on the shore. The pieces in the foreground are of the size of ordinary boats.



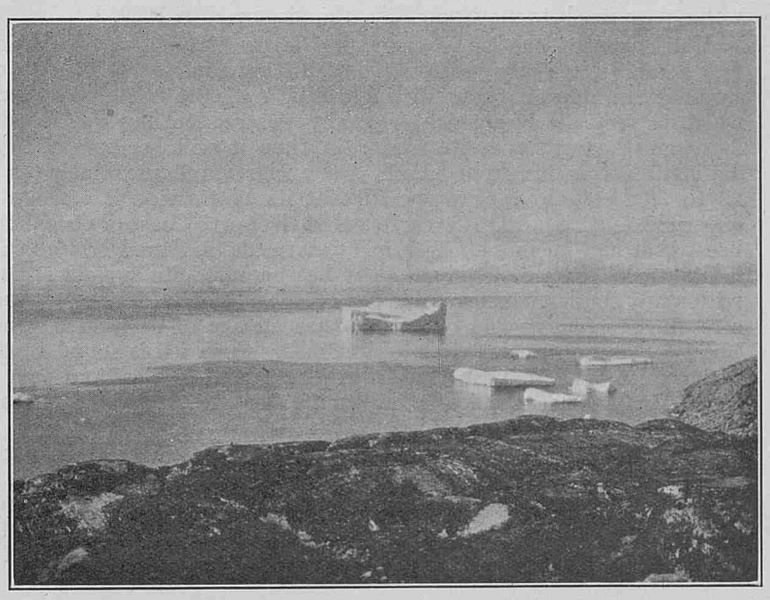
Icebergs in Disko Bay.
D. la Cour photo 1925.



The outflow of the Jakobshavn glacier-fjord into Disko Bay.
F. Froda photo, 1923.



Icebergs in Disko Bay.
D. la Cour photo, 1925.



Icebergs in Disko Bay.
F. Froda photo, 1923.

The first lot of "storis" may pass Cape Farewell at different times, but it may be presumed that the vanguard—which on an average will pass Angmagsalik on the 6th of November—will appear at Cape Farewell about January 14th. An average speed of 9 miles per diem between the two said positions has been computed from a series of exact observations. By and by new supplies of ice will come round, and in April the normal position of the ice will be a 60 miles broad belt, extending along the coast to some place between Frederikshaab and Godthaab. In May the belt is still broader, and may extend to the vicinity of Godthaab. By this time the maximum extent should have been attained. June showing signs of decrease, still the ice may extend as far as to Sukkertoppen in that month in years with very ample ice. In July the ice continues to decrease, and in August the entire south-west Coast may be free of ice; generally the "storis" disappears in the course of this month. Even though the main rule is, that from September to the close of the year, no ice will be present along the west coast of Greenland. Ice may be found, but only in very few instances past Julianehaab Bay.

North of Sukkertoppen the "storis" will never reach, but here the ice from the western side of the Davis Strait—called the "West ice"—may extend close to the coast, especially in the spring, but in the summer months this portion of the coast is free of ice.

In July and August the icebergs will commence to drift out from the ice-fjords near Disko and north of that island; the sea may then be quite a confusion of big icebergs, and they may stop navigation.

In January the winter ice will form about Disko and northward; it is of great consequence for the inhabitants that the ice layer be frozen in a state well suitable for communication. This winter ice breaks in the course of the spring, so far that navigation may go on until the northernmost colony, Upernivik, at the end of May.

More northerly, across Melville Bay, where the route for Thule is, much ice will be found, but from July the Bay may be passed, although often with great difficulty.

In the middle of the Baffin Bay ice will almost always be present, but more northward in the direction of Thule is found an open "North-water" which always will be free of ice for some time of the year.

Besides the "storis," icebergs also drift round Cape Farewell, the main portion appearing in April, but the number decreases in the course of the summer, until a new drift will occur in August, this latter supply is still next to nothing compared with the spring drift; the number of icebergs now again decreases during the next few months.

When the icebergs are present in maximum number, 700 have been counted at one time from a ship in the Julianehaab Bay.

In the whole Polar Basin and between the islands north of Canada ice will mostly be found all the year round; only in Hudson's Bay will the sea be free of ice in the summertime, so that ships may penetrate the Hudson's Strait for navigation to places in the Hudson's Bay.

Robeson Channel may get cleared of ice in quite odd years. Northerly wind may clear out the Kennedy Channel and the Kane Basin, whereas south-westerly gales will keep the ice back. Open water may reach to Latitude 82°; this occurred in 1920.

Consequently, the ice in the Polar Sea, north of these localities, may remain for many years without drifting southwards. Different sorts of ice may be here distinguished, *e.g.*, the **"Sikussak ice,"** which is very old ice, which originally was sea-ice, but which after 2–5 years has grown quite fresh; in time it will be impossible to distinguish this ice from glacier ice. The maximum thickness is 23 to 26 feet, and it is supposed that its bottomside is constantly exposed to melting. This ice is found at the north Coast of Greenland, because it can be formed only in quiet fjords, and real Sikussak ice is about 25 years old, only then it has acquired its typical surface with many small lakes surrounded by steep walls of ice, formed through screwings. **Many years old sea ice** has an age of at least 5 years, but less than 20 years; it is quite fresh. Such ice is found in the Independence fjord, near Humboldt glacier and in the fjord east of Cape York, where the ice is broken five or six times in a century only.

The Big Lane is a vast stretch north of Grant Land in about Latitude 84½°, its eastern side touching the coast of Greenland at Cape Bridgman. It is supposed that all the ice in the Polar Sea, north of the Big Lane, drifts along the east Coast of Greenland to the south towards the Atlantic Ocean, whereas the ice south thereof is pressed against the north Coast of Greenland and drifts through Robeson Channel and further southwards along Ellesmere Land into the Baffin Bay.

Palæocrystic ice. When north of Greenland big floes collide, screwings, many feet high, are formed. As the years go on, the snow-drifts will settle round these projections, with the result that mounds of several feet in height are formed upon the ice. By and by the floes will drive towards the Robeson Channel, and in the process of time only the original screwing will remain, but the ice therein has grown granulous like glacier ice, although it has been formed in the sea. The Kennedy Channel forms a bulwark against the penetration southwards of this ice.

As already mentioned, the icebergs break off from the Greenland glaciers and drift seawards; in the winter time they are stopped by the firm ice layer, but at an early time in the spring they will recommence their course accompanied by the floes along the Coast of Labrador towards the **Newfoundland Banks.** The icebergs follow the current. Some will take their way along the Coast of Newfoundland, whereas the main portion drifts along the east side of the Banks (the lesser number passing the Banks themselves), and may be found in enormous multitude in the springtime. The month of May is regarded as the culmination of the ice season; from the middle of June the drift decreases, and in the autumn the sea will usually be free of ice. The icebergs continue to the south point of the Banks, where they meet the warm Antilles Stream (Gulf Stream), which carries them north-eastwards and soon brings about their disintegration.

These icebergs may be many years old and will often carry sand and earth on their surface. Polar bears have also been seen upon them; for instance, the steamer *Hannover* in 1903 passed an iceberg on which no less than six polar bears were observed.

In 1794 an English Man-of-War passed along the east side of the Banks close to an iceberg, on which lay the wreck of a ship; the weather was hazy, and the iceberg soon disappeared in the fog, but the same wreck was observed by another Man-of-War a short time later.

In April 1851 the brig *Renovation* encountered some very great floes near the east side of the Banks; on one of these floes lay two full-rigged ships, probably whalers, of which many navigated the Baffin Bay in those times.

Quite a curious case happened to the American ship *Ajax*, which in March 1826 was surrounded by icebergs and floes upon the Banks. Occasionally the ice lay so close upon the ship that the crew went out upon it, a certainly unique case in the Atlantic.

The Bering Sea is in April still filled with an impenetrable barrier of heavy ice, which extends to the Coasts of Kamchatka, but it does not reach the Kuril Islands. Owing to many years' experience the whalers follow the coast of Asia in the spring when going northwards. During May and June the edge of the pack retreats northwards, and in July will be found north of the Bering Strait, where the sea is always free of ice from August. The ice will never retreat far north of the Bering Strait, but in August ships may navigate to the stations on the north Coast of Alaska through a narrow belt of open water. In September the ice has its extreme northerly position, but already now the new ice will form so quickly that ships, which might happen to be north of the Bering Strait in October, ought to hurry southward lest they should be locked up in the ice. If a ship be taken by the ice here, she will scarcely get free again, but will drift with the pack ice into the Polar Sea, where the ice moves slowly westwards towards the outlet between Spitsbergen and Greenland, taking four to five years to cover the distance from the Bering Strait to Spitsbergen.

Quite different from the northern ice-drift is that of the Southern Hemisphere, where the ice-covered Antarctic Continent produces gigantic icebergs; in those parts the icebergs are of uniform height and often several miles long. As these icebergs float in water, which is cold at the surface but warmer below, the ascending melting water is relatively warm. In approaching an iceberg the surface temperature of the sea has been measured with the result that the temperature increased from 31° F. to 32° F. close to the iceberg. In the Northern Hemisphere the icebergs may attain an age of some few years, whereas those near the South Pole are estimated to last about ten years; this is not improbable, because of their enormous dimensions—for instance, an "ice-island" 40–60 miles in length was observed in 1884. These icebergs will drift northwards and may reach about Latitude 45°. Near Cape Horn icebergs have occasionally been seen, likewise not far from the south point of Africa.

It will be seen that the ice in the Polar Sea has quite regular yearly movements, extending at certain times and retracting at others within certain limits, as it shows by the annexed charts, which cover a 15-years' period. Further, a portion of the ice will be carried away southwards each year by the currents, and always from the same places; this ice will disintegrate. That process has gone on in the same way as far back as records are available. It is the big currents of the sea that command the routes of the ice, those currents whose drift and speed is again directed by the sun, that great renewer and conductor of all that goes on upon the surface of the Earth.

Quite apart from Arctic ice features, much ice has appeared in European waters during cold winters. As it is very seldom that ice is encountered along the Coast of Great Britain or in its rivers, it may be of some interest to mention some of the years when such has happened:—

1434 (first part of the year). In England called "the Winter with the great frost." The Thames was frozen to Gravesend.

1538. The Thames was frozen up (presumably the upper part of the river is meant).

1565. The Thames was frozen up.

1608. The Thames was frozen up and shops were established on the ice.

1610. People could walk upon the ice of the Thames.

1665. The Thames was frozen up.

1684. On the Thames there was 11 inches of ice. The sea off England, France, Belgium and Holland was frozen some miles out from the coasts. Presumably this ice has been drift-ice from the rivers only.

1709. One of the severest winters known; it is told that the frost in England lasted from Christmas until the end of March. The sea was covered with ice in some places at the Coasts. The Thames froze up.

1716. For several miles' distance the Thames froze up so well that shops were established and market was held upon the ice.

1740. At the coasts of England the sea froze (drift ice from the rivers?) and was still covered in March. The Thames was frozen.

1763. The Thames froze up and suffered carriages to move on the ice.

1776. Off Havre the sea was ice-filled to the horizon with drift-ice from the rivers. Medway was crossed upon the ice on the 28th January.

1789. The Thames was frozen over. At Christmastime shops were erected on the ice. Even in Ireland the rivers were covered, *e.g.*, the Shannon froze at Limerick. At the north and west coasts of France thick ice was found in more places.

1802. In the Thames drift-ice stopped the navigation.

1820. Ships were frozen in on the Thames.

1855. The Thames frozen up.

1881. January 22nd. The Thames frozen up above Windsor, which had not happened since 1855.

1895. In the Naval port of Brest there was ice on February 10th, which even the oldest could not remember.

During the last few years the drift of Polar ice has been rather small, especially near Iceland and in the Davis Strait, compared with former years. Presumably we shall at some future time experience a period when the drift of the ice will increase and create difficult years.

ICE IN THE WESTERN NORTH ATLANTIC.

Compiled by J. Hennessy, Senior Nautical Assistant.

Since the inauguration of the North Atlantic Track Convention and the International Ice Patrol Service, particulars of which are given later, the danger of ice to vessels trading between European and United States ports has been reduced to a minimum, so much so that ice is rarely reported by these vessels throughout the year.

The courses of ships bound to Canadian ports must necessarily pass through the ice region, and it is mainly from "Ice reports" returned by ships of the Voluntary Observing Fleet in this trade, together with the Bulletins issued by the International Ice Patrol Service, that the following monthly summary is compiled of Ice Conditions in the Western North Atlantic during 1925.

Chart A shows the monthly limits within which reports of ice have been received by the Meteorological Office during the year 1925, also the monthly limits reached by ice over the period 1901–25. It is pointed out that the limits defined on this chart are obtained from reports of ice sighted by vessels the majority of which are following tracks specially laid down to avoid it; it is therefore possible that ice may exist outside these limits.

The publication of monthly ice limits and the latest reports of ice is useful for the information of ships leaving Europe for Trans-Atlantic ports. Commanders are therefore urged to continue to return Ice Report (Form 912) regularly. A Nil return is desired if no ice is seen.

Ice Conditions in 1925.

January. In the River and Gulf of St. Lawrence light to heavy closed packed ice was reported everywhere throughout the month.

In the first half of the month no ice of any description was reported in the Western North Atlantic. On January 26th the Norwegian steamship *Idefjord* reported heavy field ice extending in a north and south direction as far as could be seen from Latitude 45° 50′ North, Longitude 58° 02′ West, to Louisburg Harbour, Cape Breton.

On January 29th in Latitude 48° 25′ North, Longitude 50° 03′ West, steamship *Westport* observed a scattered field of slush ice and three small bergs, also passed large growlers in Latitude 48° 02′ North, Longitude 50° 13′ West. On the same date steamship *Digby* encountered patches of field ice in Latitude 45° 20′ North, Longitude 58° 37′ West, and passed through patches of broken slob ice in Latitude 44° 50′ North, Longitude 60° 43′ West.

On January 1st steamship *Stavangerfjord*, in Latitude 45° 22′ North, Longitude 59° 03′ West, reported patches of slob ice, and from Latitude 45° 14′ North, Longitude 59° 25′ West, to Latitude 45° 10′ North, Longitude 59° 40′ West, passed through open pack ice from six to twelve inches thick, extending in a north and south direction as far as could be seen.

On January 24th the sailing vessel *Acadia* was crushed in the ice off Madame Island, Cape Breton.

On the 28th, steamship *Dunston* and on the 31st steamship *Willaston* were held fast in the ice off Louisburg, Cape Breton.

February. Both in the River and Gulf of St. Lawrence heavy close packed or open ice was reported from all points throughout the month. In the western North Atlantic an extensive field of ice was reported on the 7th between Halifax, Nova Scotia, and Latitude 44° 46′ North, Longitude 59° 45′ West, reaching in a north and south direction as far as could be seen.

On the 10th, field ice was reported between Latitude 45° 30′ North, Longitude 57° 50′ West, and Latitude 45° 02′ North, Longitude

59° 35′ West. Further east, between the 9th and 21st of the month, several reports were received of large fields situated within the area bounded by the 46th and 49th parallels and the 46th and 49th meridians.

On the 28th a large berg was reported in Latitude 47° 30′ North, Longitude 47° 35′ West.

March. In the River and Gulf of St. Lawrence light open or heavy closed packed ice was reported from all points.

In the western North Atlantic the large fields of ice previously reported dissipated early in the month. On the 2nd and 12th bergs were reported in an area bounded by the 46th and 49th parallels and the 47th and 49th meridians.

The U.S.C.G. Cutter *Tampa* sailed from Boston on the 23rd to take up Ice Patrol duties for the protection of vessels using the Trans-Atlantic steamship routes during the ice season. The U.S.C.G. Weekly Bulletin, No. 16–25, dated April 18th, 1925, states :—

" The scientific observations made during the first cruise of the *Tampa* on the International Ice Patrol divulged some interesting facts. One of the most striking was the decided movement northward of the ' cold wall ' and another is the disappearance of the 32° F. line on the southern part of the Grand Banks with only a slight touch of cold water along the 44th parallel. It is very evident that the Labrador current is very weak and that the influence of the Gulf Stream is felt further north even to the extent of overlapping on the Banks. The absence of Arctic water, the weakness of the Labrador current, the overwhelming effect of the Gulf Stream and the mild winter conditions off the coast of Labrador, etc., have no doubt been responsible for the total absence of bergs below Latitude 46° North to date. From March 26th to 31st the patrol vessel encountered about 50 per cent. fog."

April. In the River St. Lawrence the unusually mild weather experienced during the first week of the month assisted the Government ice breakers in clearing the channel to Montreal and the comparatively little ice reported lower in the Gulf indicates an early opening of navigation on the St. Lawrence.

On the 13th the Canadian Signal Service reported no ice from Montreal to Gaspe, and on this day the steamship *Wabana* arrived at Montreal from Sydney, Cape Breton. Towards the end of the month heavy closed packed ice was reported from Heath Point and South Point Anticosti and Belle Isle reported heavy open ice everywhere.

The Canadian Government icebreaker *Mikula* took up ice patrol duties in the Gulf.

In the western North Atlantic, Copenhagen reported on the 14th " Closed Ice Limit 100 miles off shore Cape Farewell," and on the 24th " Ice limit, open ice 150 miles off Cape Farewell."

Frequent reports of ice on or in the vicinity of the Grand Banks were received throughout the month. Between the 4th and 13th there were thirteen reports of bergs and growlers sighted between Latitudes 45° 25′ and 48° 45′ North, and Longitudes 50° 23′ and 48° 25′ West. On the 14th the Ice Patrol Cutter sighted six bergs and seven growlers between Latitudes 48° 15′ and 48° 41′ North and Longitudes 49° 13′ and 49° 55′ West. From the 16th to the 20th several bergs were reported between Latitudes 47° 50′ and 48° 47′ North, Longitudes 47° 16′ and 49° 40′ West. On the 21st and 22nd the Ice Patrol Cutter sighted eight bergs and several growlers between Latitudes 47° 11′ and 48° 09′ North, Longitudes 47° 18′ and 48° 36′ West. There was also reported on the 22nd five bergs between Latitudes 49° 24′ and 49° 52′ North and Longitudes 46° 45′ and 48° 24′ West. From the 22nd to the 30th, twenty-one bergs and several growlers were reported between Latitudes 45° 38′ and 48° 50′ North and Longitudes 46° 44′ and 51° 21′ West. On the 29th, Ice Patrol Cutter reported dense fog covering the Patrol Area for last four days. The most southernmost berg reported during the month was in Latitude 45° 38′ North, Longitude 47° 51′ West, on the 30th.

May. During the first half of the month there were a few reports of ice in the lower end of the Gulf of St. Lawrence, but later " No ice " was reported from all points except the Straits of Belle Isle, where numerous bergs and growlers were sighted.

On May 9th, Copenhagen reported, " Polar Ice in Davis Strait from Cape Farewell to Ivigtut in Julianehaab Bay 30 miles off shore."

During this month the maximum number of reports were received of ice on or in the vicinity of the Grand Banks. The limits in which ice was reported lay between Latitudes 44° 02′ and 52° 34′ North and Longitude 40° 09′ West and the east Coast of Newfoundland. Many bergs were reported close into the shore on the east and south-east Coast of Newfoundland.

The southernmost berg reported was sighted in Latitude 44° 02′ North, Longitude 48° 56′ West, on the 30th, so that the ice did not drift so far south as is normally the case in this month. No ice was sighted on the New York routes, the nearest report being that of a berg on the 26th in Latitude 45° 35′ North, Longitude 40° 09′ West, which is just north of the westbound extra southern Track from Inishtrahull then in force.

June. No ice was reported in the Gulf of St. Lawrence other than in Belle Isle Straits, where many bergs were reported throughout the month. On June 25th, S.S. *Regina* sighted between Belle Isle and Pt. Amour eighteen bergs and several growlers, and 21 miles westward of Point Amour two bergs.

On June 5th, Copenhagen reported " Ice free 40 miles off Cape Farewell."

In the western North Atlantic the limits for the month in which ice was reported lay between Latitudes 41° 58′ and 52° 34′ North, Longitudes 40° 06′ and 55° 21′ West. Bergs were numerous on and in the vicinity of the Belle Isle routes. On June 5th steamship *Kalimba*, steaming on the Pentland Firth Track, sighted ten bergs and one growler between Belle Isle and Latitude 52° 13′ North, Longitude 54° 00′ West. The southernmost berg sighted during the month was reported by the Ice Patrol Cutter on June 16th in Latitude 41° 58′ North, Longitude 49° 15′ West, disintegrating rapidly. North of the 42nd parallel over the Grand Banks bergs were reported in large numbers, being especially menacing to ships using the Cape Race Routes. On the 24th, Cape Race reported the area between Latitudes 45° and 47° North, Longitudes 47° and 49° West, contained ten bergs, and the area between Latitudes 48° and 49° North, Longitudes 50° and 53° West, contained eleven bergs. Several ships reported dense fog when traversing the ice zone during the month.

On June 23rd, during a dense fog, steamship *Saugus* went on to and was held fast for over an hour on the submerged ledge of an iceberg, the position of which was reported the previous evening by the Ice Patrol Cutter as approximately Latitude 42° 20′ North, Longitude 48° 13′ West. At about noon on the 24th, in Latitude 42° 27′ North, Longitude 48° 08′ West, the Patrol Cutter observed this same berg to capsize and break in half, one part remaining intact and the other breaking into a great number of growlers.

July. Throughout this month ships navigating the St. Lawrence report large numbers of bergs in the Straits of Belle Isle. *Manchester Mariner*, steaming through the Straits at dawn on July 20th in calm weather, was passing a large grounded berg 2½ cables distant when it commenced cracking and emitting loud reports for about 20 minutes, then suddenly capsized. This berg, being in a state of unstable equilibrium, was apparently capsized by the wash action of the passing ship, and shows the necessity of giving bergs a wide berth at all times.

East of Belle Isle vessels using the northern routes continue to report large numbers of bergs on or near the tracks.

The bergs reported in the previous month on or in the vicinity of the Grand Banks, dissipated quickly, for during the first week of this month the Ice Patrol Cutter scouring the Banks neither sighted nor received any report of ice, south of the 48th parallel. Between the 48th and 50th parallels and the 48th and 50th meridians, only three reports of ice were received during the month.

On the 12th, there being no ice likely to constitute a danger to vessels using the United States routes, the International Ice Patrol was discontinued for the season.

August. Throughout this month frequent reports were received of bergs in the Straits of Belle Isle. East of Belle Isle, ships using the northern routes report many bergs on the tracks extending from Belle Isle to Longitude 50° W.

On the 6th a medium-sized berg was reported on the Cape Race to north of Ireland route (Track F) in Latitude 49° 07′ North, Longitude 46° 54′ West. This was the only ice reported south of the 50th parallel during the month.

September. No ice was reported this month south of the 51st parallel. Ships using the Belle Isle Route report the presence of bergs in Belle Isle Strait and eastward to the 53rd meridian.

The Labrador Mission Ship *Harmony*, proceeding northward along the east Coast of Labrador, reported twenty-five bergs between Latitude 53° and 57° 20′ North.

October. A few reports were received this month of ice in the Belle Isle Strait and eastward on the northern tracks to 54° West.

Harmony, proceeding south down the east Coast of Labrador, sighted seventeen bergs between the 58th and 55th meridians.

November. On the 19th two bergs were reported in the Straits of Belle Isle, and on November 30th Quebec reported :—" Ice in River St. Lawrence making fast Montreal to Gulf, Temperature zero."

Harmony, bound for St. John's, Newfoundland, sighted seven bergs between Latitudes 55° and 54° North, no further ice being seen for remainder of passage.

December. On December 11th navigation closed for the season on the River St. Lawrence. On the 12th the Canadian Signal Service reported :—" Montreal to Matane light close packed ice everywhere. Eastward to Martin River light close packed ice everywhere, other points no ice in sight."

No reports other than the above were received.

NORTH ATLANTIC TRACKS.

The CUNARD STEAMSHIP COMPANY, through which communication on General Track matters between the British Lines pass, promulgated particulars of amended routes dated October 1924, since when there has been no alteration. The following is a copy of the track circular :—

North Atlantic Lane Routes, United States.

Track " A " (extra Southern).

Westbound.—From April 1st to June 30th (both days inclusive).

Steer from Fastnet or Bishop Rock on Great Circle course, but nothing South, **to cross the meridian of 47° 00′ W. in Latitude 40° 30′ N.**, thence by either rhumb line or Great Circle to Boston Light Vessel or to a position South of Nantucket Light Vessel.

Eastbound.—From March 25th to July 7th (both days inclusive).

From the position of 70° 00′ W. and 40° 10′ N. or from Boston steer by rhumb line **to cross the meridian of 47° 00′ W. in Latitude 39° 30′ N.**, and from this last position nothing North of the Great Circle to Fastnet or Bishop Rock.

Track " B " (Southern).

Westbound.—From February 1st to March 31st and from July 1st to August 31st (both days inclusive).

Steer from Fastnet or Bishop Rock on Great Circle Course, but nothing South, **to cross the meridian of 47° 00′ W. in Latitude 41° 30′ N.** thence by either rhumb line or Great Circle to Boston Light Vessel or to a position South of Nantucket Light Vessel.

Eastbound.—From February 1st to March 24th and from July 8th to August 31st (both days inclusive).

From the position of 70° 00′ W. and 40° 10′ N. or from Boston steer by rhumb line, **to cross the meridian of 47° 00′ W. in Latitude 40° 30′ N.** and from this last position nothing North of the Great Circle to Fastnet or Bishop Rock.

Track " C " (Northern).

Westbound.—From September 1st to January 31st (both days inclusive).

Steer from Fastnet or Bishop Rock on Great Circle course but nothing South, **to cross the meridian of 50° 00′ W. in Latitude 43° 00′ N.** thence by either rhumb line or Great Circle to Boston Light Vessel, or to a position South of Nantucket Light Vessel.

Eastbound.—From September 1st to January 31st (both days inclusive).

From the position of 70° 00′ W. in 40° 10′ N. or from Boston steer by rhumb line, **to cross the meridian of 50° 00′ W. in Latitude 42° 00′ N.** and from this last position nothing North of the Great Circle to Fastnet or Bishop Rock.

General Instructions.

Vessels bound to or from United States ports calling at Halifax have the option of following either the Canadian or United States Seasonal Tracks to or from that port passing 40 miles South of Sable Island Westbound, and 60 miles South of Sable Island Eastbound, when proceeding on U.S. Tracks; or 20 miles South of Sable Island Eastbound, when proceeding on Canadian Tracks.

Vessels bound direct to Portland (Maine) may follow the Canadian Seasonal Tracks.

When courses are changed at the intersections of meridians any time before or after noon, Commanders must note in their logs both distances to and from the meridians that the ship has sailed from noon to noon, and not the distance from the position at noon the day before to the position at noon the day after the meridian is crossed.

The date on which tracks change is to apply to the meridian of the Fastnet for Westbound steamers and the meridian of 70° 00′ W. for Eastbound vessels.

Communications on General Track matters between the British Lines will pass through the Cunard Line. The Holland America Line will communicate with the Continental Lines excepting that during the Ice Season the Cunard Line will communicate direct with all Lines.

With regard to proposals for changes in Tracks owing to prevalence of ice the Cunard and White Star Lines in Liverpool will confer and decide dates on which changes are to become operative, advising lines by telegraph. Lines undertake to give immediate instructions to their steamers in accordance with such advices.

North Atlantic Lane Routes, Canada.

Track " D."

From 15th February to 10th April (both days inclusive).

Westbound.—Steer from the Fastnet, Inishtrahull, or 10 miles South of the Bishop Rock on Great Circle Course, **to cross the meridian of 47° W. in Latitude 42° N.** thence to Halifax or other Port, passing not less than 40 miles South of Sable Island.

