

Mists are frequently, perhaps we might say usually, formed over masses of water. The cause of this is very evident; and an examination of the circumstances which attend its activity, will probably lead us to a tolerably accurate estimate of the agency by which mists are commonly produced.

When the sun ceases to throw its rays upon the surface of the earth, exceedingly different results are produced on the land and water. The earth radiates its heat rapidly; but while the transmission of heat from the land is confined to an immoveable surface, the surface of water is constantly changing; and as quickly as the one is cooled, whether by radiation or evaporation, it sinks, and gives opportunity for the presentation of a new body of water. The superficial extent of water is therefore continually changing, until the whole mass is reduced to the point of maximum density. If this be true, then the atmosphere resting upon the surface of water ought to have, and it has, a higher temperature than that which superposes the land. When these several masses of air, having different temperatures, and being charged with aqueous vapour, intermix, a mist is produced. Sir Humphrey Davy states, that the mists formed over the Danube are attributable to these causes, and that in all his experiments, made during the presence of this phenomenon, he found the air over water to have a temperature from three to six degrees above that resting upon the land; and that when the mist dispersed, the temperature of the air over the land was invariably higher than of that over the water.

The reader must be already aware that we are much inclined to suppose that electricity has an extensive agency over atmospherical changes; but it is possible to carry theoretical opinions, which are based upon well-authenticated experiments, to the brink of speculation, or to launch them upon its unexplored and unfathomable waters. It does not become us to say that the opinions maintained by Professor Hansteen have, upon any subject, this character; but we shall not be charged with presumption in stating, that we cannot conceive how the polar lights can in any way cause the formation of mists. This highly-esteemed and discriminating philosopher imagines the atmospheric vapour to be traversed by electric meteors, which have, he says, a tendency to give it an opacity of structure and appearance, or, in other words, to produce mist