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? WHY THE WEATHER ?

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THE ANTI-TRADE WINDS

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Above the northeast trade winds of the northern hemisphere and above the southeast trade winds of the southern hemisphere, there is a somewhat gradual reversal of wind direction, so that, above a certain height, westerly winds prevail, though their altitude varies widely with latitude, season and otherwise. These upper winds, variously described as the "antitrades," "countertrades" and "return trades," were discovered generations ago through observations on lofty mountains in the trade-wind belts, such as the peak of Teneriffe and also through noting the drift of high clouds and of the ash and smoke from volcanoes. In recent times they have been explored by means of pilot-balloons.

Evidence of the existence of these winds in the West Indies region was afforded as long ago as May, 1812, when a violent volcanic eruption took place in the island of St. Vincent. Though the easterly trade wind was blowing steadily at the time and place of the eruption, there was a heavy fall of volcanic ash at Barbados, which lies 100 miles farther east. The same thing happened in May, 1902.

During an eruption of Mauna Loa, in the Hawaiian Islands, the column of volcanic dust shot vertically upward to a height of 6 miles. The southwesterly anti-trade blowing at that level carried the dust more than 600 miles to the northeastward, where the dust settled down and entered the northeast trade wind, by which it was blown back to Hawaii, arriving there 14 days after the eruption.

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