Eastbound.—Steer from Halifax or other Port **to pass 20 miles South of Sable Island to Longitude 47° W. in Latitude 43° N.**, thence on the Great Circle course to the Fastnet, Inishtrahull, or 10 miles South of the Bishop Rock.

Track " E."

From 11th April to 15th May, or until the Cape Race Route clear of ice, and November 15th to February 14th.

Westbound.—Steer from the Fastnet, Inishtrahull, or 10 miles South of the Bishop Rock on the Great Circle Course **to the meridian of 50° W. in 45° 55′ N.** thence to Halifax or the Gulf of St. Lawrence.

NOTE.—The DONALDSON LINE reserve the right to cross Longitude 45° W. in Latitude 45° N. on this track.

Eastbound.—Steer from Halifax or the Gulf of St. Lawrence **to cross the meridian of 50° W. in Latitude 45° 25′ N.**, thence on the Great Circle course to the Fastnet, Inishtrahull, or 10 miles South of the Bishop Rock.

Track " F."

From 16th May to the opening of Belle Isle Route.

Westbound.—Steer from Fastnet, Inishtrahull, or 10 miles South of the Bishop Rock on a course 10 miles North of the Great Circle track until approaching Cape Race, then steer a course to pass 10 miles South of Cape Race thence to the St. Lawrence

Eastbound.—Steer from position 25 miles South of Cape Race on a course 10 miles South of the Great Circle track until approaching Fastnet, Inishtrahull, or 10 miles South of Bishop Rock.

Track " G."

Belle Isle Route.—From the opening of the Straits of Belle Isle to November 14th.

Westbound.—Steer from Fastnet, Inishtrahull, or 10 miles South of Bishop Rock on a course 10 miles North of the Great Circle track until approaching Belle Isle.

Eastbound.—Steer from Belle Isle on a course 10 miles South of the Great Circle track until approaching Fastnet, Inishtrahull, or 10 miles South of the Bishop Rock.

General Instructions.

Vessels bound to or from U.S. Ports **from or to the North of Ireland** have the option of following the Canadian Seasonal Tracks D, E, and F, remaining on Track F during the operative dates of Track G.

On Tracks E and F vessels passing 40 miles South of Sable Island Westbound, thence to position South of Nantucket, and Eastbound from position 40° 10′ N. in 70° 00′ W. to position 60 miles South of Sable Island.

On Track D Westbound proceeding by rhumb line from position 42° 00′ N. in 47° 00′ W. to position South of Nantucket, and Eastbound from position 40° 10′ N. in 70° 00′ W. to position 43° 00′ N. in 47° 00′ W.

Commanders on encountering ice have permission to deviate from these tracks and after the end of October to leave the Belle Isle for the more Southerly route at their discretion according to weather conditions

The Lines have the option of continuing the use of the Belle Isle Route after November 14th should they wish to do so.

Admiralty Route Charts showing the above tracks are published in two sections:—

Chart No. 2058b showing Lane Routes South of Ireland and English Channel.

Chart No. 2058c showing Lane Routes North of Ireland.

That section of the routes running through the ice region in operation for the month is shown on the ICE CHART published with each number of THE MARINE OBSERVER.

International Ice Patrol Service.

At the International Conference for Safety of Life at Sea, held in London in 1913, it was decided to establish and maintain a regular patrol during the ice season of each year, the United States Government being asked to organise and manage the service. The Patrol is entrusted to the United States Coast Guard, who each year detail two Coast Guard Cutters to maintain a continuous patrol during the months of March, April, May and June, or as much longer as necessary, *i.e.*, until the danger of ice to ships using the routes no longer exists.

It is the duty of the Patrol Vessel to determine the southerly, easterly and westerly limits of the ice and to keep in touch with these fields as they move to the southward, in order that wireless messages may be sent out daily, giving the whereabouts of the ice, particularly the ice that may be in the immediate vicinity of the regular North Atlantic Lane routes. The Patrol Vessel also keeps track of every approaching vessel between the 43rd and 55th meridians, and all special ice information will be furnished on request to such vessels.

Commanders of ships bound either east or west are earnestly invited to co-operate in the work of the Patrol by reporting their position, course, and speed, and sea surface temperature every four hours, when navigating in the area bounded by the 39th and 48th parallels of Latitude and the 43rd and 55th meridians of Longitude.

Gulf of St. Lawrence Ice Patrol.

From the opening of navigation in the spring until the route is clear of ice an Ice Patrol is maintained in the Gulf of St. Lawrence between Cape Ray and Heath Pt. by the Canadian Government.

A regular message embodying ice conditions from Cape Race to Quebec and recommendations as to the route to be followed is compiled by the Ice Patrol every four hours commencing at 0500 G.M.T. and kept for immediate transmission by W/T to ships upon request. Similar information is also broadcast twice daily.

Commanders of incoming ships are requested to facilitate the work of the Patrol by supplying information regarding ice in their vicinity.

WIRELESS AND WEATHER IN SOUTH AFRICAN WATERS.

BY L. A. BROOKE SMITH, MARINE SUPERINTENDENT.

EVER since we commenced our endeavour to demonstrate the use of Weather Telegraphy and the construction of Weather Charts at sea, attempts have been made to find suitable examples for illustrating the utility of the method in the region of the Cape, but sufficient observations from ships at sea and stations on the coast or ships in harbour at the same time have not been available.

Some months ago information from Commanders of observing ships of the UNION CASTLE LINE was received that a system of routine Wireless Weather reports had been introduced for the Coasts of South Africa and a description of these was given in "Weather Signals" in the December 1925 Number.

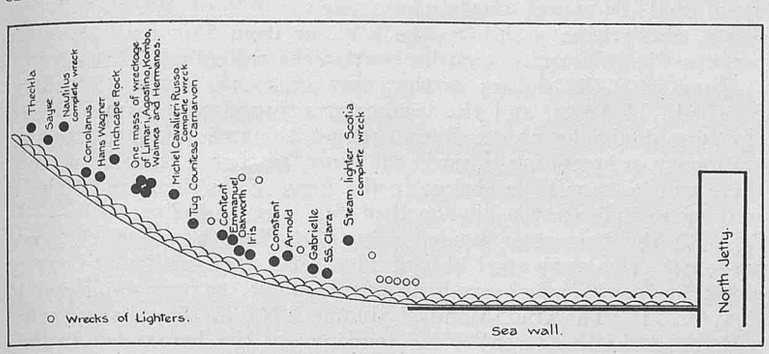
Copies of the actual reports received in observing ships forwarded by Commanders with observations recorded in Meteorological Logs and Reports (Form 911) now provide sufficient data for making simple charts, one of which is produced, which may be of some assistance as a guide to those who wish to put into practice Wireless and Weather as an aid to Navigation in South African Waters. Though Weather on the South African coast has been a subject of study for many years and many have written upon it, including Captains CAMPBELL HEPWORTH and TOYNBEE, it does not appear to have been dealt with fully in synoptic meteorology. No daily weather maps or charts of types of weather such as Mr. HUNT'S for Australia, of which a selection was given in Chapter VII, "Southern Waters," Volume 1, No. 7, are available, though we are told in a chapter on "Climate and Weather" by Mr. C. STEWART, in "Africa" of the Oxford Survey of the British Empire, that "The weather of South Africa, more particularly in the south, is largely due to a series of moving anticyclones passing from west to east with their associated Λ-shaped depressions and to secondaries.

In the absence of South African Weather Types those given for Australia above mentioned may serve as a rough guide to Marine Observers, who are advised to refer to them for the same Latitudes in other parts of the Southern Hemisphere. Before Wireless Telegraphy made the synoptic method possible at sea and before Meteorological Services had been developed, when seamen were entirely dependent upon their own isolated observation for prediction of weather, it is probable that there was no coast in the World where weather changes were more significant and sudden and where we were better able to anticipate them. Notwithstanding this and the precautions of springs on cables, upper yards sent down and so forth, there were few places in the world where more ships were lost in consequence of weather.

Algoa Bay was a veritable graveyard for sailing ships; as late as September 1st, 1902, no less than 17 sailing vessels, 2 steam tugs, and several lighters were driven ashore in a terrific S.E. gale, many of them literally piled up on top of each other, while others were broken to pieces or driven so high on the beach by the enormous seas that it was found impossible to repair and refloat them. In all, 63 lives were lost and an aggregate tonnage of about 12,500.

The ship in which the writer was serving at the time for the purpose of R.N.R. training, H.M.S. *Barracouta*, Commander SELBY ASH,

R.N., arrived with the Cape Squadron a fortnight later, and the rough plan and photograph below will give some idea of the scene of destruction.

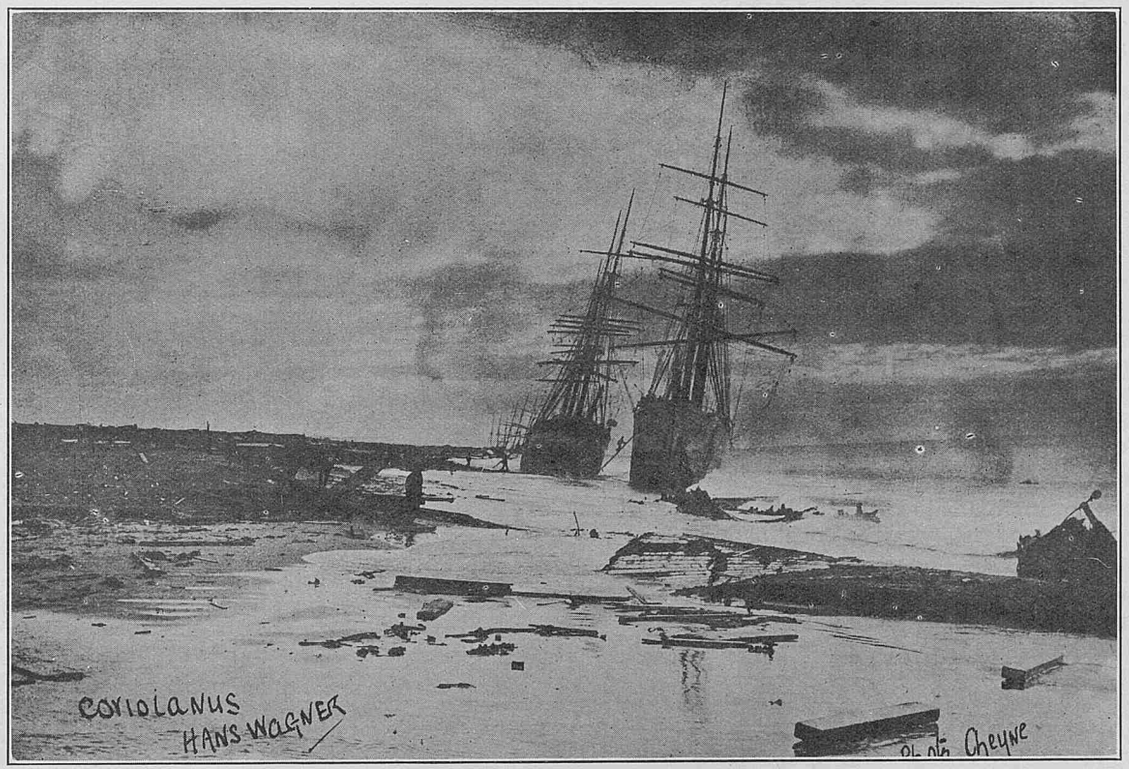


Rough plan of Algoa Bay showing positions of vessels stranded on the night of August 31st-September 1st, 1902.

Now, at 10 a.m. the wind shifted from N.N.E. to N. by E. and increased with terrific gusts; *Principality* started her anchors, and at 10.45 a.m. there was a tremendous squall with gusts which came down the Valley past Elsey Peak, a hill 990 feet high to the north of the anchorage. She commenced driving to leeward so fast that we thought she had parted her cables and that nothing could save her from going on to the rocks.

The mate promptly hoisted the fore topmast staysail with sheet to port, her head paid off to starboard, and soon afterwards her starboard anchor fouled the heavy moorings of H.M.S. *Penelope*, the depot ship, cable was veered and *Principality* placed alongside of *Penelope* as neatly as if she were a twin-screw steamer assisted by tugs.

Captain CAMPBELL HEPWORTH, who served for a number of years in the steamers of the old UNION STEAMSHIP COMPANY, gave an account of the variations of Meteorological phenomena of the south and south-east Coasts of Africa, with the oscillations of the barometer associated therewith, in his " Notes on Maritime Meteorology " which describe admirably the seaman's method of anticipating weather



During the same month we rode out another very heavy gale in Simon's Bay. On September 22nd, 1902, the barometer fell and the wind increased from N.N.E.; by 10 a.m. there was a whole gale from N. by E. (directions all magnetic). At noon the wind was storm force, N. by E., with terrific gusts off the mountains, occasional rain; 4 p.m. north, force 10; at 6.30 p.m. the wind veered to N.N.W. and dropped to force 3, and at 10 p.m. it veered (or to use the terms which have since been laid down for both north and south Latitudes *backed*, but I simply quote from my journal) to N.W. a moderate gale, after which the wind dropped and there was a perfect deluge of rain. H.M.S. *Gibraltar*, flagship of Rear-Admiral HARRIS, rode out this gale with both bowers and the stream anchor.

The fine four-masted barque *Principality* dragged her anchors and, by a fine piece of seamanship on the part of the Mate who was in charge, did not go ashore. It happened this way; Simon's Bay lies in the N.W. corner of False Bay, which is surrounded by mountains except for a stretch of beach extending from the Cape Flats from Muizenberg to Gordon's Bay. It therefore affords a weather anchorage with winds from S.W. through west and north, and the mountains break the steady drive of the wind from those directions.

This mountain break wind is, however, the cause of terrific gusts, which are a great danger in the Bay, these gusts being more sudden and terrific than the squalls accompanying the gale out at sea to windward of these mountains.

changes before distant observations were available by Wireless Telegraphy; and Captain H. STRONG, of the UNION CASTLE LINE, who has had very long experience in South African Waters, remarked upon the infallibility of the barometer as a guide to forecasting wind on these coasts in his contribution to the first number of THE MARINE OBSERVER.

With this weight of testimony of the value of the barometer it would seem that, now weather reports from coast stations are available by Wireless Telegraphy, much more may be done by the seaman himself in the matter of weather prediction.

The following is to illustrate what may be done with a little trouble and the co-operation of other ships.

On May 17th, 1925, R.M.S. *Edinburgh Castle*, Commander H. STRONG, R.N.R., was in Latitude 31° 06′ S., Longitude 15° 27′ E. at 0630 G.M.T. She made a weather report by wireless and received the Cape Town Radio weather message at 0835, but appears not to have received reports from any other ships. At this time there may have been other ships within W/T. range, but the only other steamer on our fleet list in the vicinity was S.S. *Clan Lamont*, Captain A. B. MCCORNISH, distant some 450 miles to the northward and westward.

Let us, however, take the appropriate observations available and with them make WEATHER CHART NO. XIII, carrying out exactly the same procedure and method advocated in Chapter VII, " Southern

Waters " of " Wireless and Weather an Aid to Navigation," Volume I, No. 7.

This chart shows us that the South Atlantic High extends eastward nearly to the coast, and comparison with the South Atlantic chart for the month of May shows that *Edinburgh Castle's* barometer is normal. There is a depression south of East London, while the barometer at Walvis Bay and Port Nolloth indicate a shallow depression along that coast, while a small high separates this area of intermediate pressure from the main depression. Fine weather is general.

Now, *Edinburgh Castle* is within a day's steaming of Table Bay and she wishes to know most if she may expect the S.E. head wind to increase or decrease and if the visibility will remain very good, or if depressions will come from the S.W. and cause bad weather.

Now, with CHART No. XIII we can see the distribution of pressure with the wind circulation from the vicinity of East London to Walvis Bay, but we have very little to go upon to gauge how the systems are moving or altering; for this purpose we should be glad to know what the barometer had done at each of the coast stations during the last three hours, and the higher the latitude these are in, the more valuable will they be; as it is, we must depend very largely upon what *Edinburgh Castle's* barometer is doing. We should also like a report from a ship to the S.W. or from Tristan da Cunha; perhaps when *Discovery* is on her station she will supply that need.

Now with the isobars as they run and with the ship steaming S. 37° E. 14 knots, and the barometer rising slowly (part of which rise is no doubt due to the diurnal range), the anticyclone is probably stationary or spreading towards the coast, so that it is probable that there will be very little change in the force of the wind and there is nothing to indicate the likelihood of decreased visibility.

With the barometer tendency at Port Nolloth and Cape Town we might get a very good idea of what change of gradient to expect along the coast, which gradient is, of course, as was explained in Chapter XI, " The Trade Winds," Volume I, No. 11, directly associated with the " South-Easter." The tendency of the barometer at East London would give us some indication of how the depression was moving or altering.

WEATHER SIGNALS.

II. WIRELESS WEATHER SIGNALS.

WIRELESS WEATHER BULLETINS.

PORTUGAL.

Containing observations from Madeira and Azores. C.W. Issues.

Monsanto W/T Station, approximate Latitude 38° 44′ N., Longitude 9° 11′ W., call sign CTV, broadcasts weather bulletins in code at the following times :—

0835 G.M.T. (containing observations of 0700 G.M.T., taken at the undermentioned stations, and also ships' observations).

1935 G.M.T. (containing observations of 1800 G.M.T. taken at the undermentioned stations, and also ships' observations).

Wavelength 3,000 metres C.W.

Indicator Letters.	Name.	Position (approximate).	
		Latitude.	Longitude.
Name sent in full.	Lisbon	38° 41′ N.	9° 08′ W.
	Oporto	41° 09′ N.	8° 34′ W.
	Coimbra	40° 12′ N.	8° 30′ W.
	Funchal (Madeira)	32° 37′ N.	16° 54′ W.
	Angra (Azores)	38° 39′ N.	27° 14′ W.

The bulletins are divided into two parts, Part I containing the land stations' observations, and Part II those from ships. They commence with the words " Météo Portugal." Code used, New International.

0835 and 1935 G.M.T. bulletins.

Expressed by symbols as follows :—

Part I.—(Station name in full) BBBDD FwwTT cbWVH followed by three groups which refer to observations of cloud, rainfall and swell.

BBB = Barometric pressure (corrected) in millimetres and tenths initial 7 omitted. To convert to mbs. and ins. *see* Table XV, p. 50, Vol. III, No. 27, of this Journal.

DD = Wind direction, true, from Table III, p. 17, Vol. III, No. 25 of this Journal.

F = Wind force by Beaufort scale.

ww = Present weather, from Table V, p. 17, Vol. III, No. 25 of this Journal.

TT = Air temperature in whole degrees Centigrade. To convert to Faht., *see* Table XVII, p. 50, Vol. III, No. 27 of this Journal.

c = Characteristic of barometer tendency during the 3 hours previous to the time of observations, from Table XIX, p. 51, Vol. III, No. 27 of this Journal.

b = Amount of barometric tendency during the 3 hours previous to the time of observations, in half-millimetres.

W = Past weather, from Table XI, p. 19, Vol. III, No. 25, of this Journal.

V = Visibility, from Table XX, p. 51, Vol. III, No. 27, of this Journal.

H = Humidity of the air, from Table XXI, p. 51, Vol. III, No. 27 of this Journal.

Part II.—Ships' observations, preceded by the word " Navires "—PQLLL 111GG BBDDF wwvKd. For meanings and method of decode of these symbols, *see* groups 1–4 of " Decode Form " p. 16, Vol. III, No. 25, of this Journal. Barometric pressure is given in whole millimetres, initial 7 omitted. (*See* Table XVII, p. 50, Vol. III, No. 27, of this Journal to convert to mbs. and ins.).

Monsanto W/T Station also transmits a weather message at 1245 and 2300 G.M.T. *en clair*, in Portuguese and English, on a wavelength of 1,000 metres (spark) and repeated 10 minutes later on 3,000 metres (C.W.) in each case, giving :—

A statement of weather conditions and also a forecast for the next 24 hours for the coast of Portugal, Azores, Madeira, Straits of Gibraltar and the Bay of Biscay.

AZORES.

Spark Issue.

Terceira-Faleiras W/T station, approximate Latitude 38° 40′ N., Longitude 27° 08′ W., call sign **PQT,** broadcasts weather bulletins in code on a wavelength of 1,000 metres (spark), at the following times :—

0830 G.M.T. (observations of 0800 G.M.T. from the undermentioned stations).
1330 G.M.T. (observations of 1300 G.M.T. from the undermentioned stations).
1830 G.M.T. (observations of 1800 G.M.T. from the undermentioned stations).
2330 G.M.T. (observations of 2300 G.M.T. from the undermentioned stations).

Indicator Letters.	Stations.	Latitude (Approximate).	Longitude (Approximate).
Name sent in full.	Angra	38° 39′ N.	27° 14′ W.
	Horta	38° 32′ N.	28° 38′ W.
	Ponta Delgada	37° 44′ N.	25° 40′ W.

The bulletins begin with the **name** of the observation station.

Code used :—New International, expressed by symbols as follows :—

0830 G.M.T. Bulletin : } Name of station, BBBDD FwwTT cbWVH
1330 G.M.T. do. } followed by two or three groups giving
1830 G.M.T. do. } observations of cloud, rainfall, maximum
2330 G.M.T. do. } and minimum temperatures, etc.

The three groups expressed by symbols, above, can be decoded in the same manner as the Monsanto (Portugal) weather bulletins, explanation of which is given on p. 82.

MEDITERRANEAN SEA (WESTERN PORTION).

C.W. Issue—Land Stations' and Ships' Observations.

Marignane Gignac W/T Station, approximate Latitude 43° 27′ N., Longitude 5° 13′ E., call sign **FOM,** transmits weather bulletins in code at 0840, 1440 and 1940 G.M.T. on a wavelength of 1,525 metres (C.W.). The bulletins are in two parts.

Part I. commences with the words "Météo Méditerranée," and contains the 0700, 1300 and 1800 G.M.T. observations respectively of the following land stations :—

Indicator Figures.	Station.	Position (Approx.) Lat.	Long.
022	Genoa	44° 23′ N.	8° 55′ E.
030	Mahon	39° 54′ N.	4° 16′ E.
047	Oran	35° 42′ N.	0° 41′ W.
049	Malta	35° 53′ N.	14° 31′ E.
053	Bizerta	37° 16′ N.	9° 52′ E.
064	Barcelona	41° 23′ N.	2° 09′ E.
086	València	39° 28′ N.	0° 22′ W.
087	Cap Béar	42° 32′ N.	3° 05′ E.
088	Cette	43° 25′ N.	3° 40′ E.
089	Montpelier	43° 37′ N.	3° 59′ E.
090	Marignane	43° 27′ N.	5° 13′ E.
091	Toulon	43° 07′ N.	5° 53′ E.
092	Antibes	43° 35′ N.	7° 07′ E.
093	I. du Levant	43° 05′ N.	6° 30′ E.
094	Cuers	43° 15′ N.	6° 01′ E.
095	Ajaccio	41° 55′ N.	8° 44′ E.
096	Cap Corse	43° 01′ N.	9° 25′ E.
097	Iles Sanguinaires	41° 52′ N.	8° 36′ E.
098	Pertusato	41° 22′ N.	9° 11′ E.
099	Algiers	36° 45′ N.	3° 03′ E.
100	Cap Falcon	35° 47′ N.	0° 48′ W.
101	Croisette	43° 14′ N.	5° 21′ E.
102	St. Raphaël	43° 25′ N.	6° 45′ E.
103	Tarente	40° 28′ N.	17° 15′ E.
105	Tunis (El Aouina)	36° 46′ N.	10° 10′ E.

Code used :—Mostly New International, expressed by symbols as follows :—

$I_nI_nI_n$ BBDDF PTTcN bbSV_1

$I_nI_nI_n$ = Indicator figures of observation station.
BB = Barometric pressure (corrected) in whole millimetres, initial 7 omitted. To convert to mbs. and ins., *see* Table XV, p. 50, Vol. III, No. 27 of this Journal.
DD = Wind direction, true, from Table III, p. 17, Vol. III, No. 25 of this Journal.
F = Wind force by Beaufort scale.
P = Weather at the time of observation. Table XXX.
TT = Air temperature in whole degrees Centigrade. To convert to Faht. *see* Table XVII, p. 50, Vol. III, No. 27 of this Journal.
c = Characteristic of barometer tendency during 3 hours previous to observation from Table XIX p. 51 Vol. III No. 27 of this Journal.
N = Cloud amount from Table X p. 19 Vol. III No. 25 of this Journal.
bb = Amount of barometric tendency during 3 hours previous to observation in tenths of a millimetre.
S = State of the sea and swell from Table XXIV p. 51 Vol. III, No. 27 of this Journal.
V_1 = Visibility seawards, from Table XX, p. 51, Vol. III, No. 27 of this Journal.

Part II, ships' observations, commences with the word "Navires"; code used mostly New International, expressed by symbols as follows :—

I_nI_n PQLLL 111GG BBDDF PP_1VSN A_1nA_2bb

in which the first three groups have the same meanings as Groups 1 to 3 on the "Decode Form," p. 16, Vol. III, No. 25 of this Journal. The barometer reading is given in whole millimetres, to convert to mbs. and ins., *see* Table XV, p. 50, Vol. III, No. 27 of this Journal.

Remaining groups as follows :—

P = Present weather. Table XXX.
P_1 = Past weather. Table XXX.
V = Visibility, from Table XX, p. 51, Vol. III, No. 27 of this Journal.
S = State of sea and swell, from Table XXIV, p. 51, Vol. III, No. 27 of this Journal.
N = Cloud amount. Table X, p. 19, Vol. III, No. 25 of this Journal.
A_1 = Form of low cloud. Table XXXI.
n = Amount of low cloud.
A_2 = Form of *upper* cloud. Table XXXII.
bb = Barometer tendency during 3 hours previous to observation, in tenths of a millimetre, 50 being added when the tendency is negative.

NOTE.—(1) Missing observations from land stations are replaced by X's.
(2) When there are no ships' observations for transmission the words "Navires Nil," will be sent.
(3) The messages "Météo Méditeranée" are transmitted by Marignane (FNM) in case of a breakdown at Marignane-Gignac (FOM).

Spark Issue—Land Stations' Observations.

Bizerta-Sidi-Abdallah W/T Station, approximate Latitude 37° 09′ N., Longitude 9° 48′ E., call sign **FUA,** broadcasts a weather bulletin in code at 1200 G.M.T. on a wavelength of 1,350 metres (spark).

The bulletin contains (*a*) 0700 G.M.T. observations from the undermentioned stations, and (*b*) a weather forecast for ships.

Code used :—Mostly New International. Form of message :—

(*a*) Observations of 0700 G.M.T. "Météo Alger" $I_nI_nI_n$ BBDDF wb_1 (SV_1).
(*b*) State of weather and forecast for North Africa *en clair.*

Observation Stations :—

Indicator Letters.	Station.	Position (Approx.) Lat.	Long.
SFX	Sfax	34° 44′ N.	10° 45′ E.
BZR	Bizerta	37° 14′ N.	9° 52′ E.
GAR	Cap de Garde	36° 58′ N.	7° 43′ E.
CST	Constantine	36° 23′ N.	6° 36′ E.
FAL	Cap Falcon	35° 47′ N.	0° 48′ W.
TGR	Tangier	35° 45′ N.	5° 47′ W.
RAB	Rabat	34° 02′ N.	6° 46′ W.
ALG	Algiers	36° 45′ N.	3° 03′ E.

