

the west of the place where she sank, and it must therefore have floated in a direction contrary to that of the superficial current.

The presence of saline matter in the ocean is of considerable importance in the general economy of nature. Among the most singular effects of this arrangement, we may mention that the freezing point of water is lowered, and the tendency to evaporation diminished, while at the same time it is better suited to sustain all the provisions of animal life. We frequently trace effects to their causes, without perceiving the immediate results intended by the Creator; but it is well to remember that the ultimate object being determined upon in the Eternal Mind, the causes were so arranged as to produce effects calculated to fulfil them.

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## CHAPTER X.

### SUPERFICIAL TEMPERATURE OF THE EARTH.

IN tracing the circumstances that give rise to the superficial temperature of the earth, it is necessary to keep in mind the difference between that which results from celestial, and that which depends upon geographical position. The general superficial temperature is regulated by the position of the earth in relation to the solar system, and especially to the sun; and it is universally known, that the most intense heat is suffered in places under and near the equator, and the greatest cold at or near the poles; the places situated between these having a medium approaching nearer to the one or the other of the extremes, according to their geographical position. But the causes which modify the superficial temperature are so numerous, that it is not possible to ascertain the temperature of any locality without positive experiment. Every place, however, is distinguished by a certain mean temperature; and although seasons may vary, and there may appear to be an entire change in all the circumstances which have distinguished a country from year to year for ages, yet the mean temperature remains fixed and unchangeable.