CLIMATE: TEMPERATURE.

Europe is situated almost entirely in the North Temperate Zone, and enjoys a warm climate for its latitude, especially in the south and west. If we compare the temperature of places in the West of Europe with those about the same latitude on the east coast of America, we find the former are decidedly warmer in winter. This is chiefly due to the fact that the prevailing winds of Europe are south-west winds, and, coming from hot regions, bring warmth with them. These winds also blow the surface waters of the Atlantic from the equatorial regions towards the North-West of Europe, thus creating the warm North Atlantic Drift, which helps the winds to maintain their warmth, and is of great commercial importance, since it enables the Scandinavian ports to be kept free from ice as far north as the Lofoten Isles. The Mediterranean region is warm, not only on account of the latitude, but because the mountains shelter it from the cold winds from the north and east.

The eastern parts of Europe suffer far greater extremes of temperature than the west, and are noticeably colder in winter. This is because they are further removed from the moderating influence of the ocean and of the warm south-west winds, and are more exposed to cold winds from the north. Water changes its temperature more gradually than land, and hence it always tends to equalize seasonal changes in regions near it, by affecting the winds that blow over it. This explains why the isotherms for January—that is, the lines passing through places which have the same average temperature for that month—cross Central Europe nearly due north and south, instead of from east to west, as we should expect from a consideration of latitude only. On the maps showing the distribution of temperature, the influence of the relief of the land, which causes the temperature to fall about 1° F. for every 270 feet of ascent, has perforce been ignored.

QUESTIONS.

1. Why do the summer days in the Northern Hemisphere lengthen as we go north and the winter days shorten ?
2. The snow-line is an imaginary line drawn round a mountain above which there is snow all the year round. Why is the snow-line of the Alps about 9,500 or 10,000 feet high on the southern side and 8,500 on the northern ?
3. Describe the course of isotherm 32° F. across Europe in January, and account for its variations.
4. Account for the differences in temperature of Amsterdam, Berlin, and Warsaw, and of the Great St. Bernard, Trieste, and Odessa (see pp. 21 and 23).