Indicator Figures.	Station.	Position (Approx.) Lat.	Long.
TNS	Tenès	36° 31′ N.	1° 20′ E.
NEM	Nemours	35° 07′ N.	1° 52′ W.
CLB	Colomb Béchar	31° 38′ N.	2° 13′ W.
LAG	Laghouat	33° 48′ N.	2° 53′ E.
TOU	Tougghourt	33° 07′ N.	6° 08′ E.

Explanation of code.

Bulletins commence with the words " Météo Alger " :—

$I_nI_nI_n$ = Indicator letters of station.
BB = Barometric pressure (corrected) in whole millimetres, initial 7 omitted. To convert to mbs. and ins., *see* Table XV, p. 50, Vol. III, No. 27 of this Journal.
DD = Wind direction true, from Table III, p. 17, Vol. III, No. 25 of this Journal.
F = Wind force by Beaufort scale.
w = Cloud amount and general state of weather from Table XXVII, p. 67, Vol. III, No. 28 of this Journal.
b_1 = Barometer tendency. Table XXXIII.
S = State of sea and swell, from Table XXIV, p. 51, Vol. III, No. 27 of this Journal. Not reported from Constantine Colomb Béchar, Laghouat and Tougghourt.
V_1 = Visibility seawards, from Table XX, p. 51, Vol. III, No. 27 of this Journal. Not reported from Constantine Colomb Béchar, Laghouat and Tougghourt.

EGYPT.

Containing European Land Stations' observations, C.W. Issue.

Heliopolis W/T Station, Latitude 30° 05′ N., Longitude 31° 22′ E., Call Sign **GHK,** broadcasts a weather bulletin in code at 1030 G.M.T., containing observations made at the following stations :—

Wavelength 1,800 metres (C.W.).

List of Observation Stations :—

Index Numbers.	Station.	Lat. N. (approximate).	Long. E. (approximate).	
02	Aboukir	31° 18′	30° 06′	Observations of 0600 G.M.T
03	Amman	31 57	35 57	
05	Heliopolis	30 05	31 22	
07	Abu-Sueir	30 35	32 09	
11	Ramleh	31 53	34 53	
12	Baghdad	33 17	44 29	
13	Mosul	36 20	43 08	
14	Shaibah	30 26	47 41	
18	Ramadi	33 25	43 17	
19	Kirkuk	35 28	44 22	
28	Sollum	31 34	25 12	
32	Q. Gebali	29 20	30 38	
37	Tor	28 13	33 37	

Observations from selected stations in the following list are also broadcast :—

Index Numbers.	Station.	Lat. N. (approximate).	Long. E. (approximate).	
24	Candia	35° 20′	25° 08′	Observations of 0600 G.M.T
26	Limassol	34 41	33 04	
27	Siwa	29 12	25 29	
29	Mersa Matruh	31 22	27 14	
33	Asyut	27 11	31 13	
34	Aswan	24 02	32 53	
39	Haifa	32 48	34 59	
21	Malta	35 53	14 31	0700 G.M.T.
22	Rome	41 54	12 27	
23	Kiev	50 27	30 30	0700 Local Time (Russian).
25	Athens	37 57	23 43	0600 G.M.T.
30	Koursk	51 45	36 12	0700 Local Time (Russian).
35	Sevastopol	44 37	33 31	
36	Odessa	46 29	30 44	
38	Tzaritzyn	48 42	44 31	
41	Kerch	45 21	36 29	
42	Stavropol	45 03	41 39	
47	Batoum	41 40	41 38	
49	Petrovsk	43 00	47 30	
50	Baku	40 21	49 51	
58	Krasnovodsk	40 00	52 59	
59	Askhabad	37 57	58 23	
61	Tunis	36 46	10 10	0700 G.M.T.
62	Bizerta	37 16	9 52	
63	Sfax	34 44	10 45	
64	London	51 21	0 07 W.	
65	Paris	48 56	2 26 E.	
66	Prague	50 05	14 26 E.	
67	Bordeaux	44 50	0 42 W.	
68	Lyons	45 45	4 55	
69	Budapest	47 29	19 03	0700 Local Time.
70	Perpignan	42 43	2 54	0700 G.M.T.
71	Milan	45 28	9 11	
72	Zagreb	45 49	15 58	
73	Belgrade	44 47	20 28	
74	Bucharest	44 25	26 05	
75	Genoa	44 23	8 55	
76	Florence	43 47	11 14	
77	Ancona	43 37	13 31	
78	Sofia	42 42	23 20	0530 G.M.T.
79	Maddalena	41 15	9 25	0700 G.M.T.
80	Taranto	40 28	17 15	
81	Corfu	39 35	19 55	0600 G.M.T.
82	Messina	38 12	15 33	0700 G.M.T.
83	Tripoli	32 54	13 12	
84	Benghasi	32 05	20 06	

Code. New International, in two five-figure groups for each station, expressed by symbols as follows :—

$I_n\ I_nBBB\quad DDFww$

where

$I_n\ I_n$ = Index number of station.
BBB = Barometric pressure (corrected) in millibars and tenths, initial 9 or 10 omitted.
DD = Wind direction, true, from Table III, p. 17, Vol. III, No. 25 of this Journal.
F = Wind force by Beaufort scale.
ww = Present weather, from Table V, p. 17, Vol. III, No. 25, of this Journal.

SPECIAL WEATHER TELEGRAPHY TABLES, NOT NEW INTERNATIONAL CODE.

Table XXX.

P Present Weather, or P_1 Past Weather.

Code Figure.
0 = Present weather determined by amount of cloud.
1 = Continuous rain or drizzle.
2 = Continuous snow.
3 = Rain showers, intermittent rain or hail showers.
4 = Snow showers.
5 = Thunderstorm (with or without squall).
6 = Squall (or line squall), or rain and hail, or heavy rain showers.
7 = Squall, wind very strong at or near the surface.
8 = Thick mist or fog; visibility below 1,000 metres (1,100 yards).
9 = Mist or fog of appreciable vertical thickness.

Table XXXI.

A_1—Form of Low Cloud.

Code Figure.	
0	= No low cloud.
1	= St. or Fr.-St. or both
2	= Cu. or Fr.-Cu. or both.
3	= St. and Cu. or St. and St. Cu.
4	= St.-Cu. alone.
5	= Nb. and Cu.
6	= Cu.-Nb. and Cu.
7	= Nb. and Cu.-Nb.
8	= Cu.-Nb. alone.
9	= Nb. alone.

Table XXXII.

A_2—Form of Upper Cloud.

Code Figure.	
0	= No high or middle cloud observable.
1	= Ci. alone.
2	= Ci.-Cu. alone or Ci.-Cu. and Ci.
3	= Ci.-St. alone or Ci.-St. and Ci.
4	= Cirro-cloud and A.-Cu.
5	= Cirro-cloud and A.-St.
6	= Cirro-cloud and A.-Cu. and A.-St.
7	= A.-Cu. alone visible.
8	= A.-Cu. and A.-St.
9	= A.-St. (uniform, or alone visible).

Table XXXIII.

b_1—Barometric Tendency.

		millimetres.	millibars.
0	Barometer stationary—tendency	0 m/m to 0·5 m/m	0 to 1 mb.
1	Rising slowly	1 ,, ,, 1·5 ,,	2 ,, 3 ,,
2	Rising	2 ,, ,, 3·5 ,,	4 ,, 7 ,,
3	,, rapidly	4 ,, ,, 6 ,,	8 ,, 12 ,,
4	,, very rapidly	more than 6	more than 12 ,,
5	Falling slowly	1 m/m to 1·5 m/m	2 to 3 mb.
6	Falling	2 ,, ,, 3·5 ,,	4 ,, 7 ,,
7	,, rapidly	4 ,, ,, 6 ,,	8 ,, 12 ,,
8	,, very rapidly	more than 6 ,,	more than 12 ,,

WIRELESS STORM WARNINGS.

MEDITERRANEAN SEA (WESTERN PORTION).

Oran-Ain-el-Turck, Algeria, W/T Station, approximate Latitude 35° 45′ N., Longitude 0° 45′ W., call sign **FUK,** broadcasts storm warnings when necessary at 1400 G.M.T. on a wave length of 1,350 metres (spark). The direction of the centre of the cyclonic depression is transmitted *en clair.*

Marignane W/T Station broadcasts storm warnings when necessary on a wave length of 1,525 metres (C.W.).

III. WIRELESS TIME SIGNALS.

PORTUGAL.

Spark Issue.

Monsanto W/T Station, Latitude 38° 43′ 47″ N., Longitude 9° 11′ 17″ W., call sign **CTV,** broadcasts a time signal daily at 9h. 30m. 00s. G.M.T. The time signal is controlled by Lisbon Observatory (38° 42′ 30·5″ N., 9° 11′ 10·2″ W.), and is reported to be quite reliable for checking chronometers. It is especially useful for vessels fitted with crystal receivers and small aerials, who experience difficulty in receiving the Eiffel Tower Signals in daylight off the Portuguese Coast on account of " land effect."

Wave length 600 metres (spark).

Procedure :—

G.M.T.

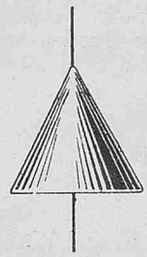
h. m. s.		h. m. s.	
9 28 00	to	9 28 32	— — · · · — (MST) *repeated* 12 *times followed by one minute's silence.*
9 29 32	,,	9 29 38	— — — — — —
9 29 39	,,	9 29 43	· · · · · · · · ·
9 29 44	,,	9 29 55	— — — — — — — — — —
9 30 00			· (*Time signal*).

CQ Time Signal from Observatory of Lisbon (in Portuguese).

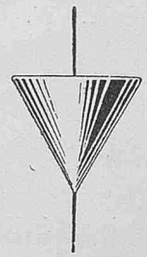
IV. VISUAL STORM WARNINGS.

PORTUGAL, WEST AND SOUTH COASTS.

The following system of storm signals is in use at semaphore stations and port offices on the coast of Portugal :—



West Coast Signification.	South Coast Signification.
Gale probable from W. to N.	Gale probable from E. to S.



Gale probable from S. to W.	Gale probable from S. to W.

By night, at the port offices, the cone is replaced by three *red* lights in the form of a triangle.

MALTA (VALLETTA).

SOUTH CONE.

By Day.  **By Night.** 

Hoisted for Gales.

From S.E., veering to S.W., W., or N.W.
,, S.W., veering to W. or N.W.
,, W., veering to N.W.
And also from E., veering to S. or S.W.

NORTH CONE.

By Day.  **By Night.** 

Hoisted for Gales.

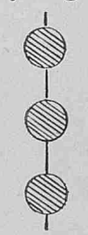
From S.E., backing to E.
,, N.W., veering to N.

MODERATE " GREGALE."

By Day.  **By Night.** 

Hoisted when the wind is expected from between N. and E., of force 5, 6 or 7 (Beaufort Scale).

STRONG " GREGALE."

By Day.  **By Night.** 

Hoisted when the wind is expected from between N. and E., of force 8 and above, (Beaufort Scale).

When one of these signals is hoisted it indicates that information has been received from the Meteorological Office at Pieta by the station exhibiting the signal, that a gale or " gregale " is expected in the vicinity of Malta.

Station :—Castille Signal Station.

Black.  **Red.**  **Green.** 

ERRATA.

VOL. III., No. 27, THE MARINE OBSERVER.

Weather Signals. IV—Visual Storm Warnings. Netherlands, Germany, Denmark, Norway, page 53, Column 2, *fourteenth* and *sixteenth lines* from top, *delete* (except Sweden).

Sweden, page 54. *Delete* information given for Sweden and *substitute* the following :—

SWEDEN.

Day Signals.	Night Signals.	Explanation.
▲	R R	Gale is expected between N. and W.
▼	W W	,, ,, ,, S. ,, W.
▲ ▲	R W	,, ,, ,, N. ,, E.
▼ ▼	W R	,, ,, ,, S. ,, E.
●	R	Gale of which the direction is not indicated.
● ▲	R R	Storm is expected between N. and W.
● ▼	W W	,, ,, ,, S. ,, W.
▲ ●	R W	,, ,, ,, N. ,, E.
▼ ●	W R	,, ,, ,, S. ,, E.
▲ ▼	R	Storm of which the direction is not indicated.

R = Red.
W = White.

56 stations along the coast of Sweden have day storm signals.

2 Stations have night storm signals and in Gothenburg the storm signals are indicated by a combination of small lights forming the outline of the day signals.

Special Notices regarding Personnel.

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

Captain J. C. Taylor.

CAPTAIN J. C. TAYLOR has been appointed an Examiner of Masters and Mates of the Board of Trade at Cardiff. He was a member of the Corps of Marine Observers when he commanded the auxiliary motor schooner *Easonian* of the CUMBERLAND GULF TRADING COMPANY, and contributed valuable observations in the Arctic.

OBITUARY.

THE death of Captain SIR HERBERT ACTON BLAKE, K.C.M.G., K.C.V.O., R.N.R., Deputy Master of Trinity House, on board R.M.S. *Arundel Castle* in March, 1926, on a voyage to the Cape to recuperate after an operation, is noted with deep regret.

SIR ACTON BLAKE was a representative for Great Britain at the International Conference of safety of life at sea after the loss of the *Titanic*. His interest and influence in the application of Marine Meteorology was considerable. His fine seamanlike qualities, true understanding, and love for the Merchant Service, his courteousness and fearless sound judgment placed him high in the esteem of his brother seamen and all with whom he came in contact.

The Corps of Marine Observers and Marine Division join in expressing sympathy with the Corporation of Trinity House in their grievous loss.

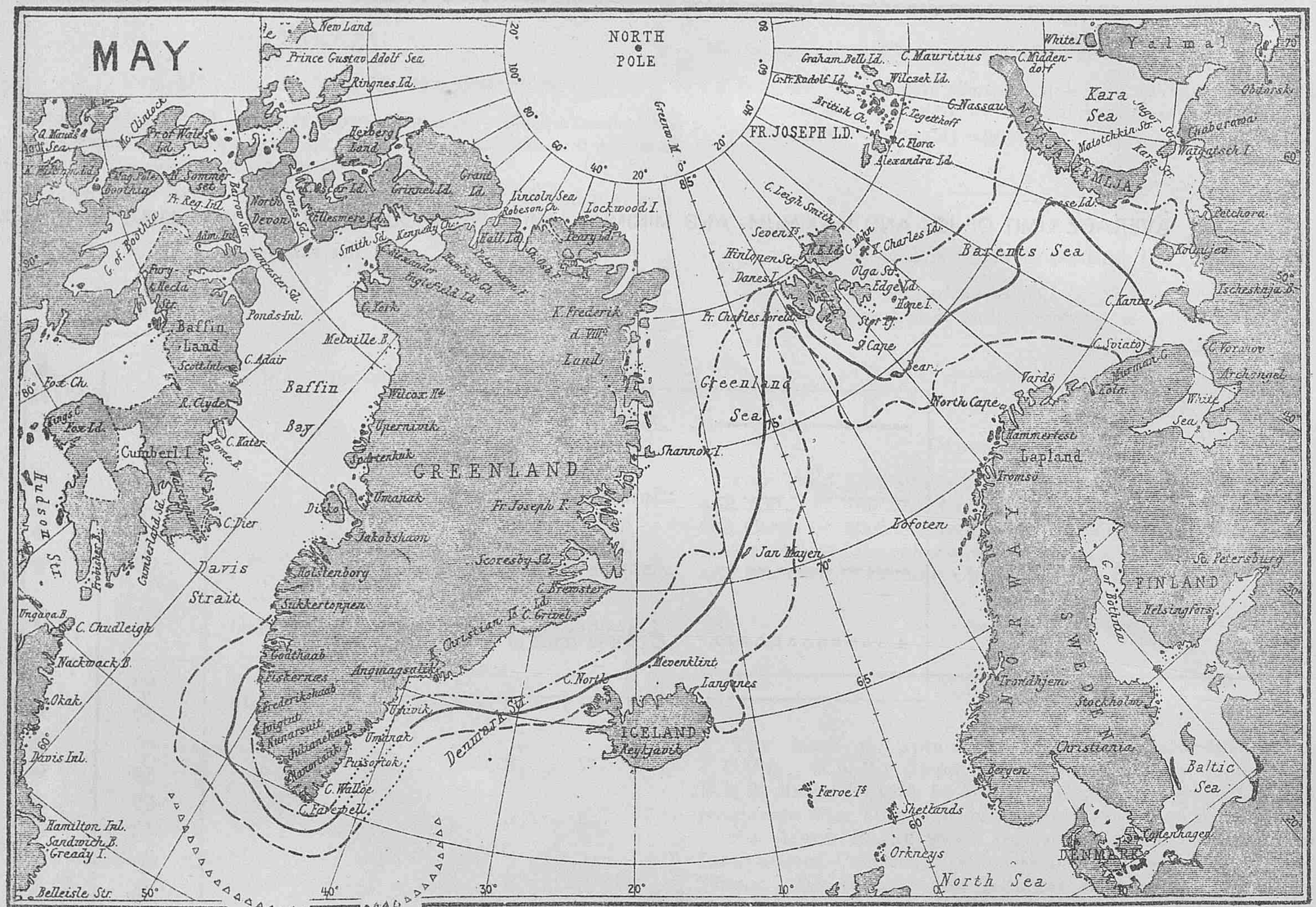
AVERAGE LIMIT OF ICE AND MAXIMUM- AND MINIMUM LIMITS FROM OBSERVATIONS 1898–1913.

Average limit

Extreme minimum limit

Extreme maximum limit

Extreme limit of icebergs


MAY.
NORTH POLE
New Land
Prince Gustav Adolf Sea
Ringnes Id.
Heiberg Land
Grant Id.
Grinnell Id.
North Devon
Ellesmere Id.
Lincoln Sea
Robeson Ch.
Lockwood I.
Smith Sd.
Kennedy Ch.
Hall Id.
Peary Id.
Inglefield Id.
C. York
Melville B.
K. Frederik d. VIII. Land
Baffin Land
Ponds Inl.
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Home B.
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Cumberland Sd.
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St. Petersburg
Helsingfors
Trondhjem
Stockholm
Christiania
Bergen
Baltic Sea
Copenhagen
DENMARK


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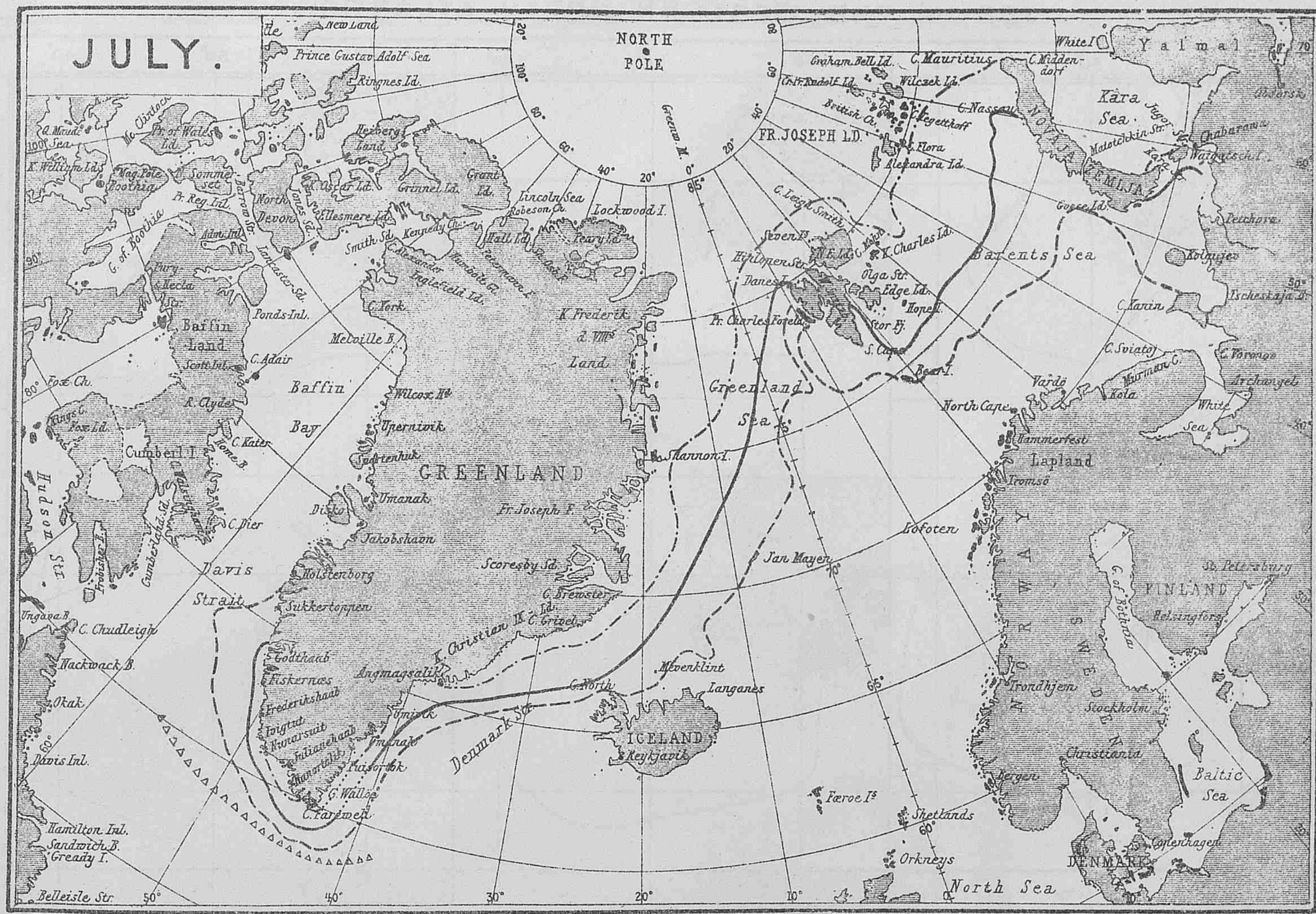
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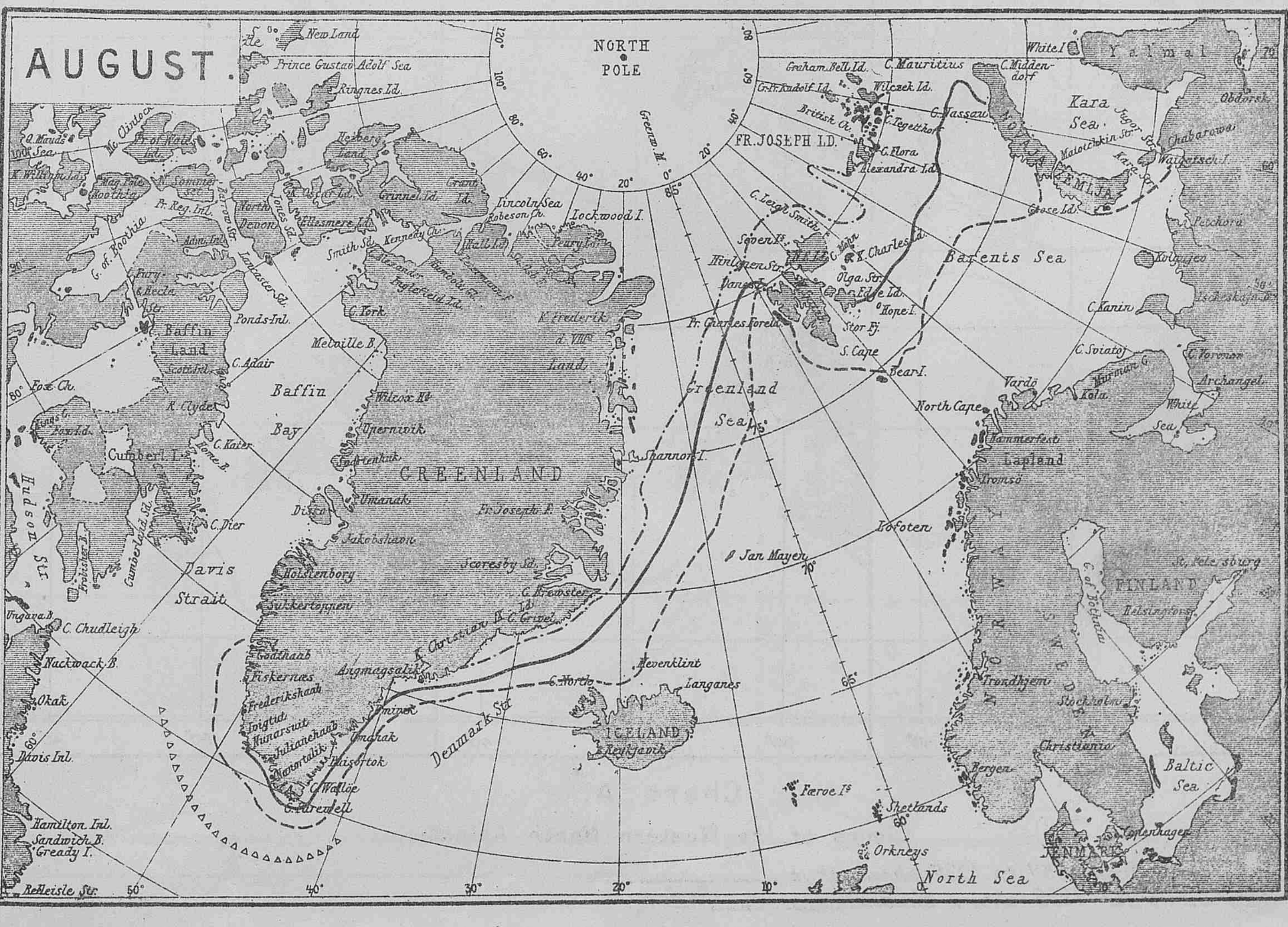
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NOVAJA ZEMLJA
Yalmal
Kara Sea
Obdorsk
Matotschkin Str.
Chabarowa
Waigatsch I.
Goose Id.
Petchora
Kolgujev
Barents Sea
C. Leigh Smith
Seven Is.
Hinlopen Str.
Danes Id.
K. Charles Id.
Olga Str.
Edge Id.
Hope I.
Pr. Charles Foreland
Stor Fj.
S. Cape
Bear I.
C. Kanin
C. Sviatoj
C. Voronov
Archangel
White Sea
Kola
Vardö
North Cape
Hammerfest
Lapland
Tromsö
Lofoten
NORWAY
SWEDEN
FINLAND
St. Petersburg
Helsingfors
G. of Bothnia
Trondhjem
Stockholm
Christiania
Bergen
Baltic Sea
Copenhagen
DENMARK

ICE IN THE WESTERN NORTH ATLANTIC.

