

Europe's Weather Stations

Meteorology

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LONDON: Meteorological Office, headquarters of the meteorological service for the British Isles. The administrative offices are at Adastral House, Kingsway. Several other branches, including the library, are in South Kensington. The historic Kew Observatory is a branch of the Meteorological Office. Modern methods of meteorological work in behalf of aviation are illustrated on a large scale at Croydon, the principal British airport.

PARIS: Office National Météorologique, headquarters of the French meteorological service. An important observatory is maintained at Parc Saint-Maur. Paris has also a municipal meteorological service with headquarters at Montsouris.

BRUSSELS: Observatoire Royal, at UCCLE, headquarters of the meteorological service of Belgium; also the chief astronomical observatory of the country.

BERLIN: Preussisches Meteorologisches Institut.

LINDENBERG (Kreis Beeskow, Prussia): Aeronautische Observatorium. Famous center of upper-air research and headquarters of the aeronautical weather service of Germany.

HAMBURG: Deutsche Seewarte. Important center of marine meteorology.

VIENNA: Zentralanstalt für Meteorologie und Geodynamik. Headquarters of the meteorological service of Austria.

ROME: Reale Ufficio Centrale de Meteorologia e Geodinamica. Headquarters of the meteorological service of Italy.

TORTOSA, SPAIN: Observatorio del Ebro. Large Jesuit institution devoted especially to the study of relations between solar and terrestrial phenomena.

DAVOS, SWITZERLAND: Physikalisch-Meteorologisches Observatorium. Founded by Dr. C. Dorno. Unique institution devoted especially to the study of the physiological effects of solar radiation, atmospheric electricity, etc.

Central offices of national meteorological services are found in all of the European countries; usually, but not always, at the capital cities.

A general account of meteorological organizations and their work is given in Charles Fitzhugh Talman's "Our Weather" (New York, 1925).

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Voyage—Continued

officers, however, change their time more frequently.

There are plenty of things of scientific interest on the ship itself, such as the various instruments by which the ship is kept constantly under control, and which may be seen if the traveller has enough "pull" to get an introduction to the captain or the officer in charge. Most ships nowadays are equipped with radio finders, with which they can get a bearing from any radio transmitting station, either ashore or afloat.

Many modern ships are equipped with the automatic pilot, by which the human helmsman, who in olden days kept at the wheel, is replaced by a mechanism that keeps the ship in the proper course. Of course, this can only be used in the open sea, where there is no danger of collision with another vessel. "Fathometers," a form of the sonic depth finder, trace on a moving strip of paper a constant record of the depth of the water beneath the ship. Engine revolution counters show the speed of the ship through the water, and are checked near land by the log. It is either thrown over the stern, the common practice on American ships, or else, as on some French vessels, from a boom projecting out over the side from the bridge. Incidentally, if you want to call the sides of the ship right and left, instead of starboard and port, you have a perfect right to do so, for the common appellations have been adopted as official by the U. S. Navy.

A question that often comes up at sea is that of the distance that one can see. From a small boat, such as a life boat, one's horizon would be about 2.5 miles away. However, from a height of 45 feet, that of the promenade deck of a large liner, the horizon would be eight miles away. Another ship equally large could be seen easily when 15 miles distant.

This explains why ships going the other way are rarely encountered, except near port. The west-bound steamer lane, in mid-ocean, is about 60 miles north of the east-bound lane, and though the ships can pass close enough to be in easy touch by radio, they are not likely to be close enough to be visible to each other, unless one is far off the path.

Birds are most likely to be seen near land, though some may follow the ship all the way across. This is particularly true of the storm petrel,

known to the sailors as "Mother Carey's chickens" and to the ornithologist as *Thalassidroma pelagica*. This is a fully descriptive name, for it means "wandering sea-walker." To see these dainty creatures skimming along over the tops of the waves, one realizes how closely it fits. Seagulls also are common.

The waves, by the way, are apt to be a good deal higher than the passenger in the deck chair is apt to realize. From the height of the deck they do not look so large. Actually, even in fine weather, they may be as high as 15 feet from trough to crest. In stormy weather they may easily reach a height of 30 to 45 feet, and be anywhere from 300 to 600 feet long. The highest recorded wave was met by the *Majestic* in December, 1922, its height being 80 feet!

The last evidence of land that the voyager is likely to see will be the Nantucket light ship, or possibly even Ambrose light. Then, as he approaches England, if his destination is Plymouth, Southampton, Cherbourg or Havre, the first evidence of Europe visible will be the Bishop Rock light, on the Scilly Islands, off the southwestern tip of England, which is visible for a distance of 18 miles. It is 148 feet high, and, at night, flashes in groups of two. About 180 miles before reaching this place, the ship reaches the European continental shelf, where the depth of the water is less than 100 fathoms, and where fish abound. From then on, fishing vessels are likely to be seen.

The first lighthouse visible on England proper, if bound for a Channel port, is the Lizard Head light, in Cornwall. If the boat is going to Southampton the famous Eddystone light is also seen. Then, just before sailing up the Solent to Southampton, the *Needles* light comes into view, and the voyage is practically over.

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Marble used in the Lincoln Memorial at Washington came from the state of Colorado.

A medieval decree forbade the wearing of squirrel fur by persons not of royal blood.

The Japanese beetle in migrating can fly continuously for as much as seven miles.

Oranges can stand a lower temperature than lemons.