

obscure the sun, and to cover the decks, sails, and rigging of vessels which may even be hundreds of miles from land. Rain falling through such a dust-cloud mixes with it, and descends, either on sea or land, as what is popularly called "blood-rain." Occasionally the dust is brought down to the surface of the ground by snow.

This phenomenon is frequent on the northwest of Africa, about the Cape Verd Islands, in the Mediterranean, and over the bordering countries. A microscopic examination of this dust by Ehrenberg led him to the belief that it contains numerous diatoms of South American species; and he inferred that a dust-cloud must be swimming in the atmosphere, carried forward by continuous currents of air in the region of the trade-winds and anti-trades, but suffering partial and periodical deviations. But much of the dust seems to come from the sandy plains and desiccated pools of the north of Africa. Daubrée recognized in 1865 some of the Sahara sand which fell in the Canary Islands. On the coast of Italy, a film of sandy clay, identical with that from parts of the Libyan desert, is occasionally found on windows after rain. In the middle of the 18th century an area of northern Italy, estimated at about 200 square leagues, was covered with a layer of dust which in some places reached a depth of one inch. In 1846 the Sahara dust reached Lyons, and it is said to have been since detected as far as Boulogne-sur-Mer. Should the travelling dust encounter a cooler temperature, it may be brought to the ground by snow, as has happened in the north of Italy, and more notably in the east and southeast of Russia, where the snows are sometimes rendered dirty by the dust raised by winds on the Caspian steppes.³⁷ It is easy to see how widespread deposits of dust may arise, mingled with the soil of the land, and with the silt and sand of lakes, rivers, or the sea; and how the minuter organisms of tropical regions may thus come to be preserved in the same formations with the terrestrial or marine organisms of temperate latitudes.³⁸

³⁷ Consult an interesting paper by C. von Camerlander on snow with dust which fell in Silesia, Moravia and Hungary in February, 1888, *Jahrb. Geol. Reichsanst.* xxxviii. (1888), p. 281.

³⁸ See Humboldt on dust whirlwinds of Orinoco, "Aspects of Nature"; also