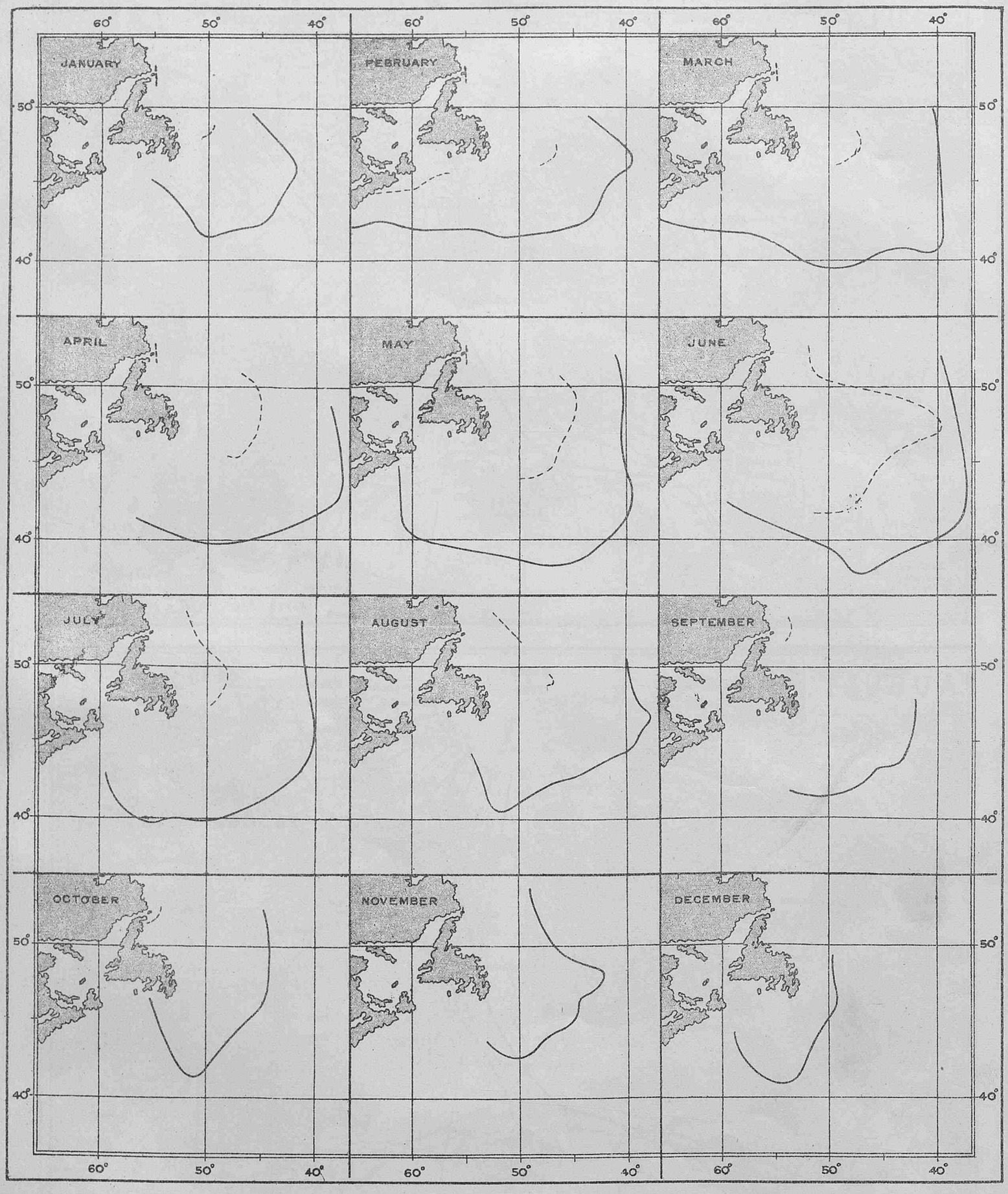
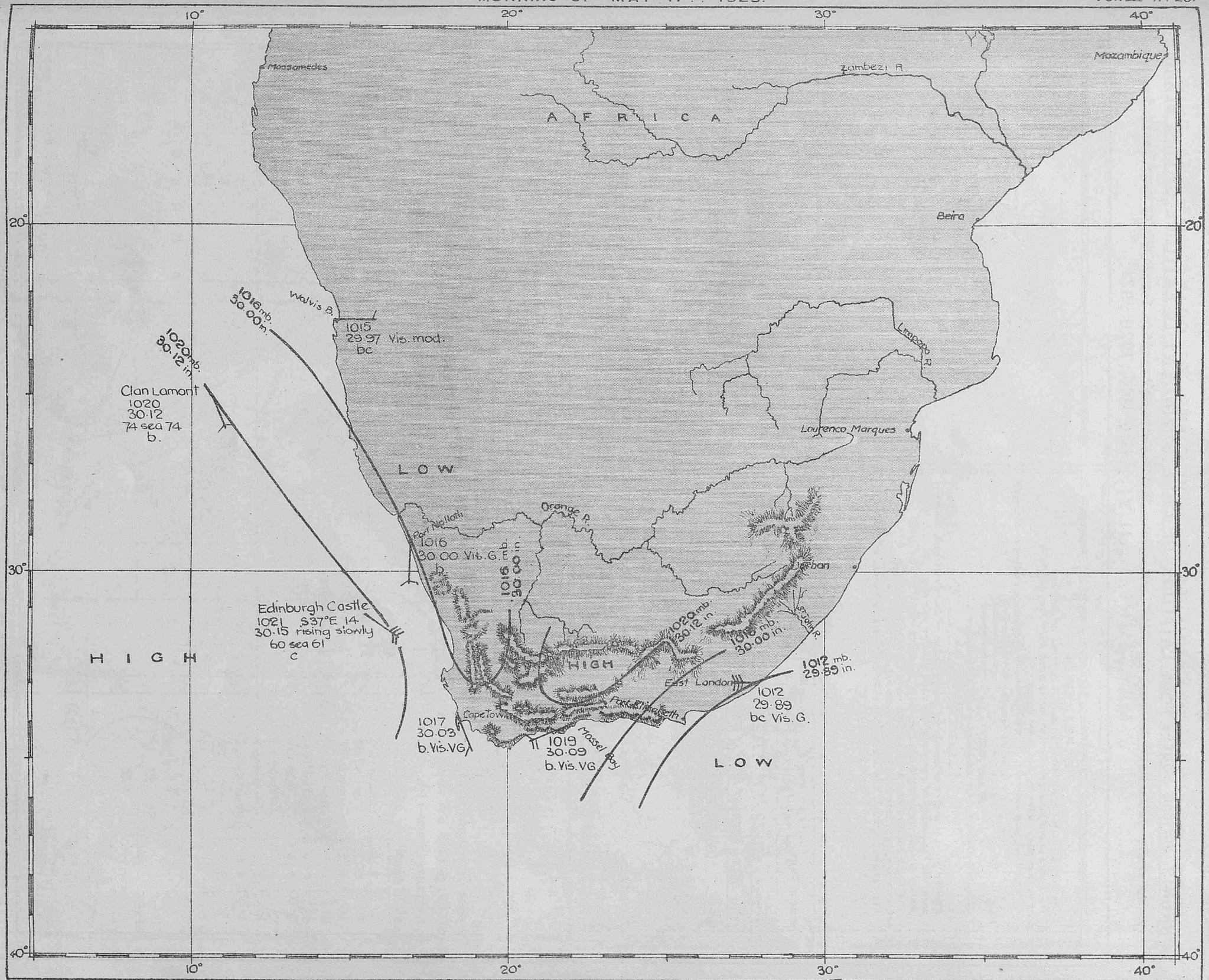


Chart A.

Limits of Ice Western North Atlantic.

Limit from 1901 to 1925 shown thus _____

Limit for 1925 shown thus - - - - - - - - - - -

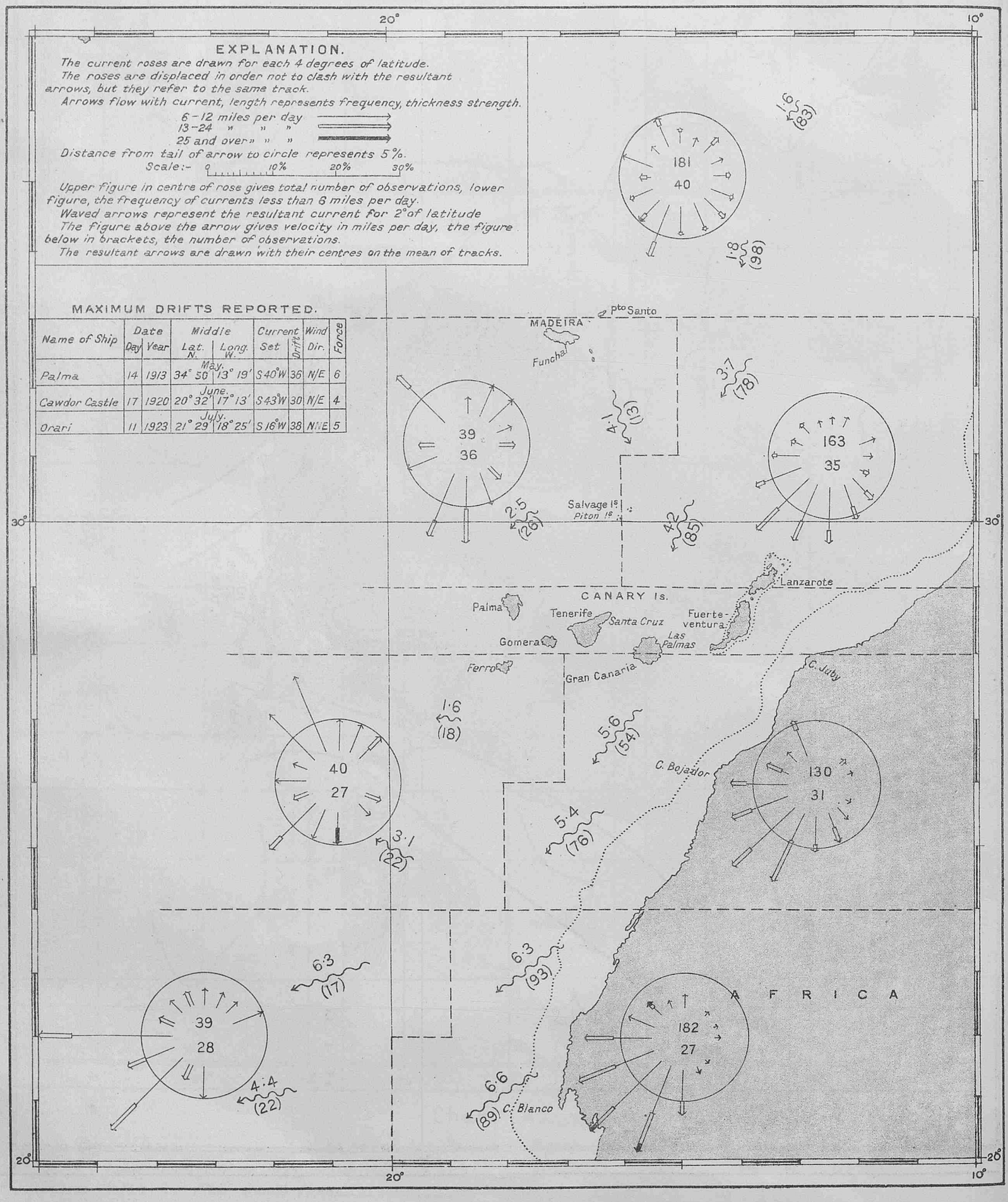


WEATHER CHART, XIII.

CURRENTS on the routes from LATITUDE OF CAPE ST VINCENT to LATITUDE OF CAPE BLANCO.

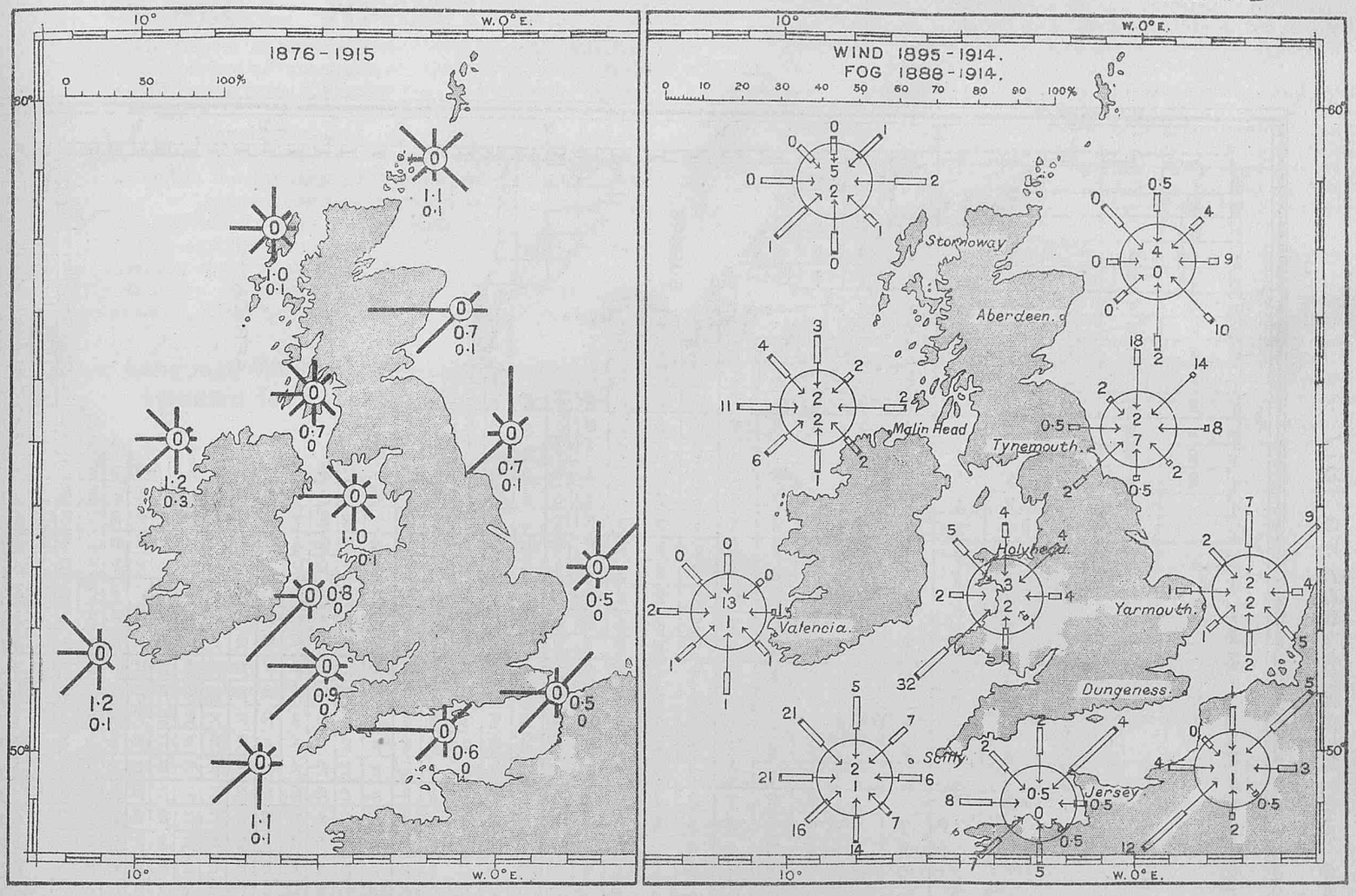
Compiled from observations made by ships using the routes from the Channel to South Africa and South America.

MAY, JUNE, JULY, . 1910-1914, 1920-1924.



MAY.

WIND AND FOG AT COAST STATIONS. GREAT BRITAIN AND IRELAND



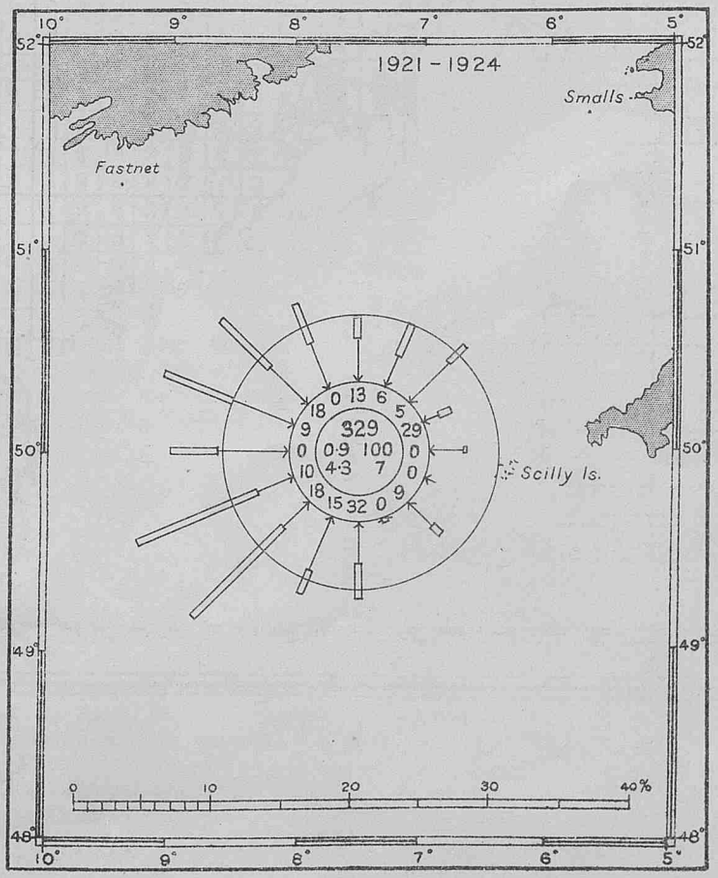
WIND, FOG AND MIST.

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	6
NNE	3
NE	3
ENE	6
E	0
ESE	0
SE	3
SSE	0
S	18
SSW	9
SW	21
WSW	12
W	0
WNW	9
NW	15
NNW	0
Calm	9
Var.	3
Total	117

Percentage frequency of fog and mist for area = 12%.

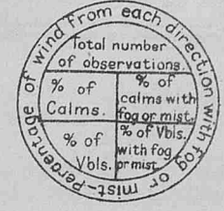


Mean and Maximum number of days with fog during the month at the different stations.

Station.	Mean.	Max.
Stornoway	0·4	3
Malin Head	2·9	8
Valencia	0·5	2
Holyhead	5·1	10
Scilly	6·4	14
Jersey	2·5	6
Dungeness	3·6	10
Yarmouth	1·8	7
Tynemouth	3·5	12
Aberdeen	2·3	6

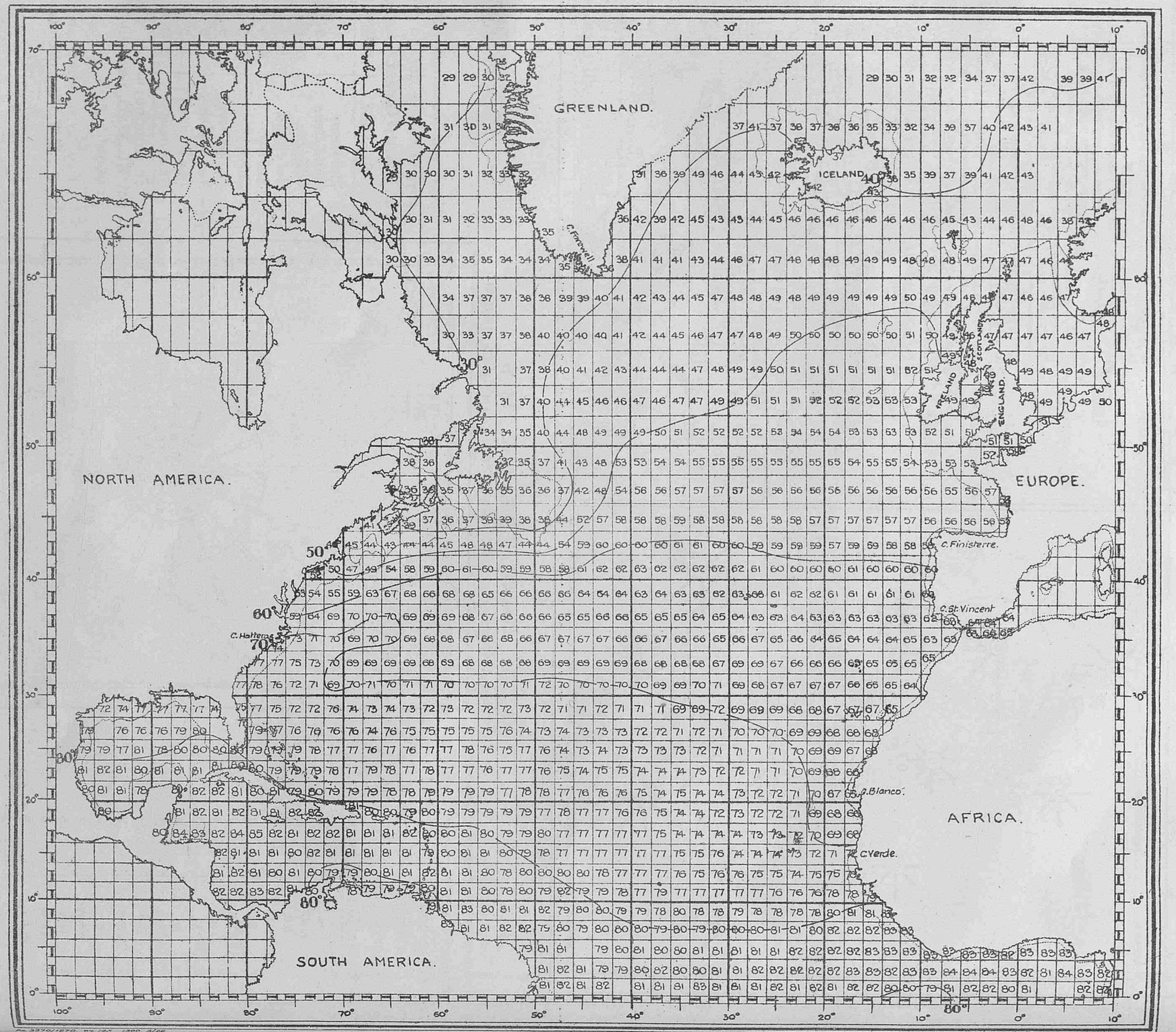
For explanation of charts see Vol. III. Nº 25, page 10, of this Journal.

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



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

NORTH ATLANTIC.



H.M. Stat. Office Press, Kingsway W.C.2

Wireless and Weather an Aid to Navigation.

Advance in any subject or movement can only be truly attained from within, and therefore advancement of meteorology as a branch of seamanship will be the surer if seamen take the initiative, hence in the chapters under the above heading, published in the 1924 numbers, we made suggestions based upon experience at sea for the promotion of the application of Wireless Weather Telegraphy to seamanship, and in the January, 1926, Number, page 2, all ships in the list of regular Marine Observers indicated as having mercurial barometers were invited to make routine reports to "All Ships" giving observations synchronising with those of the nearest coast. For these times, *see* chart on page 14, No. 25, Vol. III.

A sample message is given below to which may be added information of swell, cloud type, or other predominant elements as necessary.

Plain Language Wireless Weather Report in standard form recommended.

To C.Q.

Weather 4757 *N* 1908 *W Barometer corrected* 2994 *NNW* 2 *Overcast* 0700 *G.M.T. Fifth Course N* 70 *E* 10 *rising slowly Current S* 59 *E quarter knot from* 47 *N* 24 *W to* 48 *N* 20 *W Air* 59 *Sea* 61 *Catalina.*

NOTE.—The date appears in the middle of this message, the most important elements appearing before it. If abbreviation is desired omit all after date.

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 REPORTS.

Commanders of ships in the Trans-North Atlantic and Southern Ocean Trades are earnestly requested to have the Ice Report Form 912 completed and returned at the end of each passage. A nil return is desired if no ice is seen.

These forms are supplied with THE MARINE OBSERVER each month to regular observing ships in these Trades.

INTERNATIONAL ICE PATROL SERVICE.

For the purpose of carrying on the International Ice Observation and Ice Patrol Service provided for by the International Convention for the Safety of Life at Sea, London, 1913-14 the United States Coastguard Cutters *Tampa* and *Modoc* have been detailed for this service.

The object of the Ice Patrol Service is to locate icebergs and field ice nearest to the North Atlantic Lane Routes. It will be the duty of the patrol vessels to determine the southerly, easterly, and westerly limits of the ice and to keep in touch with these fields as they move to the southward, in order that radio messages may be sent out daily, giving the whereabouts of the ice, particularly the ice that may be in the immediate vicinity of the regular North Atlantic Lane Routes.

During the months of **March, April, May and June,** and as much longer as necessary, these two vessels will alternate on patrol.

Having located the ice, the patrol vessel will send daily radiograms and broadcasts as stated below, each broadcast being repeated three times, with an interval of two minutes between each repeat. Each broadcast will be preceded by the general call "QST" on 600 metres (500 kilocycles) wave length, immediately followed by the ice broadcast on the wave length specified, as follows:—

G.M.T.	Time. 75th meridian.	Wave length (metres).	Frequency (in kilocycles).
0000 ...	7.00 p.m.	1,713	175
1100 ...	6.00 a.m.	706	425
1200 ...	7.00 a.m.	1,713	175
2300 ...	6.00 p.m.	706	425

NOTE.—Attention is invited to the change to 1,713 metres (175 kilocycles) from 1,621 metres (185 kilocycles), which was used during the season of 1925.

At 0100 (G.M.T.), 8 p.m., 75th meridian time, a radiogram will be sent to the Hydrographic Office, Washington, D.C., through land radio stations, defining the ice danger zone, its southern limits, or other definite ice news, while other messages will be sent during the night if any later information is obtained by the patrol vessel. The telegraphic address of the Hydrographic Office is "Hydrographic, Washington, D.C."

Ice information will be given by radio at any time to any ship with which the patrol vessel can communicate. Such information will be furnished as regular radio traffic (without charge) on commercial traffic frequencies (wave lengths).

Ice information broadcasts will be given in as plain, concise English as practicable and will state in the following order:—

(*a*) Position of patrol vessel.
(*b*) Location and description of ice.
(*c*) Other data.

The Ice Patrol vessels' general radio call letters are **NIDK.** This is a special call for the vessel actually on patrol, and should not be confused with the regular radio call letters assigned to the individual vessels.

The radio messages from the patrol vessel and from other sources will be given publicity by the Hydrographic Office as follows:—

(*a*) By radio broadcast from:—

Station.	G.M.T.	75th meridian standard time.	Wave-length (metres).
Arlington	1530	10.30 a.m	2,655 A.C. tube.
	0255	10.00 p.m.	2,655 A.C. tube.
Annapolis... ...	2200	5.00 p.m.	17,130 C.W.
Boston	1600	11.00 a.m.	1,363 T.D. tube.
	2200	5.00 p.m.	
New York ...	1530	10.30 a.m.	1,538 T.D. tube.
	2200	5.00 p.m.	
Norfolk	1545	10.45 a.m.	1,363 tube.
	2100	4.00 p.m.	

(*b*) All reports of ice are published in the Daily Memorandum and the weekly Hydrographic Bulletin.

The work of the United States Coastguard cutters engaged on this Ice Patrol duty will be greatly facilitated if the principal trans-Atlantic steamships report the following data by radio to the patrol vessels:—

(*a*) Icebergs or obstructions sighted, giving date, time (G.M.T.), latitude, longitude, set, and drift; and in case it is an iceberg, the temperature of the water at the time should be included.

(*b*) Surface temperature of the sea water every four hours when between latitude 39° N. and 48° N. and between longitudes 43° W. and 58° W., when bound either east or west, giving time of observation (G.M.T.) the latitude, longitude, course, and speed.

These data will facilitate the drawing of a temperature curve which will be useful in locating the branches of the Labrador Current.

It is requested that radio operators desist, as far as practicable, from operating at the above times in order to lessen radio interference.

ICE CHART.

WESTERN NORTH ATLANTIC.

LETTERS OF TRANSATLANTIC TRACKS INDICATE

(A)	Westbound. From 1st April to 30th June, inclusive. Eastbound. From 25th March to 7th July, inclusive.
(E)	From 11th April to 15th May, or until the Cape Race route clear of ice.
(F)	From 16th May to Opening of Belle Isle route. Westbound, on approaching Cape Race steer a course to pass 10 miles S. of Cape Race. Eastbound, steer from position 25 miles S. of Cape Race.

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.

