

small, very apparent fructifications, from which, at maturity, the reproductive sporidia escape, which, microscopic in appearance, become dispersed over the ground, or are transported by the winds to enormous distances, in order to develop themselves, when the conditions of soil and humidity are favourable to them. Such, while it remains, is of an inestimable value to the wandering and migratory tribes of the deserts, who are preserved by it from hunger in years of famine and in certain particularly critical circumstances.

Is it not evident, says Dr. O'Rorke that this substance is the true manna of the Hebrews,—that which fed them with regularity for forty years in the wilderness? Those who desire a more complete agreement with the text of the Scriptures can yet admit this conclusion:—Moses has confounded, under the name of manna, two distinct substances, because they both resembled each other in apparently falling from heaven, that is—

1st. An amylaceous substance which could be preserved and pulverized suitable for making bread, might be collected at any time, increasing on the ground, like to coriander or bdellium in colour; that is the lichen described above.

2nd. A sugary substance, very readily alterable, somewhat rare, and collected on certain trees or shrubs during three months of the year only, and serving as a condiment or dainty to mix with the lichen bread; that is to say, the *manna of the tamarisk*, of the *Alhagi*, and perhaps of some others.

We see then, that the real bread of the Hebrews, the *manna of the wilderness*, is no other than the *Lichen esculentus* of Pallas, or the *Lecanora esculenta* of Acharius. No commentator has hitherto alluded to this.—*Journal de Pharmacie et de Chimie*, June, 1860.

### HOW TO FORETELL WEATHER.

THE following manual of the barometer has been compiled by Rear-Admiral Fitzroy, and published by the Board of Trade:—

Familiar as the practical use of weather-glasses is, at sea as well as on land, only those who have long watched their indications and compared them carefully, are really able to conclude more than that the rising glass\* usually foretells less wind or rain, a falling barometer more rain or wind, or both; a high one fine weather, and a low the contrary. But useful as these general conclusions are in most cases, they are sometimes erroneous, and then remarks may be rather hastily made, tending to discourage the inexperienced.

By attention to the following observations (the results of many years' practice and many persons' experience), any one not accustomed to use a barometer may do so without difficulty.

The barometer shows whether the air is getting lighter or heavier, or is remaining in the same state. The quicksilver falls as the air becomes lighter, rises as it becomes heavier, and remains at rest in the glass tube while the air is unchanged in weight. Air presses on everything within about 40 miles of the world's surface like a much lighter ocean, at the bottom of which we live, not feeling its weight because our bodies are full of air,† but feeling its currents, the winds. Towards any place from which the air has been drawn by suction,‡ air presses with a force or weight of nearly 15lbs. on a square inch of surface. Such a pressure holds the limpet to the rock when, by contracting itself, the fish has made a place without air§ under its shell. Another familiar instance is that of the fly, which walks on the ceiling, with feet that stick. The barometer tube, emptied of air, and filled with pure mercury, is turned down into a cup or cistern containing the same fluid, which feeling the weight of air, is so pressed by it as to balance a column of about 30 inches (more or less) in the tube, where no air presses on the top of the column.

\* Glass, barometer, column, mercury, quicksilver, or hand.

† Or atmosphere, or the atmospheric fluid which we breathe.

‡ Or exhaustion.

§ A vacuum.