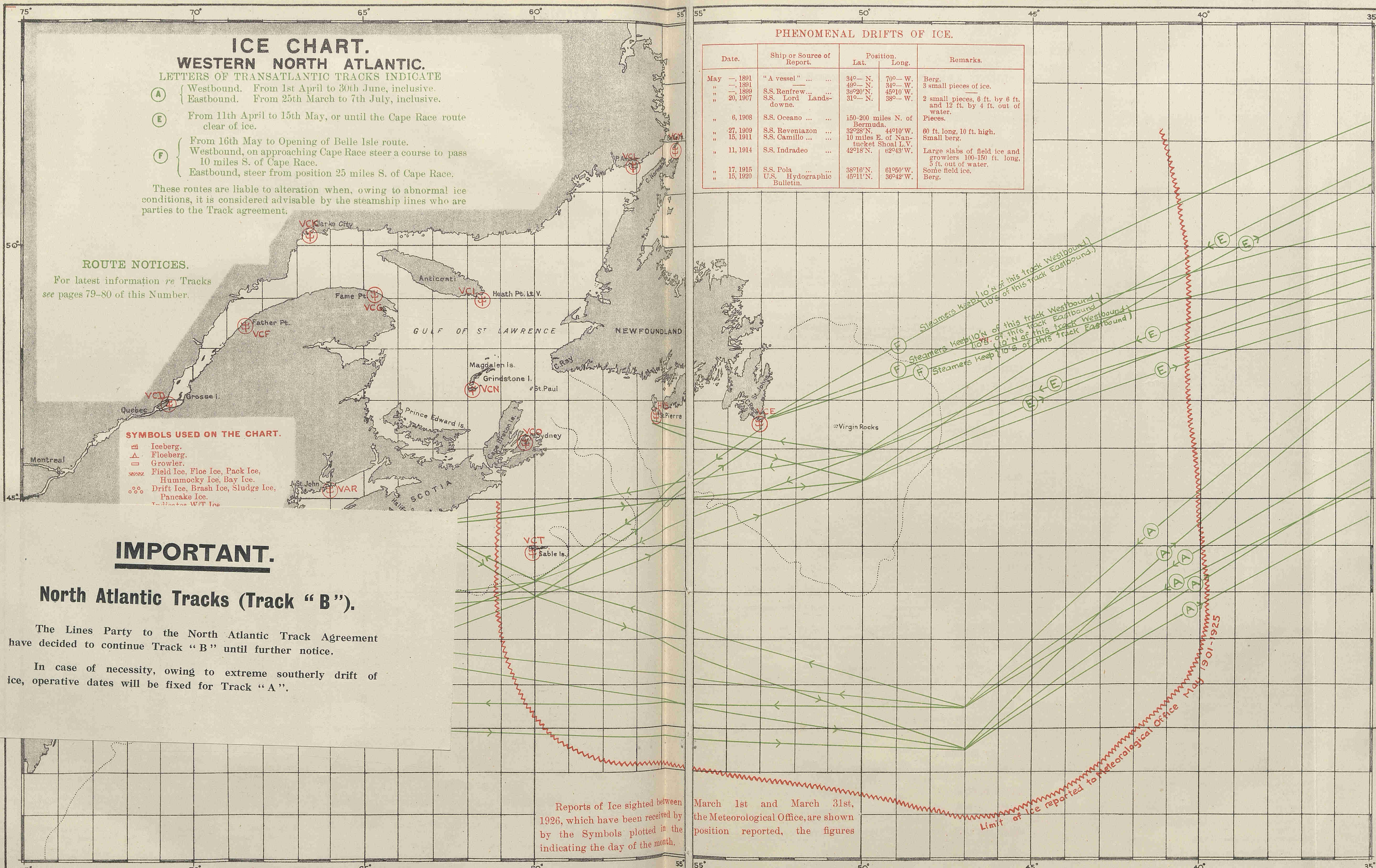
For latest information *re* Tracks *see* pages 79–80 of this Number.

PHENOMENAL DRIFTS OF ICE.

Date.	Ship or Source of Report.	Position. Lat.	Long.	Remarks.
May —, 1891	"A vessel"	34°— N.	70°— W.	Berg.
" —, 1891	——	49°— N.	34°— W.	3 small pieces of ice.
" —, 1899	S.S. Renfrew... ...	36°20′N.	45°10′W.	——
" 20, 1907	S.S. Lord Lansdowne.	31°— N.	38°— W.	2 small pieces, 6 ft. by 6 ft. and 12 ft. by 4 ft. out of water.
" 6, 1908	S.S. Oceano	150-200 miles N. of Bermuda.		Pieces.
" 27, 1909	S.S. Reventazon ...	32°28′N.	44°10′W.	60 ft. long, 10 ft. high.
" 15, 1911	S.S. Camillo	10 miles E. of Nantucket Shoal L.V.		Small berg.
" 11, 1914	S.S. Indradeo ...	42°18′N.	62°43′W.	Large slabs of field ice and growlers 100-150 ft. long, 5 ft. out of water.
" 17, 1915	S.S. Pola	38°16′N.	61°50′W.	Some field ice.
" 15, 1920	U.S. Hydrographic Bulletin.	45°11′N.	36°42′W.	Berg.

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.



Reports of Ice sighted between March 1st and March 31st, 1926, which have been received by the Meteorological Office, are shown by the Symbols plotted in the position reported, the figures indicating the day of the month.

IMPORTANT.

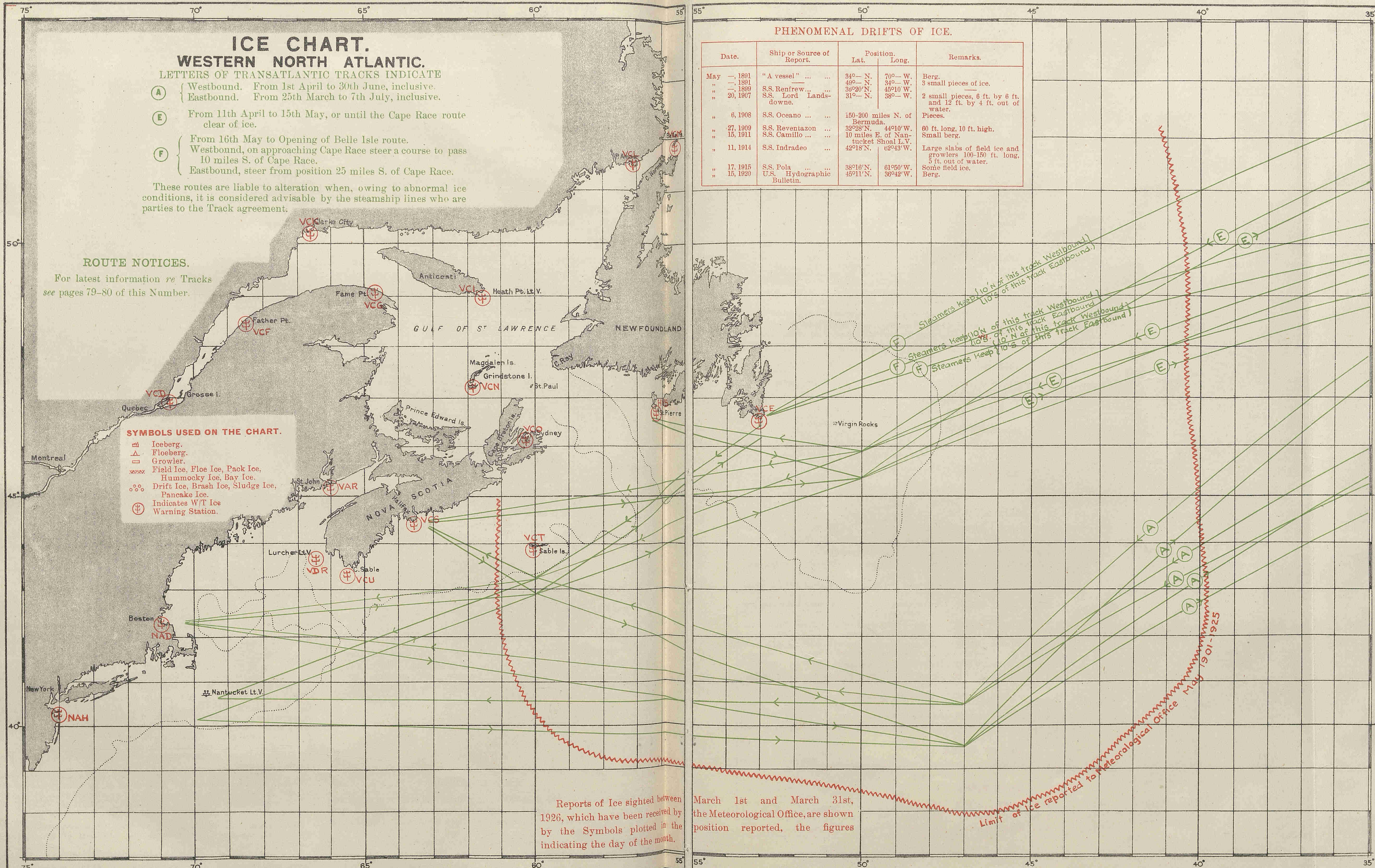
North Atlantic Tracks (Track "B").

The Lines Party to the North Atlantic Track Agreement have decided to continue Track "B" until further notice.

In case of necessity, owing to extreme southerly drift of ice, operative dates will be fixed for Track "A".

PS.3370/1270. Wt.145A. 1300. 3/26.

H.M.S.O. Press, Kingsway, W.C.2.


ICE CHART.
WESTERN NORTH ATLANTIC.
LETTERS OF TRANSATLANTIC TRACKS INDICATE
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E From 11th April to 15th May, or until the Cape Race route clear of ice.
F { From 16th May to Opening of Belle Isle route. Westbound, on approaching Cape Race steer a course to pass 10 miles S. of Cape Race. Eastbound, steer from position 25 miles S. of Cape Race.
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* pages 79–80 of this Number.
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.
75°
70°
65°
60°
55°
50°
45°
40°
35°
Clarke City
VCK
Anticosti
VCI
Heath Pt. Lt. V.
Fame Pt.
VCG
Father Pt.
VCF
GULF OF ST LAWRENCE
NEWFOUNDLAND
C. Norman
P. Amour
VCL
Belle Is.
VCM
C. Ray
Magdalen Is.
Grindstone I.
VCN
St. Paul
Grosse I.
VCD
Quebec
Montreal
Prince Edward Is.
Cape Breton Is.
VCO
Sydney
HYS
St. Pierre
St. Johns
C. Race
VCE
Virgin Rocks
St. John
VAR
NOVA SCOTIA
Halifax
VCS
VCT
Sable Is.
Lurcher Lt. V.
VDR
C. Sable
VCU
Boston
NAD
New York
NAH
Nantucket Lt. V.
Steamers Keep { 10' N of this track Westbound. 10' S of this track Eastbound. }
Steamers Keep { 10' N of this track Westbound 10' S of this track Eastbound }
Steamers Keep { 10' N of this track Westbound 10' S of this track Eastbound }
Limit of Ice reported to Meteorological Office May 1901–1925
Reports of Ice sighted between March 1st and March 31st, 1926, which have been received by the Meteorological Office, are shown by the Symbols plotted in the position reported, the figures indicating the day of the month.

PHENOMENAL DRIFTS OF ICE.

Date.	Ship or Source of Report.	Position. Lat.	Long.	Remarks.
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" —, 1891	——	49°— N.	34°— W.	3 small pieces of ice.
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" 20, 1907	S.S. Lord Lansdowne.	31°— N.	38°— W.	2 small pieces, 6 ft. by 6 ft. and 12 ft. by 4 ft. out of water.
" 6, 1908	S.S. Oceano	150-200 miles N. of Bermuda.		Pieces.
" 27, 1909	S.S. Reventazon ...	32°28'N.	44°10'W.	60 ft. long, 10 ft. high.
" 15, 1911	S.S. Camillo	10 miles E. of Nantucket Shoal L.V.		Small berg.
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" 15, 1920	U.S. Hydographic Bulletin.	45°11'N.	36°42'W.	Berg.

PS.3370/1270. Wt. 145A. 1300. 3/26.

H.M.S.O. Press, Kingsway, W.C.2.

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.

Marine Observers who wish to assist in developing the rapid interchange of Meteorological information and Weather Forecasting at sea can do so by using the standard form, **not** in code, of W/T Weather Report suggested in "Weather Signals," given in Vol. III, No. 25, pages 14 and 15. For this purpose a mercurial barometer of which the index error has been ascertained is essential.

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 2*s*.

Marine Agencies and Port Meteorological Officers.

LIVERPOOL ..	(Port Meteorological Office), Lieut.-Commander M. Cresswell, R.N.R., Dock Office. *Telephone No.: Bank 8959.*
CARDIFF	Captain T. Johnston, Technical College.
CLYDE	Captain M. C. Corrance, Board of Trade Surveyor's Office, 73, Robertson Street, Glasgow.
DUBLIN	Captain M. H. Clarke, Chief Surveyor, Ministry of Industry and Commerce, Marine Department, 27, Eden Quay.
HULL	Captain Geo. B. Sturdy, c/o Mr. W. Hakes, Commercial Road.
LEITH..	Captains G. Black and C. G. Bonner, V.C., D.S.C., Leith Salvage and Towage Co., Ltd., 2, Commercial Street.
SOUTHAMPTON ..	Captain D. Forbes, Nautical Academy, 1, Albion Place.
TYNE	Captain J. J. McEwan, Marine School, South Shields.
HONG KONG ..	Lieut.-Commander C. R. H. Harvey, O.B.E., R.N. Superintendent, Admiralty Chart and Chronometer Depôt.
VANCOUVER ..	T. S. H. Shearman, Esq., Room 40, Post Office Building.
AUSTRALIA ..	The Commonwealth Meteorologist.

The Deputy Directors of Navigation act as sub-agents as follows:—

FREMANTLE ..	Captain J. J. Airey, Dalgety's Buildings.
MELBOURNE ..	Captain L. J. Bolger, Electricity Commissioners Building, 22, William Street.
SYDNEY	Captain G. D. Williams, D.S.O., Customs House.

LATE PRESS.

DERELICTS AND FLOATING WRECKAGE.

Date.	Position. Latitude.	Position. Longitude.	Description.
	NORTH SEA.		
2.3.26	53°56′N.	0°32′E.	Submerged wreckage.
7.3.26	54°—′N.	1°50′E.	Floating derelict about 150 feet long and 80 feet wide. Derelict looked like a floating pier, just awash and very deep.
10.3.26	7 m. S. by W. from Kentish Knock.		Small wreck, bottom up, painted black and white.
11.3.26	3 m. S.W. of Cromer Knoll Lt. Vsl.		Submerged object.
14.3.26	54°03′N.	8°07′E.	Submerged wreckage.
	ENGLISH CHANNEL.		
3.3.26	49°56′N.	1°05′E.	Wreckage dangerous to navigation, partly submerged, about 2 feet out of water, painted black and white.
7.3.26	49°20′N.	3°52′W.	Broken mast, dangerous to navigation.
16.3.26	49°19′N.	4°52′W.	Black buoy adrift, dangerous to navigation.
19.3.26	Start Point bearing N.17°E.(True) 5 miles.		Piece of wreckage about 10 feet long, partially submerged, apparently portion of a wooden bulwark.
	IRISH CHANNEL.		
9.3.26	24 m. off Douglas Head, the Head bearing N.W. by N. ½ N.		Floating spar showing 6 or 8 feet above water, dangerous to navigation.
	MEDITERRANEAN.		
13.3.26	35°25′N.	17°37′E.	Italian barquertine *Maria Altieri* abandoned in a sinking condition, dangerous to navigation.
	RED SEA.		
15.3.26	13°57′N.	42°52′E.	Submerged object.
	NORTH ATLANTIC.		
2.3.26	51°41′N.	7°44′W.	Small red conical buoy.
2.3.26	36°31′N.	75°16′W.	White spar buoy.
4.3.26	44°05′N.	38°27′W.	Schooner *General Smuts* on fire.
5.3.26	48°30′N.	8°45′W.	Spherical buoy, black and white vertical stripes, and small staff.
5.3.26	27°37′N.	69°16′W.	Apparently floating wreckage, about 100 feet long, barely awash.
5.3.26	27°22′N.	58°58′W.	Derelict wooden vessel, bottom up, rudder showing and bow submerged.
6.3.26	38°09′N.	49°34′W.	Wooden derelict, apparently schooner, bottom up, dangerous to navigation.
7.3.26	39°42′N.	73°45′W.	Submerged schooner, about 150 feet long, with mast projecting about 6 feet out of water.
11.3.26	58°08′N.	5°51′W.	Frame tower gas buoy adrift.
13.3.26	62°48′N.	13°27′W.	Big red buoy, drifting N.W., dangerous to navigation.
13.3.26	48°18′N.	14°52′W.	Faint flashing green light, evidently wreck-marking buoy adrift,
15.3.26	62°11′N.	16°02′W.	Submerged object.
19.3.26	47°57′N.	6°58′W.	Spherical buoy marked in red *Any Silverton 32.*
	GULF OF MEXICO.		
8.3.26	29°45′N.	86°42′W.	90 feet water logged barge adrift.
	NORTH PACIFIC.		
1.3.26	36°52′N.	122°27′W.	Conical buoy.
4.3.26	7°51′N.	79°28′W.	Large log.
4.3.26	40°26′N.	124°31′W.	Large tree trunk about 50 feet long.

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 Meteoro-logical Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 19.3.26.	Date Received.
Aba	Hughes, J. ...	G. Pugh Williams, R. Wilkinson, J. R. Jones.	M.L.	Elder Dempster ...	Met. Log. 22.7.25 to 25.10.25...	11.11.25.
Abinsi	Wright, J. B. ...	R. R. Watson	No. A.	,, ...	Form 911 4.2.26 to 13.3.26 ...	17.3.26.
Achilles ...	Hill, R.	D. MacTavish	,, A.	A. Holt	,, 8.10.25 to 19.10.25...	18.11.25.
Actor	Haylett, E. ...	A. Frew, J. McKay, W. H. Bowen.	M.L.	Harrison	Met. Log. 28.10.25 to 16.1.26...	27.1.26.
Adda	Toft, J. T.	W. Skutil	No. M.	Elder Dempster ...	,, 21.1.26 to 25.2.26 ...	2.3.26.
50 *Adriatic* ...	Beadnell, F. E., Capt., R.N.R.	J. Collins, A. C. I. Anson, R. G. Roberts.	W.T.	White Star	W.T. Reg. 13.2.26 to 4.3.26 ...	16.3.26.
					Form 911 13.2.26 to 6.3.26 ...	16.3.26.
Aeneas ...	Wallace, W. K. ...	J. M. Anderson	No. A.	A. Holt	,, 1.1.26 to 22.1.26 ...	2.2.26.
Agapenor ...	Ramsay, J. ...	A. T. Gillard	,, A.	,, ...	,, 19.1.26 to 28.2.26 ...	10.3.26.
Alban	Whayman, W. ...	C. D. Lane, A. T. Douglas ...	,, A.	Booth	,, 6.12.25 to 22.12.25...	4.1.26.
Albania ...	Gronow, S.	L. Harper	,, A.	Cunard	,, 29.8.25 to 22.9.25 ...	24.9.25.
Algerian Prince ...	Shaw, D. C. ...	G. Potts	,, A.	Prince	,, 17.3.25 to 31.3.25 ...	6.4.25.
Alipore ...	Gordon, L. M., R.D., Commr., R.N.R.	F. R. W. Page	,, M.	P. and O.	,, 3.8.25 to 22.8.25 ...	21.9.25.
Almanzora ...	Mackenzie, G. A. ...	E. S. Dunch, E. Hewitt ...	,, A.	R.M.S.P.	,, 28.11.25 to 10.1.26...	19.1.26.
Alondra ...	Prendergast, J. J. ...	H. Peters	,, A.	Yeoward	,, 13.2.26 to 8.3.26 ...	13.3.26.
Ampetco ...	Vandenkerckhone, A.	A. Aspeslagh	,, A.	American Petroleum...	,, 17.12.25 to 4.1.26 ...	25.1.26.
Antilochus ...	Wilkinson, H. ...	E. T. Bayes	,, A.	A. Holt	,, 27.7.25 to 6.10.25 ...	21.10.25.
Aorangi ...	Crawford, R. ...	J. W. Bray, G. H. Kime, H. A. Titchfield.	M.L.	Canadian-Australasian	Met. Log. 24.9.25 to 7.1.26 ...	2.2.26.
Appam ...	Yardley, H. A., D.S.C.	S. C. Fry, J. A. McGough, W. Page.	,,	Elder Dempster ...	,, 24.6.25 to 5.12.25 ...	24.12.25.
30 *Aquitania* ...	Charles, Sir J. T. W., K.B.E., C.B., R.D., Commodore, R.N.R.	J. L. Croasdaile, J. Locke, L. T. Simpson.	W.T.	Cunard	W.T. Reg. 11.2.26 to 25.2.26 ...	2.3.26.
62 *Arabic* ...	Davies, J.	R. Walker, H. G. Morgan, W. Clements.	,,	White Star	,, 12.2.26 to 4.3.26 ...	8.3.26.
					Form 911 11.2.26 to 4.3.26 ...	8.3.26.
Arafura ...	Gordon, A. S. ...	J. T. Heddle, G. C. Smith, C. Stratford, F. O. Colvin.	M.L.	Eastern and Australian	Met. Log. 6.10.25 to 3.1.26 ...	26.2.26.
Archimedes ...	Taylor, F. C. ...	F. W. Johnson	No. A.	Lamport & Holt ...	Form 911 7.6.25 to 8.7.25 ...	9.7.25.
Ariguani ...	Scudamore, J. H. H., D.S.C., R.D. Commr. R.N.R.	... ...	,,	Elders & Fyffes ...	... ...	...
Armadale Castle ...	Millard, L. A., Knight, A.	M. M. Tomkins, R. F. Bayer, C. H. Williams.	M.L.	Union Castle ...	Met. Log. 31.1.25 to 22.7.25 ...	8.8.25.
Arracan ...	Willis, M.	R. McInnes, M. S. Stuart, A. McCullum.	,,	P. Henderson ...	,, 2.7.25 to 27.11.25...	10.12.25.
Arundel ...	Short, H.	Mr. Hill	C.C.	Southern Rly. ...	Telegraphic Report 19.3.26 ...	19.3.26.
Arundel Castle ...	Hague, J. W., Commr., R.N.R.	G. Blaiklock, C. Lloyd, H. S Colbourne, T. A. Rainey, F. O. Wilbraham.	M.L.	Union Castle ...	Met. Log. 24.10.25 to 15.2.26...	23.2.26.
Assyria ...	Donald, D. R. ...	A. Middleton	No. A.	Anchor	Form 911 16.8.25 to 7.9.25 ...	9.9.25.
Astronomer ...	Booth, W. M. ...	J. Rae, H. Thomas, E. Shatton.	M.L.	Harrison	Met. Log. 29.8.25 to 12.1.26 ...	14.1.26.
Athenic ...	Davies, E.	W. Hill	No. A.	White Star	Form 911 30.1.26 to 16.2.26 ...	8.3.26.
Atreus	Salter, G. H. ...	J. C. Podmore	,, A.	A Holt	,, 1.2.26 to 12.2.26 ...	19.2.26.
Atsuta Maru ...	Saito, B.	K. Murazumi	,, A.	Nippon Yusen Kaisha	,, 23.2.26 to 8.3.26 ...	15.3.26.
Auditor ...	Owen, W. T. ...	T. E. Stsel	,, M.	Harrison	,, 24.1.26 to 17.2.26 ...	16.3.26.
Ausonia ...	Gibbons, G., R.D., Commr. R.N.R.	E. R. B. Freeman ...	,, A.	Cunard	,, 23.1.26 to 14.2.26 ...	17.2.26.
Author	Kinloch, R ...	... ...	,, M.	Harrison	... ...	...
Avon	Adam, C., R.D., Commr., R.N.R.	E. S. Munch	,, M.	R.M.S.P.	Form 911 27.1.26 to 12.3.26 ...	17.3.26.
Balfour	Rothwell, A. ...	A. Hammersley	No. A.	Canadian Pacific ...	,, 26.11.25 to 5.1.26 ...	20.1.26.
51 *Baltic* ...	White, E. R., Commr. R.N.R.	F. Laws, J. Farrell, H. R. Wilkinson.	W.T.	White Star ...	W.T. Reg. 24.1.26 to 11.2.26 ...	16.2.26.
					,, 23.2.26 to 13.3.26 ...	16.3.26.
					Form 911 24.1.26 to 14.3.26 ...	16.3.26.

Name of Vessel.	Captain.	Observing Officers.	Official Meteorological Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 19.3.26.	Date Received.
Bambra ...	Buckeridge, G. ...	H. W. Norris, J. E. Turner, F. Humble.	M.L.	State Service, Australia	Met. Log. 12.8.25 to 22.11.25...	28.12.25.
Bampton Castle ...	Hutchings, A. H. ...	J. W. S. Brooks	No.	Union Castle ...	,, 3.10.25 to 11.2.26 ...	15.2.26.
Banbury Castle ...	Singeisen, E. A., D.S.C., R.D., Capt., R.N.R.	... ...	,,	,, ...	... ...	...
Banffshire ...	Wynne, R. H. ...	J. M. Bowie	No. A.	Turnbull Martin ...	Form 911 4.1.26 to 25.1.26 ...	8.3.26.
Baron Cawdor ...	Cairns, W.	A. Campbell	,, A.	Hogarth & Sons ...	,, 26.7.25 to 16.10.25...	20.10.25.
Barpeta ...	Denne, G. A. ...	J. W. Knight	,, M.	British India ...	,, 30.12.25 to 29.1.26...	15.2.26.
Baychimo ...	Cornwall, S. A. ...	S. Jackson	,, A.	Hudson's Bay Co. ...	,, 18.11.25 to 9.1.26 ...	13.1.26.
Beaufort ...	Rice, W. V., D.S.O., D.S.C., Commr., R.N.	J. Taylor	M.L.	His Majesty's Ship ...	Met. Log. 14.8.25 to 13.11.25...	11.1.26.
59 *Belgenland* ...	Bradshaw, J. ...	C. J. Murray, J. M. Appleby,	W.T.	Red Star	W.T. Reg. 4.10.25 to 21.10.25...	23.10.25.
					Form 911 3.10.25 to 21.10.25	23.10.25.
Benalder ...	Cole, J. H., D.S.C....	T. S. Rawlingson	No. A.	Ben Line	,, 13.1.26 to 30.1.26 ...	22.2.26.
Bendigo ...	Nicholl, R. N. C. ...	C. E. Arundel	,, M.	P. & O. Branch ...	,, 7.1.26 to 25.1.26 ...	15.3.26.
Bengloe ...	McCorquodale, A. ...	G. M. Duff	,, A.	Ben Line	,, 12.8.25 to 29.8.25 ...	30.9.25.
31 *Berengaria* ...	Peel, R. V., R.D., Capt., R.N.R.	J. A. Myles, W. C. A. Robson, E. W. Connell.	W.T.	Cunard ...	W.T. Reg. 25.2.26 to 11.3.26 ...	15.3.26.
Berrima ...	Townshend, W. P.	T. Ferguson	No. M.	P. & O. Branch ...	Form 911 22.11.25 to 7.1.26 ...	12.1.26.
Bintang ...	Morzer Bruyns, M. F.	A. A. H. Blankestyn ...	,, M.	Nederland ...	,, 2.1.26 to 29.1.26 ...	2.2.26.
Bogota ...	Dunn, R. E., O.B.E.	T. R. Thomas	,, A.	R.M.S.P. Co. ...	,, 8.10.25 to 28.10.25...	5.11.25.
Bolingbroke ...	Jones, D. C. ... Dott, J. F.	C. A. Mott	M.L.	Canadian Pacific ...	Met. Log. 30.6.25 to 16.1.26 ...	20.1.26.
Borda	Holland. R. ...	... ...	No. M.	P. & O. Branch ...	Form 911 25.7.25 to 1.9.25 ...	15.2.26.
Bothwell ...	Jones, D. J. C. ...	G. Mowatt	,, A.	Canadian Pacific ...	,, 31.10.25 to 30.11.25	8.12.25.
Brandon ...	Henderson, W. ...	T. Beck	,, A.	,, ,, ...	,, 9.1.26 to 8.2.26 ...	11.2.26.
Brecon ...	Newman, J. ...	J. Mackenzie, H. C. Waters, T. J. Webster, D. Durin, N. B. Goater, T. Golby.	,, A.	,, ,, ...	... ...	...
Brenda ...	Murdoch, R. J. ...	F. R. Ness	,, A.	Scottish Fishery Board	Form 911 1.2.26 to 28.2.26 ...	2.3.26.
Brighton ...	Hill, A.	Mr. Munton	C.C.	Southern Railway ...	Telegraphic Report 16.3.26 ...	16.3.26.
British Advocate	Taylor, R. J. ...	C. J. Metcalf	No. M.	British Tankers ...	Form 911 17.10.25 to 13.3.26...	17.3.26.
British Engineer...	Joures, T. W. ...	M. J. Grieves	,, M.	,, ,, ...	,, 1.8.25 to 14.11.25 ...	7.1.26.
British Judge ...	Putt, R. O.	H. Westlake	,, M.	,, ,, ...	,, 3.2.26 to 19.2.26 ...	2.3.26.
Browning ...	Connorton, W. A. ...	A. B. Murray	,, A.	Lamport & Holt ...	,, 16.11.25 to 13.2.26...	16.2.26.
Bruyere ...	Denson, W. ...	R. Mowbray	,, A.	,, ,, ...	,, 24.10.25 to 11.11.25	29.12.25.
Cambria C.S. ...	Sherwood, C. A. ... D.S.C.	H. Selby, A. J. English, B. C. Farrow.	M.L.	Eastern Tel. Co. ...	Met. Log. 14.7.25 to 21.11.25...	26.1.26.
Cambria ...	Telfer, J.E. ...	V. S. Phillips	C.C.	L.M. & S. Rly. ...	Telegraphic Report 19.3.26 ...	19.3.26.
Cameronia ...	Smart, R. W. ...	C. Paton	No.	Anchor	... ...	...
Camito	Scudamore, J. H. H., D. S. C., R. D., Commr., R.N.R.	R. M. Cossantine, P. C. Congdon. A. E. Harvey, F. Dudgeon, W. G. W. Chanter.	M.L.	Elders & Fyffes ...	Met. Log. 14.9.25 to 15.1.26 ...	20.1.26.
Canada ...	Jones, T. ...	A. Thompson	No. M.	White Star-Dominion	Form 911 14.11.25 to 6.12.25...	11.12.25.
Canadian Importer	Wallace, C. ...	C. W. Gilding	,, A.	Canadian Govt. Mercantile Marine.	,, 1.6.25 to 7.7.25 ...	24.7.25.
Canadian Inventor	Boulton, F. W. ...	T. Edgar	,, A.	,, ,, ,,	,, 21.11.25 to 9.12.25...	1.2.26.
Canadian Miller	McConechy, W. T.	B. D. Ranns	,,	,, ,, ,,	... ...	...
Canadian Raider	Dixon, C. C. ...	C. J. Carp	,, A.	,, ,, ,,	Form 911 16.3.25 to 22.4.25 ...	5.5.25.
Canadian Scottish	Wallace, C.	P. D. Angus	,, A.	,, ,, ,,	,, 7.11.25 to 20.12.25...	2.2.26.
Canadian Skirmisher.	Millar, W. H. ...	R. J. Watson	,, A.	,, ,, ,,	,, 28.10.25 to 9.12.25...	16.12.25.
Canadian Winner	Hocking, N. P. ...	R. Girling, J. Cochrane ...	,, M.	,, ,, ,,	,, 2.1.26 to 10.2.26 ...	8.3.26.
Carlow Castle ...	Whitfield, G. J. ...	J. W. Kirby	,, A.	Union Castle ...	,, 8.5.25 to 2.6.25 ...	8.6.25.
35 *Carmania* ...	Brown, F. G., R.D., Capt., R.N.R.	W. M. Stewart, A. T. Hamer, W. B. Tanner.	W.T.	Cunard	W.T. Reg. 1.2.26 to 20.2.26 ...	23.2.26.
					Form 911 31.1.26 to 21.2.26 ...	23.2.26.
34 *Caronia* ...	Hossack, W. H., R.D., Capt., R.N.R.	R. F. Bovey, T. Ashcroft, D. Butler.	,,	,, ...	W.T. Reg. 15.2.26 to 5.3.26 ...	10.3.26.
					Form 911 15.2.26 to 7.3.26 ...	9.3.26.
52 *Cedric* ...	Hickson, V. W. ...	E. A. Crowley, A. Thompson, D. K. Crawford.	,,	White Star	W.T. Reg. 15.2.26 to 6.3.26 ...	12.3.26.
					Form 911 15.2.26 to 6.3.26 ...	10.3.26.
53 *Celtic* ...	Berry, G. ...	J. W. Peters, F. E. Patchett, H. C. Gray.	,,	,, ,, ...	W.T. Reg. 1.2.26 to 21.2.26 ...	25.2.26.
					Form 911 31.1.26 to 21.2.26 ...	24.2.26.
Centaur ...	Rose, A. F. ...	L. Johnstone, E. D. Potts ...	No. M.	A. Holt & Co. ...	,, 2.12.25 to 28.1.26 ...	1.3.26.
Ceramic ...	Roberts, J., C.B.E. D.S.O.,R.D.,Capt., R.N.R.	D. W. Chamberlain ...	,, A.	White Star	,, 31.1.26 to 17.2.26 ...	8.3.26.
Changte ...	Gambrill, F. C. ...	... ...	M.L.	Yuill & Co.... ...	... ...	...
China	Cossey, W. F. ...	E. R. Chaffin	No. M.	P. & O.	Form 911 13.11.25 to 4.12.25...	29.12.25.
Chindwara ...	Brisley, P. L. ...	W. Welch	,, M.	British India ...	,, 29.8.25 to 17.12.25...	11.1.26.
Chindwin ...	Esslemont, C. ...	J. Summers, J. P. Stewart, C. S. Owen.	M.L.	P. Henderson ...	Met. Log 22.8.25 to 18.2.26 ...	4.3.26.
City of Alexandria	Bedford, G. B. ...	T. Tellesson	No. M.	Ellerman	Form 911 14.3.25 to 7.4.25 ...	5.5.25.
City of Baroda ...	Houghton, W. ...	A. Beaton, J. Cook, H. N. Jones.	M.L.	,, ...	Met. Log. 27.5.25 to 13.8.25...	17.8.25.
City of Benares ...	Wyper, J.	C. G. Inglis	No. A.	,, ...	Form 911 21.11.25 to 25.11.25	16.12.25.
City of Brisbane...	Seaborne, F. O., D.S.C.	R. W. Watkin	,, A.	,, ...	,, 7.1.26 to 26.1.26 ...	15.2.26.
City of Canterbury	Bremner, D. M. ...	A. M. Hamilton	,, A.	,, ...	,, 3.4.25 to 24.6.25 ...	29.6.25.
City of Chester ...	Letton, F. W. ...	F. C. Wilson, H. Asher, W. Speakman.	M.L.	,, ...	Met. Log. 15.11.25 to 3.3.26 ...	8.3.26.
City of Edinburgh	Spencer, H. ...	J. D. MacDonald	No. M.	,, ...	Form 911 4.6.25 to 2.7.25 ...	18.8.25.
City of London ...	Martin, D.	J. J. McTigue	,, A.	,, ...	,, 13.1.26 to 3.2.26 ...	22.2.26.
City of Marseilles	Brown, G.	W. A. MacAdams, G. F. L. Coates.	,, A.	,, ...	,, 8.1.26 to 18.1.26 ...	15.3.26.
City of Rangoon...	Dunning, T. W. J....	A. Gibb, V. S. Turner, A. H. Cosker, E. J. Sawyer, G. Lawrey.	M.L	,, ...	Met. Log. 16·6·25 to 17·11·25...	9.12.25.
City of Valencia...	Williamson, W. A., R.D., Lieut.-Commr. R.N.R.	C. C. Duncan	No. M.	,, ...	Form 911 5.3.25 to 3.4.25 ...	2.6.25.
City of Yokohama	McDonald, W. D. ...	R. A. Jutton	,, A.	,, ...	,, 14.1.26 to 28.1.26 ...	15.2.26.
Clan Lamont ...	McCornish, A. B. ...	C. W. Banbury, A. F. Martin	,, A.	Clan	,, 18.1.26 to 25.1.26 ...	2.3.26.
Clan Lindsay ...	Willits, J., Commr.	J. C. Carter	,, A.	,, ...	,, 4.2.26 to 19.2.26 ...	15.3.26.
Clan Macbeth ...	Young, A. H., R.D., Lieut.-Commdr., R.N.R.	J. T. Bell...	,, A.	,, ...	,, 1.11.25 to 1.12.25 ...	22.12.25.
Clan Macfadyen	Stenson, F. J., R.D., Capt., R.N.R.	K. T. Roper	,, A.	,, ...	,, 7.11.25 to 24.12.25...	30.12.25.
Clan Macgillivray	West, W. F. ...	P. G. de Gruchy	,, A.	,, ...	,, 18.12.25 to 17.1.26...	11.2.26.
Clan Macindoe ...	Law, A. ...	J. G. Baillie	,, A.	,, ...	,, 22.10.25 to 20.1.26...	8.2.26.
Clan Mackellar ...	Scotland, A. ...	D. McAllister	,, A.	,, ...	,, 10.12.25 to 4.1.26 ...	2.2.26.

Name of Vessel.	Captain.	Observing Officers.	Official Meteorological Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 19.3.26.	Date Received.
Clan Mackinnon	Mackie, R. W. ...	W. F. Isaac, S. Y. Strange, S. H. Danson.	M.L.	Clan	Met. Log. 20.6.25 to 28.9.25 ...	22.10.25.
Clan Macphee ...	Gourlay, J. B. ...	D. S. Rae, A. W. Jones, J. J. Millar.	,,	,, ...	,, 28.12.24 to 24.7.25...	4.8.25.
Clan Macnaughton	Thomson, W. ...	A. J. Storkey, D. MacDiarmid	No. A.	,, ...	Form 911 24.12.25 to 13.1.26...	22.2.26.
Clan Mactaggart...	Gray, J. N. ...	W. J. Henderson	,, A.	,, ...	,, 22.12.25 to 20.1.26...	16.2.26.
Clan MacTavish	Higgins, C. J. ...	... ...	,, A.	,, ...	... ...	...
Clan Macvicar ...	Phillips, G. P. ...	L. S. Murrin	,, A.	,, ...	Form 911 14.7.25 to 2.8.25 ...	24.8.25.
Clan Macwilliam	Williamson, A. ...	... ...	,, A.	,, ...	... ...	...
Clan Malcolm ...	Neill, G. A. ...	S. M. Werrey Easterbrook ...	M.L.	,, ...	... ...	...
Clan Morrison ...	Porterfield, W. M....	G. Morren	No. A.	,, ...	Form 911 21.7.25 to 13.10.25...	15.10.25.
Clan Murdoch ...	Miller, W. ...	P. McMillan	,, A.	,, ...	,, 9.12.25 to 27.1.26 ...	16.2.26.
Clan Ranald ...	Openshaw, L. G. ...	T. E. Woodall	,, A.	,, ...	,, 22.1.26 to 23.2.26 ...	25.2.26.
Clan Ross ...	Jones, R. C. ...	G. Short	,, A.	,, ...	,, 19.1.26 to 7.2.26 ...	8.3.26.
Clan Sinclair ...	Neill G. A. ...	J. Brittain	,, A.	,, ...	,, 10.3.25 to 29.7.25 ...	5.8.25.
Clan Urquhart ...	Gibb, A. F. W. ...	T. G. Mitchell	,, A.	,, ...	,, 26.11.25 to 28.12.25	30.12.25.
Colonia, C.S. ...	Garnham, S. A. ...	A. S. Muir, F. Bolingbroke, J. M. Matthews, W. Sangwine.	M.L.	Telegraph Construction & Maintenance.	Met. Log. 29.8.25 to 1.10.25 ...	9.10.25.
Colonian ...	Gittins, R. P. ...	T. A. Schofield-Miller ...	No. A.	Leyland	Form 911 7.1.26 to 31.1.26 ...	8.2.26.
Columbia ...	Erskine, R. ...	C. L. Seaman	,, A.	Anchor	,, 28.6.25 to 19.7.25 ...	27.7.25.
Concordia ...	{Morris, J. ... Telfer, J. H. ...	T. Philip, J. McIntosh, J. Davies, H. A. Hartley.	M.L.	Anchor Donaldson ...	Met. Log. 7.8.25 to 8.2.26 ...	19.2.26.
Comino ...	Nuttall, E. L. ...	E. J. Johnson	No. A.	Furness Withy ...	Form 911 27.1.26 to 6.3.26 ...	9.3.26.
Copenhagen ...	Kerr, J. J. ...	... ...	,,	Glen & Co. ...	... ...	...
Corinthic ...	Hart, F.	F. Kean, M. Bennett, F. G. Rogers.	M.L.	White Star ...	Met. Log. 4.4.25 to 18.7.25 ...	27.7.25.
Cornish City ...	James, D. P. ...	... ...	No. A.	Reardon Smith ...	... ...	...
Cornwall ...	Haines, F. P. ...	Mr. Maltby, Mr. Ray ...	No. A.	Federal	Form 911 4.7.25 to 13.8.25 ...	21.9.25.
Crawford Castle ...	Morgan, A. O., R.D., Commr. R.N.R.	J. E. R. Wilford	,, A.	Union Castle ...	,, 10.1.26 to 9.2.26 ...	15.2.26.
Cristales ...	Isaacson, J. M. ...	... ...	M.L.	Elders & Fyffes ...	... ...	...
Culebra ...	Mackay, A. S. ...	P. Cooper, J. W. Duncan, C. A. Payne.	,,	R.M.S.P. Co. ...	Met. Log. 4.5.25 to 15.12.25 ...	1.1.26.
Cumberland ...	Deith, G. T. ...	... ...	No.	Federal	... ...	...
Cuthbert ...	Barlow, F. P. ...	S. E. Adam	No. A.	Booth	Form 911 10.1.26 to 24.2.26 ...	15.3.26.
Cyclops ...	Cosker, W. ...	H. L. Cole	,, A.	A. Holt	,, 23.12.25 to 1.3.26 ...	8.3.26.
Dardanus ...	Williams, D. T. ...	W. K. Kerr	,, A.	,, ...	,, 23.1.26 to 1.3.26 ...	8.3.26.
Darian... ...	Masters, W. ...	A. S. Holland	,, A.	Leyland	,, 17.1.26 to 8.3.26 ...	10.3.26.
Darro	Smith, W. E., D.S.O., R.D.,Capt., R.N.R.	L. Peterson	,, M.	R.M.S.P. Co. ...	,, 15.11.25 to 9.1.26 ...	14.1.26.
Daytonian ...	Walker, C. J., D.S.C.	... ...	,, A.	Leyland	,, 30.3.25 to 13.5.25 ...	21.5.25.
Demerara ...	Willan, F. C. L. ...	J. J. C. Blake	,, M.	R.M.S.P. Co. ...	,, 12.1.26 to 8.3.26 ...	10.3.26.
Demosthenes ...	Orriss, F. A. ...	S. J. Buckland	,, M.	Aberdeen	,, 24.1.26 to 9.3.26 ...	18.3.26.
Deseado ...	Hannam, F. S. ...	L. D. Jennings, A. H. Phillipson	,, M.	R.M.S.P. Co. ...	,, 4.12.25 to 20.1.26 ...	25.1.26.
Desna	Huff, G. F. ...	J. W. Smith	,, M.	,, ...	,, 12.12.25 to 6.2.26 ...	10.2.26.
Deucalion ...	Findlay, J. ...	L. E. Brown	,, A.	A. Holt	,, 27.12.25 to 15.1.26...	22.2.26.
Dieppe... ...	Marmery, S. ...	Mr. Parsons	C.C.	Southern Railway ...	Telegraphic Report 4.2.26 ...	4.2.26.
Dimboola ...	Roy, C. M. ...	H. L. Price	No. A.	Melbourne S.S. Co. ...	Form 911 25.12.25 to 19.1.26...	22.2.26.
Discoverer ...	Ling, J. T. ...	H. Hall	,, M.	Harrison	,, 17.9.25 to 9.12.25 ...	18.12.25.
Discovery, R.R.S.	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. 24.7.25 to 7.1.26 ...	19.2.26.
Domala, M.V. ...	Buswell, W. ...	C. E. Merchant	No. M.	British India ...	Form 911 27.9.25 to 8.10.25 ...	15.10.25.
61 *Doric* ...	S.Bolton,D.S.C.,R.D., Commr., R.N.R.	W. F. Dennison, R. H. Shaw, W. Nicoll.	W.T.	White Star {	W.T. Reg. 8.2.26 to 28.2.26 ...	3.3.26.
					Form 911 7.2.26 to 28.2.26 ...	2.3.26.
Doric Star ...	Thomas, R. T. ...	T. Williams	No. M.	Blue Star	,, 1.8.25 to 15.9.25 ...	16.9.25.
Dorington Court...	Isaacs, W. A. ...	E. D. A. Gibbs	,, A.	Haldin & Co. ...	,, 12.9.25 to 6.11.25 ...	20.11.25.
Dorset ...	Kettlewell, C. R. ...	E. Smith, H. S. Rogers, S. T. Woodhouse.	M.L.	New Zealand S.S. Co.	Met. Log. 13.6.25 to 29.12.25...	6.1.26.
Dorsetshire ...	Adamson, B. W. ...	C. H. Griffiths, W. A. Kent, R. Cuming, J. Logan.	,,	Bibby	,, 3.10.25 to 7.1.26 ...	12.1.26.
Dromore Castle ...	Vincent, E. S., R.D., Commr. R.N.R.	S. S. Smith	No. A.	Union Castle ...	Form 911 8.12.25 to 26.12.25...	30.12.25.
Dryden ...	Major, T. W. ...	A. Hewitt	,, M.	Lamport & Holt ...	,, 1.9.25 to 17.9.25 ...	7.10.25.
Duendes ...	Cox, F. D. ...	H. Jones...	,, M.	P.S.N. Co. ...	,, 15.2.26 to 3.3.26 ...	8.3.26.
Dundrum Castle	Weller, H. E. ...	W. S. Byles	,, A.	Union Castle ...	,, 9.2.26 to 9.3.26 ...	10.3.26.
Dunrobin ...	Ramsay, J. D. ...	M. M. Ramsay	,, A.	Glen & Co.	,, 26.1.26 to 23.2.26 ...	8.3.26.
Duquesa ...	Ellis, F., D.S.C. ...	H. D. Chamberlain ...	,, M.	Furness Withy ...	,, 29.11.25 to 25.1.26...	27.1.26.
Durenda ...	Wilson, W. ...	K. G. Pullman	,, M.	British India ...	,, 1.1.26 to 9.1.26 ...	1.2.26.
Edinburgh Castle	Morton Betts, W. ...	... ...	M.L.	Union Castle ...	Met. Log. 5.9.25 to 27.12.25 ...	30.12.25.
El Cordobes ...	Noton, F. G. ...	J. W. Ekins	No. A.	British & Argentine S.N. Co.	Form 911 26.9.25 to 16.12.25...	19.12.25.
Elmina ...	Allen, E. E. ...	R. A. Roberts, J. A. Jones, C. V. Evans.	M.L.	Elder Dempster ...	Met. Log. 9.9.25 to 3.11.25 ...	16.11.25.
El Paraguayo ...	Smith, F. C. ...	J. Allerton	No. M.	Houlder Bros. ...	Form 911 21.11.25 to 21.1.26	26.1.26.
Elpenor ...	T. W. Hannay ...	M. Robertson	M.L.	A. Holt	Met. Log. 1.11.25 to 1.3.26 ...	4.3.26.
Empress of Asia...	Douglas, L. D., R.D., Lt. - Commr., R.N.R.	R. H. Foley, M. Kissack, L. Johnston, L. C. Hogg, T. M. W. Golby.	,,	Canadian Pacific ...	,, 17.9.25 to 29.1.26 ...	2.3.26.
Empress of Australia.	Hailey, A. J. ..	R. Leicester, J. Downes ...	,,	,, ,, ...	,, 21.3.25 to 17.12.25...	12.1.26.
Empress of Canada	Robinson, S., C.B.E., R.D., Commr., R.N.R.	W. S. Halliday, L. C. Barry, J. W. Thomas.	,,	,, ,, ...	,, 15.5.25 to 21.9.25 ...	16.12.25.
Empress of France	Griffiths, E. ...	O. Pennington, E. Roberts, A. W. Patrick, W. Ewens.	,,	,, ,, ...	,, 21 6.25 to 17.11.25...	24.11.25
Empress of Russia	Holland, A. J., R.D. Lt.-Commr.,R.N.R.	... ...	,,	,, ,, ...	,, 25.6.25 to 6.10.25 ...	14.11.25.
Empress of Scotland	Latta, R. G. ...	B. Grant, D. Loram, W.Bacon, K. Hutchings, F. G. Hutchings.	,,	,, ,, ...	,, 3.5.25 to 7.10.25 ...	3.11.25.
Endeavour ...	Commr. S. A. Geary-Hill, D.S.O., R.N.	M. L. Harrison, E.V.B. Baker, E. H. B. Baker, J. Torlesse.	,,	His Majesty's Ship ...	,, 26.5.25 to 24.6.25 ...	13.7.25.
Essequibo ...	Duncan, E. E. ...	A. Lyall	No. M.	R.M.S.P. Co. ...	Form 911 4.12.25 to 18.1.26 ...	1.2.26.
Eumaeus ...	Read, J. W. ...	W. J. Ryan	,, A.	A. Holt	,, 2.1.26 to 10.3.26 ...	15.3.26.
Euripides ...	Collins, P. J., O.B.E.	H. S. Cox. G. R. Fisher, A. J. Terry.	M.L.	Aberdeen	Met. Log. 27.2.25 to 18.6.25 ...	29.6.25
Eurybates ...	Carnon, C. G. ...	C. Napier	No. A.	A. Holt	Form 911 1.1.26 to 13.2.26 ...	18.2.26.
Explorer ...	Lamont, A. ...	Scientific Staff	M.L.	Scottish Fishery Board	Met. Log. 2.3.25 to 17.10.25 ...	29.12.25.
Ferndale ...	Daniel, F.	D. Jones	No. M.	Commonwealth Govt.	Form 911 25.12.25 to 31.1.26...	4.2.26.

Name of Vessel.	Captain.	Observing Officers.	Official Meteorological Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 19.3.26.		Date Received.
Fitzroy	Silk, H. V., Lt.-Commr, R.N.	M. E. Welby	M.L.	His Majesty's Ship ...	Met. Log.	25.8.25 to 16.11.25...	21.11 25.
Flandria ...	Veldkamp, G. J. ...	T. Doornbosch	No. M.	Holland Lloyd ...	Form 911	8.1.26 to 25.2.26 ...	1.3.26.
Flinders ...	Henderson, D A., Lt.-Commr., R.N	H. E. Turner	M.L.	His Majesty's Ship ...	Met. Log.	23.8.25 to 20.11.25...	2.12.25.
Francisco ...	Collins, F. ...	C. Walker	No. A.	Ellerman Wilson ...	Form 911	23.1.26 to 5.2.26 ...	15.2.26.
Freya	Angus, W. ..	J. H. Hennessey	,, A.	Scottish Fishery Board	,,	22.2.26 to 12.3.26 ...	18.3.26.
Garoet	Visser, C. W. ...	C. J. Vandenboom	,, M.	Rotterdam Lloyd ...	,,	3.12.25 to 18.1.26 ...	8.3.26.
Gascoyne ...	Rutt, W. N. ...	R. Simpson	,, A.	Dalgety & Co. ...	,,	24.10.25 to 4.1.26 ...	8.2.26.
Gelria	Bakker, T. J. ...	K. H. Schilp	,, M.	Holland Lloyd ...	,,	22.1.26 to 11.3.26 ...	13.3.26.
Glenamoy, M.V. ...	Angier, J. ...	R. H. Bishop	,, A.	Glen Line	,,	24.1.26 to 11.2.26 ...	8.3.26.
Glenapp, M.V. ...	Roberts, W. E. ...	S. W. Bell	,, A.	,, ...	,,	14.11.25 to 27.12.25	4.1.26.
Glenluce, M.V. ...	Barkley, E. ...	J. D. Richards	,, A.	,, ...	,,	22.2.25 to 24.3.25 ...	30.3.25.
Glenshane ...	Beer, E. ...	R. A. Dale	,, A.	,, ...	,,	7.2.26 to 19.2.26 ...	1.3.26.
Gloucestershire ...	Robin, E. ...	M. W. Simmons	,, A.	Bibby	,,	25.10.25 to 1.1.26 ...	5.1.26.
Gorgon... ...	Hughes, J. W. ...	E. W. Powell	,, A.	A. Holt & Co. ...	,,	28.1.26 to 9.2.26 ...	15.3.26.
Gourko... ...	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.
Haliartus ...	Marsh, L. V. ...	W. H. Upton	No. A.	R. P. Houston ...	Form 911	26.11.25 to 18.12.25	19.1.26.
Harmonides ...	Hughes, W. J. ...	D. L. Roberts	,, A.	,, ...	,,	1.3.25 to 16.3.25 ...	30.4.25.
Harmony, Auxy.	Jackson, J. C. ...	A. W. Bush	,, A.	Moravian Mission ...	,,	1.12.25 to 18.12.25...	29.12.25.
Hatarana ...	Woodget, H. T. ...	J. L. Durkee, F. Wells, H. Harrison, H. J. O'Donohoe.	M.L.	British India ...	,,	7.10.24 to 22.4.25 ...	4.5.25.
Hauraki, M.V. ...	Frew, J. D. ...	J. A. Pearson	No. M.	Union S.S. Co., N.Z....	,,	10.11.25 to 17.12.25	16.2.26.
Henry Holmes, C.S.	Bicker Caarten, A.	R J. M. Pearce	,, M.	W. I. & Panama Telegraph Co.	,,	7.7.25 to 5.9.25 ...	23.9.25.
Herald	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.
Herefordshire ...	Mann, R. P. ...	J. E. Cullen, G. Whitworth, P. S. Cooper.	No.	Bibby	,,	10.10.25 to 17.12.25	14.1.26.
Herschel ...	Davies, G. W. ...	J. M. Edgar	No. A.	Lamport & Holt ...	Form 911	14.10.25 to 15.12.25	29.12.25.
Hibernia ...	Tanner, E. B. ...	R. Woodall	C.C.	L.M. & S. Rly. ...	Telegraphic Report, 13.3.26 ...		13.3.26.
Highland Enterprise	Pond, R. H. ...	J. H. Titton	No. A.	Nelson	Form 911	12.12.25 to 11.2.26...	10.3.26.
,, *Glen* ...	Jones, T. J. ...	C. M. Best	,, A.	,, ...	,,	8.2.26 to 27.2.26 ...	13.3.26.
,, *Heather*	Powell, G. A. ...	J. H. Cables, F. Jeyes ...	No.	,, ...	Met. Log.	10.12.24 to 1.6.25 ...	16.6.25.
,, *Laddie*...	Alford, C. ...	R. Simpson	No. A.	,, ...	Form 911	5.11.25 to 4.1.26 ...	6.1.26.
,, *Piper* ...	Collings, D. ...	A. S. Jones, J. S. Collins W. T. Breen, E. F. Smart.	M.L.	,, ...	Met. Log.	20.6.25 to 3.11.25 ...	18.11.25.
,, *Pride* ...	Davies, G. A. ...	F. Falconer, R. R. Soanes, G. E. Leech.	No.	,, ...	,,	5.12.25 to 31.1.26 ...	4.2.26.
,, *Rover* ...	Ashby Graves, F. ...	G. J. Evans	No. A.	,, ...	Form 911	18.12.25 to 13.2.26...	26.2.26.
,, *Warrior*	Robinson, R. H. ...	R. B. Scullard	,, M.	,, ...	,,	15.12.25 to 21.2.26...	24.2.26.
Hildebrand ...	Maddrell, J. ...	A. Allan	,, A.	Booth	,,	18.11.25 to 31.12.25	14.1.26.
Hobsons Bay ...	Kydd, O. J. ...	Morrison, Hendy, Grantham, M. P. Pearce.	M.L.	Commonwealth Govt.	Met. Log.	24.11.25 to 12.3.26...	18.3.26.
Holbein ...	Gough, W. A. ...	H. L. Rudd	No. A.	Lamport & Holt ...	Form 911	8.11.25 to 16.1.26 ...	21.1.26.
54 *Homeric* ...	Holme, A. ...	A. E. Dyer, A. Griffiths, S. A. Jones, S. B. Morfee.	W.T.	White Star	W.T. Reg.	14.1.26 to 28.1.26 ...	9.2.26.
Hororata ...	Holland, E. ...	H. J. Wilde	No. A.	New Zealand S.S. Co.	Form 911	16.7.25 to 27.1.26 ...	2.2.26.
Honorius ...	Samuels, C. ...	J. E. Martin, W. G. Iddes ...	,, A.	R. P. Houston ...	,,	27.7.25 to 27.8.25 ...	31.8.25.
Hubert... ...	Buck, R. H. ...	G. H. Jordan	,, A.	Booth	,,	6.8.25 to 28.8.25 ...	14.9.25.
Hurunui ...	Burton Davies, J. ...	J. C. Tuckett, C. D. Watt, F. Pover, G. R. Hogg.	M.L.	New Zealand S.S. Co.	Met. Log.	20.11.24 to 17.5.25...	9.6.25.
Ikala	Meetham, J. T. ...	E. Lightfoot, C. W. Smithurst	No. A.	J. H. Welsford & Co.	Form 911	22.5.25 to 5.6.25 ...	16.7.25.
Ingoma ...	Barrow, R. K. ...	O. Stanhope	,, M.	Harrison	,,	28.11.25 to 17.1.26...	22.1.26.
Intaba	Gibbings, W. A. ...	A. M. Hughes	,, A.	,, ...	,,	3.1.26 to 17.2.26 ...	24.2.26.
Iris, C.S. ...	Hughes, H. R. ...	... ...	M.L.	Pacific Cable Board ...	...	... ...	...
Iroquois ...	Jackson, A. L., Commr., R.N.	A. K. Baxendell	,,	His Majesty's Ship ...	Met. Log.	17.8.25 to 30.11.25...	27.1.26.
Ixion	Williams, R. J. ...	A. S. Brotherton	No. A.	A. Holt	Form 911	10.11.25 to 7.12.25...	8.2.26.
Javanese Prince ..	Naylor, E. ...	F. Armstrong	,, A.	Prince	...	... ...	...
Jervis Bay ...	Chaplin, W. R. ...	R. W. Laycock	,, M.	Commonwealth Govt.	Form 911	12.1.26 to 14.2.26 ...	17.2.26.
John Pender, C.S.	Gibson, L.	A. E. Everall	,, A.	Eastern Tel. Co. ...	,,	31.10.25 to 19.11.25	9.12.25.
Junin	Benson, C. W. ...	A. Beharrel	,, A.	Pacific S.N. Co. ...	,,	16.5.25 to 5.6.25 ...	17.6.25.
Justin	Evans, L. ...	A. R. Fasting	,, A.	Booth	...	... ...	...
Kaikoura ...	McNish, R. ...	H. E. Reilly, H. Neagle, D. Glegg, S. Toyne.	M.L.	New Zealand S.S. Co.	Met. Log.	26.1.25 to 8.8.25 ...	26.8.25.
Kaisar-i-Hind ...	Manley G. ...	G. R. Baker	No. M.	P. & O.	Form 911	30.1.26 to 16.2.26 ...	22.2.26.
Kamo Maru ...	Shiratori, S. ...	... ...	,, A.	Nippon Yusen Kaisha	,,	9.1.26 to 7.2.26 ...	12.2.26.
Kangaroo ...	Norris, H. C. ...	R. J. Sinclair, V. Gilbert, J. Egglestone.	M.L.	State Service Australia	Met. Log.	11.4.25 to 20.9.25 ...	2.11.25.
Kashmir ...	Stringer, R.H., O.B.E., Commr., R.N.R.	H. A. Tod	No. M.	P. & O.	Form 911	20.1.26 to 7.2.26 ...	16.3.26.
Kathlamba ...	Mordue, J. A. ...	... ...	,, A.	Ellerman Bucknall ...	,,	19.2.26 to 7.3.26 ...	18.3.26.
Kellett	Maxwell, P. S. E., Commr., R.N.	D. G. V. Williams... ...	M.L.	His Majesty's Ship ...	Met. Log.	29.7.25 to 16.11.25...	18.11.25.
Kenilworth Castle	Chave, Sir B., K.B.E.	J. W. Beckh, A. C. Grove Price, L. G. May, H. L. Iddas.	,,	Union Castle ...	,,	8.2.25 to 26.8.25 ...	12.1.26.
Khiva	Randall, H.W., R.D., Capt., R.N.R.	M. R. Little, A. H. Cole, L. A. Hill	,,	P. & O.	,,	29.8.25 to 9.12.25 ...	12.12.25.
Khyber... ...	Collyer, R. M. M., R.D., Commr., R.N.R.	J. B. Child	No. M.	,, ...	Form 911	4.7.25 to 29.10.25 ...	7.11.25.
Kia Ora ...	McIntosh, A. ...	E. A. Hickling	,, A.	Shaw Savill & Albion	,,	10.11.25 to 18.12.25	8.3.26.
Kildonan Castle...	Imlah, C. B. ...	G. H. Pickering	,, A.	Union Castle ...	,,	2.1.26 to 21.2.26 ...	1.3.26.
Kitano Maru ...	Gotoh, M.	M. Hara	,, A.	Nippon Yusen Kaisha	,,	12.9.25 to 6.10.25 ...	13.11.25.
Knight Companion	Beale, H. E. ...	J. J. Daniel, A. M. Hunter...	,, M.	A. Holt	,,	8.7.25 to 23.7.25 ...	24.8.25.
Kovno ... {	Dosser, W. A. ...	J. Marshall, T. Tindell, J. J. Collier, F. T. Shaw.	M.L.	Ellerman Wilson ...	Met. Log.	26.4.25 to 3.10.25 ...	10.11.25.
Kovno ... {	Brown, A. M. ...						
Kwang Tung ...	Byers, G. ...	... ...	,,	China Nav. Co. ...	...	... ...	...
Kyogle	Coalstad, C. ...	C. B. Odman, E. W. Hughes	No. A.	Commonwealth Lighthouse Service.	Form 911	17.8.25 to 9.11.25 ...	14.12.25.
Lady Denison Pender, C.S.	West, G. W. ...	F. Lawrence	,, A.	Eastern Tel. Co. ...	Met. Log.	9.1.26 to 26.1.26 ...	2.3.26.
Laguna ...	Pape, E. R. ...	W. P. Boon	,, A.	Pacific S.N. Co. ...	,,	22.12.25 to 8.1.26 ...	25.1.26.
Lahore ...	Gordon, L. M., R.D., Commr. R.N.R.	... ...	,, M.	P. & O.	...	... ...	...
Lalande ...	Hamill, H.	A. N. Blundell	,, A.	Lamport & Holt ...	,,	15.10.25 to 14.12.25	8.2.26.
Lancashire ...	Beckett, F. W. ...	W. M. S. Higginson ...	,, A.	Bibby	,,	21.11.25 to 28.1.26...	5.2.26.
36 *Lancastria* ...	Brown, F. G. ...	P. J. Robinson, L. Harper...	W.T.	Cunard ... {	W.T. Reg.	12.10.25 to 1.11.25...	5.11.25.
					Form 911	11.10.25 to 1.11.25...	4.11.25.
Laomedon ...	Beswick, W. ...	H. Howe...	No. A.	A. Holt	,,	11.12.25 to 15.1.26...	15.3.26.
La Paz, M.V. ...	Ross, J.	F. T. Gale	,, M.	Pacific S.N. Co. ...	,,	8.12.25 to 29.12.25...	11.1.26.

Name of Vessel.	Captain.	Observing Officers.	Official Meteoro-logical Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 19.3.26.	Date Received.
Laplace ...	Shaw, W. ...	W. Boyde, R. B. Langley ...	No. A.	Lamport & Holt ...	Form 911 19.4.25 to 19.7.25 ...	18.8.25.
55 *Lapland* ...	Howell, T. ...	E. Cornellie, F. Good ...	W.T.	Red Star	W.T. Reg. 3.1.26 to 21.1.26 ...	1.2.26.
					Form 911 17.10.25 to 7.11.25...	9.11.25.
Lassell, M.V. ...	Hickman, V. T. ...	F. J. Durrant	No. A.	Lamport & Holt ...	,, 21.12.25 to 9.1.26 ...	18.2.26.
Leicestershire ...	English, G. L. ...	J. Cullen, P. H. Potter, D. Y. Sharrock, J. Tradewell.	M.L.	Bibby	Met. Log. 2.1.26 to 12.3.26 ...	18.3.26.
Leighton, M.V. ...	Lindesay J. M. ...	H. A. Bolding, T. O. Jones	No. A.	Lamport & Holt ...	Form 911 15.11.25 to 4.12.25	4.1.26.
Leitrim ...	Robertson, A. ...	E. F. C. Higgins	,, A.	Dowie, J., & Co. ...	,, 10.12.25 to 26.1.26...	5.2.26.
Loch Katrine ...	Shillittoe, B. ...	K. Whitaker	,, M.	R.M.S.P. Co. ...	,, 14.11.25 to 9.2.26 ...	11.2.26.
London Commerce	Young, H. J., D.S.C.	H. P. Longland	,, A.	Furness Withy ...	,, 16.1.26 to 23.2.26 ...	8.3.26.
London Importer ..	Williamson, J. M. ...	G. Lusty	M.L.	,, ,, ...	Met. Log. 11.10.25 to 10.1.26...	22.1.26.
Loriga, M.V. ...	Barkley, E. ...	W. N. Anders	No. A.	Pacific S.N. Co. ...	Form 911 22.5.25 to 6.8.25 ...	25.8.25.
Losada, M.V. ...	Meldrum, G. W. ...	E. Baxter	,, M	,, ,, ...	,, 23.11.25 to 15.2.26	18.2.26.
Macedonia ...	Potter, H. W., R.D., Commr., R.N.R.	E. R. Bodley	,, M.	P. & O.	,, 27.1.26 to 10.2.26 ...	19.2.26.
Macharda ...	Richardson, T. ...	D. M. Fulton	,, M.	Brocklebank ...	,, 30.1.26 to 14.2.26 ...	8.3.26.
Mahana ...	Kershaw, W. A. R.	F. M. Smith, J. C. K. Rogers	M.L.	Shaw, Savill & Albion	,, 13.1.26 to 20.2.26 ...	1.3.26.
Maharaja ...	Elliott, G. ...	D. M. Swaine	No. M.	Asiatic S.N. Co. ...	,, 22.12.25 to 23.1.26	22.2.26.
Maihar ...	Rowe, J. P. ...	C. Shaw, H. T. Scoins, G. Henshaw, A. C. Hocking.	M.L.	Brocklebank ...	Met. Log. 17.12.25 to 17.2.26...	8.3.26.
Maimyo ...	Richardson, T. ...	P. Yates	No. A.	,, ...	Form 911 23.7.25 to 13.10.25...	3.11.25.
Maine	Seymour, H. ...	A. S. Smith	,, A.	Atlantic Transport ...	,, 20.4.25 to 26.5.25 ...	15.6.25.
Maiwara ...	Brown, T. M. ...	... ...	M.L.	Burns Philp ...	... ...	...
58 *Majestic* ...	Metcalfe, G. R. ...	L. Thompson, W. Pearson C. J. Warltire, J. A. Macnaughton.	W.T.	White Star	W.T. Reg. 8.1.26 to 21.1.26 ...	25.1.26.
					Form 911 7.1.26 to 21.1.26 ...	25.1.26.
Makambo ...	Brown, T. M. ...	F. C. Ree, J. B. Norris ...	M.L.	Burns Philp ...	Met. Log. 10.9.24 to 28.2.25 ...	17.11.25.
Makura ...	Worrall, L. C. H. ...	J. D. Lundie, D. Todd, A. R. Noble.	,,	Canadian-Australasian	,, 11.3.25 to 2.7.25 ...	21.9.25.
Malakuta ...	Adamson, F. L. ...	J. H. Round	No. M.	Brocklebank ...	Form 911 28.12.25 to 16.1.26	22.2.26.
Malancha ...	Whitham, F. ...	C. Cadwallader	,, M.	,, ...	,, 5.11.25 to 29.1.26 ...	4.2.26.
Malda	Gray, T. N. ...	H. J. O'Donohoe ...	,, M.	British India ...	,, 19.1.26 to 22.2.26 ...	1.3.26.
Manchester Corporation.	Everest, J. E. ...	W. L. Lavers	,, A.	Manchester Liners ...	,, 18.1.26 to 24.2.26 ...	1.3.26.
Manchester Hero	Riley, J. E. ...	... ...	M.L.	,, ,, ...	... ...	...
Manchester Merchant.	Hudson, J. H ...	R. A. Walker	No. A.	,, ,, ...	Form 911 25.12.25 to 12.1.26 ...	25.1.26.
Manchester Shipper	Dormer, A. E ...	... ...	M.L.	,, ,, ...	... ...	...
Manipur ...	Scurr, T. W. ...	H. M. Drummond... ...	No. M.	Brocklebank ...	Form 911 28.10.25 to 17.1.26...	19.1.26.
Mantua ...	Butler, G. E. ...	J. Paice	,, M.	P. & O.	,, 9.1.26 to 7.2.26 ...	16.3.26.
Manzanares ...	Maxwell Brown, W.E.	G. S. Gracie	,, A.	Elders & Fyffes ...	,, 10.11.25 to 25.11.25	4.1.26.
29 *Marburn* ...	Stewart, A.... ...	R. Biggs, W. R. Thorburn ...	W.T.	Canadian Pacific	W.T. Reg. 7.11.25 to 27.11.25	1.12.25.
					Form 911 7.11.25 to 27.11.25	1.12.25.
Marella ...	Mortimer S. ...	J. A. Street	M.L.	Burns Philp ...	Met. Log. 2.4.25 to 25.8.25 ...	1.12.25.
Marengo ...	Collins, T. ... ... Brown, A. M. ...	F. Eglin, J. E. Stott, J. Donovan, B. Bryon, J. Ford	,,	Ellerman Wilson ...	,, 19.9.25 to 8.3.26 ...	16.3.26.
Margha ...	Milne, A. R., R.D., Commr., R.N.R.	J. Strachan, P. Wright, H. E. Evans.	,,	British India ...	,, 24.10.25 to 3.1.26 ...	18.1.26.
Marglen ...	Griffiths, J. N. ...	E. Eastley	No. A.	Canadian Pacific ...	Form 911 19.2.25 to 9.4.25 ...	14.4.25.
Matakana ...	Thurston, H. P. ...	A. Chrystal	M.L.	Shaw, Savill & Albion	,, 26.7.25 to 3.1.26 ...	8.1.26.
Mataram ...	Hillman, E. J. ...	K. L. Thompson	No. A.	Burns Philp & Co. ...	,, 18.6.25 to 18.7.25 ...	31.8.25.
Matheran ...	Columbine, F. F. ...	J. A. Embley, R. E. Gartside, G. T. Hogg, D. Newton.	M.L.	Brocklebank ...	Met. Log. 14.7.25 to 13.10.25...	2.11.25.
Mathura ...	Bacon, A. E. ...	H. H. Armstrong	No. M.	,, ...	Form 911 1.2.26 to 3.3.26 ...	8.3.26.
Matiana ...	Langlands, D. H. ...	W. R. Sobey	,, M.	British India ...	,, 23.11.25 to 21.1.26...	27.1.26.
Maunganui ...	Worrall, L. C. H. ...	A. R. Noble	,, M.	Union S.S. Co. of N.Z.	,, 8.8.25 to 3.9.25 ...	28.9.25.
32 *Mauretania* ...	Rostron, A. H., C.B.E., R.D., A.-d.-C., Capt., R.N.R.	E. R. Taylor, A. Mackellar, J. A. Quarrie.	W.T.	Cunard	W.T. Reg. 9.12.25 to 20.12.25...	24.12.25.
Media	Mallett, R. ...	S. C. Cramb	No. A.	T. & J. Brocklebank...	Form 911 20.10.25 to 20.11.25...	14.12.25.
56 *Megantic* ...	Trant, E. L., Commr. R.N.R.	F. A. Billiald, J. Clarke, A. H. Young.	W.T.	White Star ...	W.T. Reg. 29.11.25 to 18.12.25	24.12.25.
22 *Melita*	Aikman, — ...	J. McLennan, D. Dunn, F. N. Stell.	,,	Canadian Pacific	,, 30.11.25 to 17.12.25	21.12.25.
					Form 911 30.11.25 to 17.12.25	21.12.25
Memnon ...	Evans, D. I.. ...	L. S. Evans	No. A.	A. Holt	,, 16.11.25 to 3.3.26 ...	13.3.26.
Menominee ...	Pollard, W. F., D.S.O., R.D., Capt. R.N.R.	R. Day	,, A.	Atlantic Transport ...	,, 15.10.25 to 21.11.25...	25.11.25.
Mercian ...	Gardner, J. ...	R. Hughes	,, A.	Leyland ...	,, 12.9.25 to 20.9.25 ...	23.9.25.
21 *Metagama* ...	Freer, A. Commr. R.N.R.	R. Walker, A. Mansey ...	W.T.	Canadian Pacific ...	W.T. Reg. 24.1.26 to 12.2.26...	16.2.26.
					,, 21.2.26 to 12.3.26...	15.3.26.
Miami... ...	Makepeace, S. ...	A. F. Woodhouse, J. W. Kendall.	No. A.	Elders & Fyffes ...	Form 911 20.10.25 to 21.11.25	24.11.25.
Minderoo ...	Richardson, E. ...	B. J. Bennie, W. J. McPhedron, J. H. Oxton.	M.L.	West Australia Nav. Co.	Met. Log. 31.5.25 to 9.11.25 ...	12.1.26.
Minna ...	Mackenzie, G. G. ...	D. Rattray	No. A.	Scottish Fishery Board	Form 911 17.1.26 to 3.3.26 ...	15.3.26.
23 *Minnedosa* ...	... ...	... ...	W.T.	Canadian Pacific ...	... ...	...
Minnetonka ...	Gates, T. F., C.B.E.	H. E. McCartney	No. M.	Atlantic Transport ...	,, 4.1.26 to 12.1.26 ...	27.1.26.
Minnewaska ...	Claret, F. H., C.B.E., Commr., R.N.R.	J. W. Grier	,, M.	,, ,, ...	,, 27.2.26 to 6.3.26	13.3.26
Mirror, C.S. ...	Gibson, L. ...	A. G. Watts	,, M.	Eastern Tel. Co. ...	,, 4.2.26 to 22.2.26...	8.3.26.
Mississippi, M.V.	Wylie, J. T. J. ...	H. K. Cockerill	,, A.	Atlantic Transport ...	,, 17.5.25 to 28.5.25 ...	3.6.25.
Moldavia ...	Ohlson, B. J. ...	H. M. Flint	,, M.	P. & O.	,, 10.10.25 to 13.11.25	23.12.25.
Mongolian Prince	Durrant, G. D. ...	M. Gibson	,, A.	Prince	,, 13.9.25 to 15.10.25...	26.10.25.
Monkbarns, Ship	Davies, W. ...	R. Baise	,, A.	J. Stewart & Co. ...	,, 23.10.25 to 16.11.25	29.12.25.
24 *Montcalm* ...	Hamilton, G. ...	H. McFadyen	W.T.	Canadian Pacific ...	W.T. Reg. 31.1.26 to 18.2.26	23.2.26.
25 *Montclare* ...	Webster, G. S., R.D., Lt.-Commr., R.N.R.	R. Fegan, H. S. Knight, J. Biggs.	,,	,, ,, ...	,, 6.12.25 to 22.12.25	29.12.25.
					Form 911 6.12.25 to 23.12.25	29.12.25.
Montferland ...	Van Noppen, C. D.	Van der Mast	No. M.	Holland Lloyd ...	,, 30.11.25 to 26.2.26...	2.3.26.
27 *Montnairn* ...	Turnbull, J., C.B.E., R.D., Capt., R.N.R.	F. E. Williams, A. G. Harrison, T. Jones.	W.T.	Canadian Pacific ...	W.T. Reg. 10.1.26 to 29.1.26 ...	3.2.26.
Montoro ...	Donaldson, A. ...	K. Morris	No. A.	Burns, Philp & Co. ...	,, 2.9.25 to 19.10.25 ...	14.12.25.
26 *Montrose* ...	Landy, E. ...	A. Watt. F. H. Carter, H. A. McCallum.	W.T.	Canadian Pacific ...	,, 14.2.26 to 4.3.26 ...	9.3.26.
					Form 911 26.6.25 to 17.7.25 ...	20.7.25.
20 *Montroyal* ...	Freer, A., Commr., R.N.R. Latta, R. G.	J. H. Tudor, R. W. Jones, F. H. Carter.	,,	,, ,, ...	W.T. Reg. 29.8.25 to 17.9.25 ...	14.1.26.
					,, 26.9.25 to 15.10.25	14.1.26.
Moresby ...	Edgell, J. A., O.B.E., Capt. R.N.	C. F. Mills	M.L.	His Majesty's Ship ...	Met. Log. 4.7.25 to 13.12.25 ...	10.2.26.

Name of Vessel.	Captain.	Observing Officers.	Official Meteoro-logical Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 19.3.26.	Date Received.
Morvada ...	Mills, T. L., O.B.E., R.D., Commr., R.N.R.	A. J. Norris	No. M.	British India ...	Form 911 9.11.25 to 6.2.26 ...	9.2.26.
Mulbera ...	Steadman, W. R. ...	F. Broomhead	No. M.	„ ...	„ 14.1.26 to 3.3.26 ...	15.3.26.
Nagara ...	Purvis, A. ...	E. N. Giller	„ M.	R.M.S.P. Co. ...	„ 26.6.25 to 2.9.25 ...	7.9.25.
Nagoya... ...	Davis, H. C. ...	P. Haworth	„ M.	P. & O.	„ 23.1.26 to 14.2.26 ...	8.3.26.
Nardana ...	Moth. F. L. ...	S. C. T. Smith	„ M.	British India ...	„ 15.9.25 to 25.10.25...	31.10.25.
Nariva...	Hodge, W. C., Spriddell, F. G., R.D., Commr., R.N.R.	H. M. S. Laidlaw, A. E. Randle, W. A. Delap, R. A. B. Ardley, C. Frankson	M.L.	R.M.S.P. Co. ...	Met. Log. 12.9.25 to 24.2.26 ...	4.3.26.
Nellore... ...	Hignett, A. H., R.D., Lt. - Commr. R.N.R.	F. Squire	No. M.	P. & O.	Form 911 10.1.26 to 7.2.26 ...	9.2.26.
Nestor	Owen, R. D., O.B.E.	D. Rees, R. Wilks, F. J. Silva	M.L.	A. Holt	Met. Log. 30.8.25 to 8.1.26 ...	18.1.26.
Nevasa... ...	Swanson C. J. ...	W. G. Bussey	No. M.	British India ...	Form 911 15.1.26 to 19.2.26 ...	24.2.26.
Newby Hall ...	Edge T. P. ...	R. H. Stewart, G. E. M. Jenkins, R. M. Redhead.	M.L.	Ellerman	Met. Log. 2.5.25 to 24.10.25 ...	25.11.25.
Niagara ...	Showman, A. C. ...	T. A. Macpherson, J. Dawson, A. P. Cousin. D. McKenzie	„	Canadian-Australian...	„ 27.8.25 to 10.1.26 ...	2.3.26.
Ningchow ...	Wilson, C. A. ...	G. H. Oldridge	No. A.	A. Holt	Form 911 6.11.25 to 9.3.26 ...	15.3.26.
Norna	Wright, J. ...	T. Mather	„ A.	Scottish Fishery Board	„ 14.1.26 to 12.2.26 ...	22.2.26.
Norseman, C.S.	Douglas, W. ... Barter, H. O. ...	R. Forrest, E. Pearse, J. A. Prosser.	M.L	Western Tel. Co. ...	Met. Log. 16.2.25 to 1.9.25 ...	28.9.25.
Nubian ...	Watmough, T. M. ...	H. R. Gaskill	No. A.	Leyland	Form 911 23.12.25 to 24.1.26	28.1.26.
Nyanza ...	Norman, W. A. ...	R. H. Hand, R. G. Freeman, R. E. Mackay.	M.L.	P. & O.	Met. Log. 7.10.25 to 24.12.25...	31.12.25.
Oaklands Grange...	Routledge, R. ...	E. J. Longheed	No. A.	Houlder Bros. ...	Form 911 30.11.25 to 28.12.25	5.1.26.
42 *Ohio* ...	Parker, W.H., C.B.E., R.D., Capt. R.N.R.	P. M. Burrell, R. W. Stoney, L. D. Jennings, E. A. E. Littlewood.	W.T.	R.M.S.P. Co. ...	W.T. Reg. 14.9.25 to 1.10.25 ...	5.10.25.
					Form 911 21.1.26 to 17.2.26	8.3.26.
Olympia ...	Caldwell, R. ...	D. R. Urquhart, G. Lynas, W. Proudfoot.	M.L.	Anchor	„ 13.11.25 to 28.1.26...	13.2.26.
					W.T. Reg. 28.1.26 to 10.2.26 ...	16.2.26.
57 *Olympic* ...	Marshall, W., C.B., D.S.O., R.D., Capt., R.N.R.	H. J. C. Day, A. Fisher, J. Law, J. Boyce.	W.T.	White Star ...	„ 18.2.26 to 3.3.26 ...	9.3.26.
					Form 911 28.1.26 to 5.3.26 ...	9.3.26.
Orama... ...	Staunton, H. G., C.B.E., R.D., Commr R.N.R.	L. J. Vesty, F. L. Hubbard, J. S. Metcalfe, A. S. Nicholls, T. Fox Russell.	M.L.	Orient	Met. Log. 15.11.25 to 16.2.26...	23.2.26.
Oranian ...	Hoskins, W. ...	R. H. Theaker	No. A.	Leyland	Form 911 16.8.25 to 3.9.25 ...	17.9.25.
Orari	Robinson, F. W. ...	F. Longheed, C. Wilkinson, W. Tarr.	M.L.	New Zealand S.S. Co.	Met. Log. 7.3.25 to 11.8.25 ...	15.8.25.
40 *Orbita* ...	Smith, W. E., D.S.O. R.D., Capt. R.N.R.	B. C. Dodds, H. G. Whittle, H. M. Rennie, H. Baylis.	W.T.	R.M.S.P. Co. ...	W.T. Reg. 19.10.25 to 9.11.25	12.11.25.
					Form 911 17.10.25 to 10.11.25	12.11.25.
Orcoma ...	Dominy, R. H., C.B.E., Commr. R.N.R.	R. Skellorn, R. Griffiths, W. Billington.	M.L.	Pacific S.N. Co. ...	Met. Log. 22.11.25 to 4.2.26 ...	13.2.26.
41 *Orduna* ...	Smith, W. E. D.S.O., R.D., Capt. R.N.R.	H. G. Whittle, S. Robbins, R. W. Sumpton, R. J. Finch	W.T.	R.M.S.P. Co. ...	W.T. Reg. 23.1.26 to 14.3.26 ...	17.3.26.
					Form 911 25.1.26 to 15.3.26 ...	18.3.26.
Oriana... ...	Mander, T. ...	W. Pearce, R. D. Eckford, T. H. McGill.	M.L.	Pacific S.N. Co. ...	Met. Log. 12.11.25 to 19.1.26...	29.1.26.
Orita ...	Splatt, W. A. ... Makin, F. W.	T. R. Scott, D. W. Hutchinson, R. W. Hanson.	„	„ „ ...	„ 23.6.25 to 17.2.26 ...	10.3.26.
Ormonde ...	Knowles, C. H., D.S.O., Commr., R.N.	A. M. Hughes	„	His Majesty's Ship ...	„ 4.9.25 to 4.12.25 ...	22.12.25.
Ormonde ...	Shelford, W. S., Lt.-Commr., R.N.R.	T. B. Granger Grieve, N. A. Whinfield, J. F. Thompson.	„	Orient	„ 18.10.25 to 19.1.26...	29.1.26.
Ormuz ...	O'Sullivan, F. R. ...	E. Hatch, W. Wickham, W. Elliot.	„	„	„ 1.11.25 to 4.2.26 ...	10.2.26.
Oronsay ...	Owens, A. L., R.D., Lt. Commr., R.N.R.	C. Dodgson, P. R. Murphy, R. K. Rogerson.	„	„	„ 20.9.25 to 26.12.25...	31.12.25.
Oroya	Pearce, A. ...	S. Lewis	No. M.	Pacific S.N. Co. ...	Form 911 28.10.25 to 3.1.26 ...	9.1.26.
Orsova	Matheson, C. G., D.S.O., R.D., Capt., R.N.R.	G. E. Martin, A. J. Croft Cohen, H. Petit Dann.	M.L	Orient	Met. Log. 26.7.25 to 12.1.26 ...	20.1.26.
Orvieto... ...	Simner, G. L., R.D., Commr., R.N.R.	A. O. H. O'Bryen, Hawker, A. H. Dyer.	M.L.	„	„ 4.5.25 to 4.8.25 ...	8.8.25.
Osterley ...	Cameron, E. P., R.D. Commr. R.N.R.	H. Tanner, J. E. Goldsworthy, G. L. Carter.	„	„	„ 4.10.25 to 7.1.26 ...	18.1.26.
Othello	Montgomery, H. ...	A. C. Fullerton	No. A.	Ellerman Wilson ...	Form 911 6.9.25 to 27.11.25 ...	15.2.26.
Otira	Elford, H. E. ...	E. J. Riccard	„ M.	Shaw, Savill & Albion	„ 25.12.25 to 10.1.26...	1.2.26.
Otranto ...	Simner, G. L., R.D., Commr., R.N.R.	R. H. Rogerson	„ M.	Orient	„ 11.1.26 to 28.1.26 ...	13.3.26.
Ovid	Groom, A. C. B. ...	... ...	„ A.	Shakespear Shipping Co.	Form 911 8.2.26 to 19.2.26 ...	26.2.26.
Oxfordshire ...	Crumplin, W. E. ...	F. C. Brooks	„ A.	Bibby Bros. ...	„ 17.12.25 to 15.1.26...	21.1.26.
Pacific Shipper, M.V.	Newman, G. W. A.	H. G. Dupont	„ A.	Furness Withy ...	„ 13.10.25 to 13.11.25	18.11.25.
Pakeha ...	W. P. Clifton Mogg	E. T. Baker, A. Black, A. Lockhart	M.L.	Shaw, Savill & Albion	Met. Log. 26.9.25 to 28.2.26 ...	8.3.26.
Paparoa ...	Dowse, F.	C. J. Brewer	No. M.	New Zealand S.S. Co.	Form 911 14.11.25 to 6.1.26 ...	9.1.26.
Pareora ...	Evans, J. O. ...	R. F. Hillings	„ A.	Hain S.S. Co. ...	„ 28.12.25 to 6.2.26 ...	11.2.26.
Paris	Cook, C. L. ...	Mr. Biles...	C.C.	Southern Rly. ...	Telegraphic Report. 30.10.25 ...	30.10.25.
Patia	Bostock, R. J. ...	W. McIlwaine	No. A.	Elders & Fyffes ...	Form 911 4.7.25 to 8.8.25 ...	12.8.25.
Patrol, C.S. ...	Welsh, T. K. ...	W. H. S. Clark, H. F. P. Albrecht, W. G. MacBryde, A. T. Morrell.	M.L.	Eastern Extension (A. & C.) Telegraph Co.	Met. Log. 1.10.24 to 12.1.25 ...	16.4.25.
Persic	Bulman, J. B. ...	R. Conway	No. A.	White Star ...	Form 911 27.9.25 to 4.11.25 ...	17.3.26.
Peshawar ...	Hester, C. W., R.D., Commr., R.N.R.	D. G. Baillie, E. J. R. North, R. D. Whyte-Mackay.	M.L.	P. & O.	Met. Log. 18.7.25 to 22.11.25...	24.11.25.
Pharos ...	Ewing, T. N. ...	A. McLachlan	No. A.	Northern Lighthouse Board.	Form 911 29.6.25 to 14.8.25 ...	18.8.25.
Philadelphian ...	Baker, J. A. ...	W. T. Godwin	„ A.	Leyland	„ 9.10.25 to 1.11.25 ...	16.11.25.
Polycarp ...	Evans, T. G. ...	C. W. Smethurst	„ A.	Booth	„ 6.1.26 to 16.1.26 ...	1.2.26.
Port Adelaide ...	Hayter S W. ...	E. Catchpole, G. Lovegrove, C. Hodson.	M.L.	Commonwealth & Dominion.	Met. Log. 21.8.25 to 28.12.25...	7.1.26.
Port Albany ..	Robinson, C. A. ...	E. A Leavett, A. G. Newbury, W. Eastoe, J. L. Richardson.	„	„	„ 16.5.25 to 28.9.25 ...	12.10.25.

Name of Vessel.	Captain.	Observing Officers.	Official Meteorological Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 19.3.26.	Date Received.
Port Auckland ...	Durham, R. S. ...	R. B. Stannard	No. A.	Commonwealth & Dominion.	Form 911 25.11.25 to 5.1.26 ...	20.1.26.
,, *Bowen* ...	Gilling, W.	W. R. Johnston	,,	,, ,, ,,	... ...	...
,, *Caroline* ...	Renaut, F. A. ..	T. Copeland, E. Fenton, C. Chamberlin.	M.L.	,, ,, ,,	Met. Log. 24.1.25 to 13.6.25 ...	22.7.25.
,, *Chalmers* ...	Enright, W. J. ...	... ...	,,	,, ,, ,,	... ...	...
,, *Curtis* ...	Van den Bergh, C.	W. H. Miles	No. A.	,, ,, ,,	Form 911 14.12.24 to 25.4.25	2.6.25.
,, *Darwin* ...	Sawbridge, I. R. ...	E. T. N. Lawrey, G. F. Pannett.	,, A.	,, ,, ,,	,, 25.11.25 to 10.1.26...	13.1.26.
,, *Denison* ...	Ferris, J. ...	W. H. Sadler, J. C. Goddard	,, M.	,, ,, ,,	,, 15.6.25 to 14.8.25 ...	21.9.25.
,, *Dunedin* ...	... ...	E. G. Jones	No.	,, ,, ,,	... ...	...
,, *Hacking* ...	Hoad, A. C. ...	C. Newton	No. A.	,, ,, ,,	Form 911 18.11.25 to 2.1.26 ...	5.1.26.
,, *Hobart* ...	Craven, R.	L. Copeland	No.	,, ,, ,,	... ...	...
,, *Hunter* ...	Cottell, S. C ...	A. Cooper, C. F. Post, J. T. Weldin.	M.L.	,, ,, ,,	Met. Log. 2.4.25 to 13.9.25 ...	29.9.25.
,, *Lincoln* ...	... ...	... ...	No.	,, ,, ,,	... ...	...
,, *Melbourne* ...	Kearney, F. J. ...	D. G. H. Bradley, J. A. Fairbairn, A. G. Starkey.	M.L.	,, ,, ,,	Met. Log. 26.4.25 to 7.9.25 ...	10.9.25.
,, *Napier* ...	... ...	... ...	No.	,, ,, ,,	... ...	...
,, *Nicholson* ...	Jack, J. ...	... ...	,,	,, ,, ,,	,, ...	...
,, *Pirie* ...	Higgs, W. G. ...	H. C. Jeffery, W. G. Jones, N. M. Muzzill, S. Hearn.	M.L.	,, ,, ,,	,, 26.8.25 to 27.2.26 ...	2.3.26.
,, *Sydney* ...	Lea, W. H. ...	A. W. Sams, C. Groves, A. M. Stanton.	,,	,, ,, ,,	,, 13.12.24 to 19.5.25...	25.5.25.
,, *Victor* ...	Swan, L. H. ...	E. G. Fullick, W. Howe, W. Renouf.	,,	,, ,, ,,	,, 5.4.25 to 14.8.25 ...	22.8.25.
,, *Wellington* ...	Farmer, F.	... ...	No	,, ,, ,,	... ...	...
President Jackson	Griffith, J ...	H. G. Holland	No. A.	Pacific Mail S.S. Co....	Form 911 21.12.26 to 22.1.26...	15.3.26.
President Jefferson	Nichols, F. R. ...	C. H. Moen	,, A.	Admiral Oriental Line	,, 1.1.26 to 22.1.26 ...	16.2.26.
Protea, H.M.S.A.S.	Woodhouse, A. F. B., Lt.-Commr., R.N.	F. J. S. Scott-Stokes ...	,, A.	South African Naval Service.	,, 1.8.25 to 29.8.25 ...	12.11.25.
Pyrrhus ...	Elford, W. J. ...	J. L. Millar...	,, A.	A. Holt	,, 12.9.25 to 6.1.26 ...	11.1.26.
Ranpura ...	King, A. M. ...	... ...	No. M.	P. & O.	... ...	...
60 *Regina* ...	Smith, R. G. ...	G. W. Couch, H. Daman, C. Cochrane.	W.T.	White Star-Dominion	W.T. Reg. 18.1.26 to 7.2.26 ... Form 911 18.1.26 to 7.2.26 ...	11.2.26. 11.2.26.
Reindeer ...	Langdon, C. ...	... ...	C.C.	G.W. Railway ...	Telegraphic Report 6 3.26 ...	6.3.26.
Remuera	Cameron	P. McCullum	No.	New Zealand S.S. Co.	... ...	...
Rhodesian Transport.	Fowler, W. H. ...	W. Heritage	No. A.	Houlder Bros. ...	Form 911 14.11.25 to 12.3.26...	18.3.26.
Rimutaka ...	Hemming, F. A. ...	H. Horwood, R. S. Cox, O. M. Watts.	M.L.	New Zealand S.S. Co.	Met. Log. 12.10.24 to 1.4.25 ...	6.4.25.
Risaldar ...	Park, G.	A. J. Cavallo, H. Hardwick, C. M. Knight.	,,	Asiatic S.N. Co. ...	,, 21.4.25 to 10.10.25...	17.11.25.
Romney ...	Syms, G.	H. Trodden	No. A.	Lamport & Holt ...	Form 911 9.10.25 to 21.10.25...	30.11.25.
Rotorua ...	Hunter, J. B. ...	D. F. Clegg	M.L.	N.Z.S. Co. ...	,, 26.9.25 to 12.1.26 ...	20.1.26.
Royal Fusilier ...	Dawson, J. ...	J. Fraser	No. A.	London & Edinburgh S.S. Co.	,, 30.12.25 to 24.1.26...	26.1.26.
Royal Transport...	Dove, J.	R. Martin	,, A.	Houlder Bros. ...	,, 17.11.25 to 17.12.25	21.12.25.
Ruapehu ...	McKellar, A. W., R.D., Capt., R.N.R.	E. P. Aslin, J. D. Tooms, A. J. Webb, E. Russel.	M.L.	New Zealand S.S. Co.	Met. Log. 2.5.25 to 1.10.25 ...	7.10.25.
Sachem... ...	Westgarth, W. A. D.S.C.	C. Waldron, E. Sainty, G. R. Watson.	,,	Furness Withy ...	,, 30.6.25 to 10.12.25...	17.12.25.
St. Albans ...	Pilcher, E.	W. McIntyre	,,	Eastern and Australian	... ...	...
St. Helier ...	Mulhall, W. ...	C. Bell	C.C.	G.W. Railway ...	Telegraphic Report 9.3.26 ...	9.3.26.
St. Julien ...	Langdon, C. H. ...	C. Joy	,,	,, ...	,, ,, 18.3.26 ...	18.3.26.
St. Patrick ...	Bearpark, E. W. ...	J. Hill	No. A.	Rankin Gilmour ...	Form 911 15.1.26 to 1.2.26	15.2.26.
Salaga	Sola, P., D.S.O. ...	G. E. Dutton	,, A.	Elder Dempster ...	,, 12.1.26 to 9.2.26 ...	15.2.26.
Samaria ...	McNeil, S. G. S. ...	H. L. Pryse	,, A.	Cunard	,, 28.11.25 to 21.12.25	29.12.25.
Sandown Castle ...	Jackson, C. R. ...	P. G. MacIver	,, A.	Union Castle ...	,, 16.12.25 to 23.2.26...	26.2.26.
10 *Saturnia* ...	Mitchell, W. ...	D. Macqueen	W.T.	Anchor Donaldson ...	W.T. Reg. 17.10.25 to 6.11.25 Form 911 16.10.25 to 7.11.25	11.11.25. 11.11.25.
Saxoleine ...	King, A.	B. Johnsen	No. A.	Hunting & Son ...	,, 6.12.25 to 21.12.25	4.1.26.
Saxon	Knight, A. ...	T. M. Lockwood	,, A.	Union Castle ...	,, 21.12.25 to 8.2.26 ...	10.2.26.
Scholar ...	McCullum, J. ...	J. D. Grieves	,, M.	Harrison	,, 1.4.25 to 20.6.25 ...	2.7.25.
Scindia ...	Matthews, W. ...	R. S. Paton	,, A.	Anchor	,, 28.11.25 to 1.3.26 ...	8.3.26.
Scotia	Prichard, S.D. ...	O. W. L. Jones	C.C.	L.M. & S. Rly. ...	Telegraphic Report 13.2.26 ...	13.2.26.
Scottish Bard ...	McDonnell S. ...	J. W. Lilley	No. A.	Tankers Ltd. ...	Form 911 31.1.26 to 15.2.26 ...	9.3.26.
33 *Scythia* ...	Prothero, W. ...	T. Parry, J. C. Munro, J. W. Caunce.	W.T.	Cunard	W.T. Reg. 19.10.25 to 9.11.25 Form 911 18.10.25 to 9.11.25	13.11.25. 13.11.25.
Sheaf Mount ...	Groves, C. V. ...	C. A. Goold	No. A.	W. A. Souter ...	,, 13.12.25 to 19.12.25	9.1.26.
Sheaf Spear ...	Whitfield G. A., O.B.E.	W. H. Grisewood, N. Thompson.	M.L.	,, ...	Met. Log. 7.12.24 to 16.7.25 ...	19.8.25.
Socrates ...	Taylor, F. C. ...	W. E. Jordan	No. A.	Lamport & Holt ...	Form 911 22.12.25 to 21.1.26...	25.1.26.
Soekaboemi ...	Z. W. Flach ...	C. van Reenen	,, M.	Rotterdam Lloyd ...	,, 28.9.25 to 2.11.25 ...	7.11.25.
Somerset ...	Barnett, H. ...	J. J. Youngs	,, M.	N.Z.S. Co.	,, 15.12.25 to 21.1.26...	26.1.26.
Somersetshire ...	De Legh, P. ...	P. Hawkins, R. C. Leitch, H. G. Walton.	M.L.	Bibby	Met. Log. 24.7.25 to 7.11.25 ...	11.11.25.
Somme... ...	Miles, F. R., Commr., R.N.R.	H. Chamberlain, A. P. Portsmouth.	No	R.M.S.P. Co. ...	,, 22.11.24 to 29.8.25...	10.2.26.
Spectator ...	Harding, C. H. J. ...	D. Fraser, J. G. F. Betson ...	No. A.	,, ...	Form 911 20.11.25 to 20.2.26...	26.2.26.
Spero	Norton, W. J. ...	T. E. Fea, R. O. Otley ...	M.L.	Ellerman Wilson ...	Met. Log. 22.5.25 to 6.12.25 ...	10.12.25.
Stockwell ...	Kershaw, R. W. ...	W. Baxter	No. A.	Brocklebank ...	Form 911 20.9.25 to 9.10.25 ...	21.10.25.
Stuart Prince ...	Durrant, G. D. ...	W. C. Freeman	,, A.	Prince	Met. Log. 9.5.25 to 22.10.25 ...	26.10.25
Surrey	Field, H. G. B. ...	C. P. Jackson, C. Welch, H. Harris.	M.L.	Federal	Met. Log. 9.5.25 to 22.10.25 ...	26.10.25.
Suwa Maru ...	Okuno, Y. ...	H. Yamashita	No. A.	Nippon Yusen Kaisha	Form 911 10.11.25 to 2.1.26 ...	11.1.26.
Tainui ...	Hartman, W. H. ...	P. S. Horwood	,, A.	Shaw, Savill & Albion	,, 9.11.25 to 15.12.25...	18.12.25.
Tairoa	Summers. W. G. ...	S. A. Bannister	,, A.	,, ,, ,,	,, 2.7.25 to 10.8.25 ...	12.10.25.
Tahiti ...	Aldwell, B. L. ...	W. Gould	,, A.	Union S.S. Co. of N.Z.	,, 5.11.25 to 26.12.25...	2.2.26.
Taiping ...	Hamilton, H. E. ...	... ...	M.L.	Yuill & Co. ...	... ...	...
Talthybius ...	Ireland, T. R. ...	P. Elder	No. A.	A. Holt	Form 911 19.9.25 to 26.10.25...	2.11.25.
Tanda	Pilcher, E. ... Laing, J. O. ...	C. G. Holdaway, J. Kean, R. Lloyd Harry, B. Dun.	M.L.	E. & A. S.S. Co. ...	Met. Log. 18.7.25 to 1.12.25 ...	8.1.26.
Tambora ...	Huisman, N. ...	H. Van Manen	No. M.	Rotterdam Lloyd ...	Form 911 22.10.25 to 9.12.25...	22.12.25.

Name of Vessel.	Captain.	Observing Officers.	Official Meteorological Equipment.	Line.	Last Log, Register, or Report Contributed. Received up to 19.3.26.	Date Received.
Teiresias ...	Dodds, R. ...	W. H. Newby	No. A.	A. Holt & Co. ...	Form 911 13.12.25 to 14.1.26...	28.1.26.
Tekoa	Howell Price, J., D.S.O., D.S.C.	... ...	No. M.	New Zealand S.S. Co.	... ...	...
Telamon ...	Beswick, W. ...	... ...	No.	A. Holt	... ...	...
Teucer	Hodgson, R. N. ...	A. Lightbody	,, A.	,, ...	Form 911 12.1.26 to 30.1.26 ...	10.2.26.
Themistocles ...	Jermyn, W. M. ...	W. F. Sargent	,, M.	Aberdeen	,, 10.12.25 to 23.1.26...	1.2.26.
Theseus ...	Jones, E.	J. T. Fettes	,, A.	A. Holt	,, 4.2.26 to 15.2.26 ...	2.3.26.
Titan	Wilkinson, T. G. ...	S. C. Tinmouth, J. Morris, N. L. Thompson.	M.L.	,, ...	Met. Log. 20.10.25 to 11.3.26...	18.3.26.
Tongariro ...	... ...	C. B. H. Jones	No. M.	New Zealand S.S. Co.	... ...	...
Transylvania ...	Bone, D. W. ...	... ...	No.	Anchor	... ...	...
Trematon ...	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.
Turakina ...	... ...	W. Dickinson	No.	New Zealand S.S. Co.	... ...	...
Tuscania ...	Gemmell, W. J. ...	G. H. Squires	No. A.	Anchor	Form 911 3.10.25 to 11.10.25...	20.10.25.
Tyndareus ...	Slater, H. N. ...	C. Broad, A. C. H. Jones, S. A. Beith.	M.L.	A. Holt	Met. Log. 16.7.25 to 16.12.25...	12.1.26.
Ulimaroa ...	Wylie, W. J. ...	J. Gilbertson	No. M.	Huddart Parker, Ltd.	... ...	...
Ulysses ...	McHutcheon, W. ...	H. A Standfield	No. A.	A. Holt	Form 911 28.1.26 to 11.3.26 ...	16.3.26.
Umvolosi ...	Barnes, E. W. ...	H. Green	,, A.	Bullard King ...	,, 17.10.25 to 18.12.25	11.1.26.
Valacia ...	Doyle, M. ...	N. Grayson	,, M.	Cunard	,, 19.10.25 to 25.11.25	3.12.25
Valdura ...	Anderson, J. ...	J. Paterson, D. Cameron, L. Rowling.	M.L.	Gow Harrison ...	Met. Log. 27.10.25 to 12.1.26...	4.2.26.
Vardulia ...	Hughes, W. ...	A. Watts	No. A.	Cunard	Form 911 3.11.25 to 14.11.25...	8.2.26.
Vasconia ...	Inch, F.	G. Watts	,, A.	,, ...	,, 9.11.25 to 8.12.25 ...	25.1.26.
Vellavia ...	Fear, E. T. C. ...	F. R. Gorman	,, A.	,, ...	,, 2.2.26 to 4.3.26 ...	8.3.26.
Ventura de Larrinaga.	Keay, W. S. ...	H. J. Kay	,, A.	Larrinaga	,, 3.12.24 to 28.3.25 ...	19.5.25.
Verbania ...	Pooley, T. S. M. ...	W. Bradley	,, A.	Cunard	,, 6.1.26 to 12.2.26 ...	15.2.26.
Verentia ...	Wray, C. M. ...	F. H. Wood	,, A.	,, ...	,, 29.11.25 to 27.12.25	5.1.26.
Vigilant ...	Simpson, E. S. S. ...	J. Hunter	,, A.	Scottish Fishery Board	,, 27.1.26 to 12.3.26 ...	16.3.26.
Waimana ...	Andrews, C. M. ...	T. A. Smith	,, A.	Shaw, Savill & Albion	... ...	...
Waiotapu ...	Norton, A. ...	W. Johnson	,, A.	Canadian-Australasian	,, 14.11.25 to 18.12.25	4.1.26.
Walmer Castle ...	Stanley, W. F., R.D. Commr., R.N.R.	H. A. Deller	,, A.	Union Castle ...	,, 27.11.25 to 17.1.26...	8.2.26.
Wangaratta ...	Scutt, W. ...	T. W. Wordingham, G. R. Millard, K. M. Morrison, N. A. Pope.	M.L.	British India ...	Met. Log. 30.8.25 to 19.1.26 ...	26.1.26.
Warfield ...	Steel, R.	H. Coffey	No. A.	,, ,, ...	Form 911 29.1.26 to 10.2.26 ...	22.2.26.
Welshman ...	Rollerson, W. ...	W. A. Fletcher	,, M.	White Star-Dominion	,, 24.12.25 to 20.1.26...	28.1.26.
Westmoreland ...	... ...	... ...	,,	Federal	... ...	...
White Heather, Ketch	Glenister, S. L. ...	F. R. Smith	,,	S. L. Glenister ...	... ...	...
Windsor Castle ...	Strong, H., R.D., Commr., R.N.R.	T. M. Gordon	,, A.	Union Castle ...	Form 911 23.1.26 to 14.3.26 ...	16.3.26.
Winifredian ...	Harrocks, W. ...	G. P. Boyle	,, M.	Leyland	Form 911 14.12.25 to 19.1.26...	30.1.26.
Woodarra ...	Reilly, J. V. ...	L. D. Graham, G. Hyland ... L. C. Comber, J. Wallace.	M.L.	British India ...	Met Log. 27.9.25 to 13.2.26 ...	22.2.26.
Yorkshire ...	Millson, G. C. ...	E. E. Jones	No. A.	Bibby	Form 911 11.12.25 to 17.2.26...	19.2.26.
Zeeland ...	Thomas, A. J. ...	N. Lee	,, M.	Red Star	,, 21.2.26 to 15.3.26 ...	17.3 26.
Conway H.M.S.	Broadbent, H. W., R.D. Capt., R.N.R.	The Senior Cadets... ...	Cadets' M.L.	... ...	Cadets' Met. Log. 20.9.25 to 12.12.25	21.12.25.
Pangbourne Nautical College.	Tracy, A. F. G., Commr., R.N.	,, ...	,,	... ...	Cadets' Met. Log. 21.9.25 to 12.12.25	17.12.25.
Worcester, H.M.S.	Sayer M. B., O.B.E., R.D., Capt., R.N.R.	,, ...	,,	... ...	Cadets' Met. Log. 25.9.25 to 15.12.25	21.12.25.
Abaco	... ...	The Keepers	Lighthouse Register.	... ...	Lighthouse Register 20.7.25 to 31.12.25	9.3.26.
Cay Lobos ...	... ...	,, ...	,,	... ...	Lighthouse Register 1.7.25 to 31.12.25	8.3.26.
Double Headed Shot	... ...	,, ...	,,	... ...	Lighthouse Register 1.1.25 to 30.6.25	9.11.25.
Inagua... ...	... ...	,, ...	,,	... ...	Lighthouse Register 1.7.25 to 31.12.25	9.3.26.
Sombrero ...	... ...	,, ...	,,	... ...	Lighthouse Register 1.7.25 to 31.12.25	9.2.26.
Watling Island ...	... ...	,, ...	,,	... ...	Lighthouse Register 18.7.25 to 16.1.26	8.3.26.
Cape Pembroke (Falkland Is.).	... ...	,, ...	,,	... ...	Lighthouse Register 1.7.25 to 31.12.25	24.2.26.

LIST OF SHIPS CO-OPERATING THROUGH THE METEOROLOGICAL OFFICE WITH THE MINISTRY OF AGRICULTURE AND FISHERIES (FISHERIES LABORATORY, LOWESTOFT) IN THE COLLECTION OF WATER SAMPLES, ETC.

Name of Vessel.	Captain.	Observing Officer.	Line.	Last Case of Water Samples, Reports, etc., Received up to 28.2.26.	Date Received.
Herschel	Davies, G. W.	T. Lester Guy	Lamport & Holt ...	Water Samples	31.12.25.
Hildebrand	Maddrell, J.	A. Allan	Booth	,, ,, ...	8.1.26.
Holbein	Gough, W. A.	G. P. Kitto	Lamport & Holt ...	,, ,, ...	23.1.26.
Munzanares	Maxwell Brown, W. E. ...	G. S. Gracie	Elders & Fyffes ...	,, ,, ...	21.12.25.
Miami	Makepeace, S.	W. E. Grant	,, ,, ...	,, ,, ...	22.1.26.

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