

The manna of the Hebrews, was not, then, a true manna, and Dr. O'Rorke believes that he can demonstrate evidently that this manna was a *lichen*. The lichens are cryptogamous, and there are a great many species. They are the first plants which make their appearance on naked bodies, such as stones, rocks, and the ground. These plants have no true roots, and are not parasitic except in appearance, for they do not live at the expense of the body upon which they are applied and to which they adhere. Heat dries them up, but moisture restores them to life.

No lichen is deleterious, and all contain a nitrognoeous matter in abundance and a kind of starch; they are employed, therefore, in several parts of the globe as food for man and other animals. We could even employ them everywhere for such a purpose, did we not possess more nourishing matters, and of more agreeable flavour. In Lapland the reindeer eat them; in Norway, those of the inhabitants which are nourished by them are said to be less frequently affected by leprosy than those of whom fish constitutes the principal food. The alimentary value of certain lichens would be even superior, according to some authors, to that of wheat, since a bushel of powdered lichen is equivalent to two bushels of wheat-flour. A great many lichens contain an enormous quantity of oxalate of lime. Some contain a bitter principle (*cetrarine*, &c.); which renders them febrifugal; others a rich colouring principle (*orcine*); and all contain a fecula analogous to *inuline*, which is not coloured blue by iodine.

Amongst the lichens, there is one which is called by Pallas *Lichen esculentus*, and which, according to Acherius, belongs to the genera *lecarona* and (?) *parmelia*. This lichen is found in Persia, in the deserts of Tartary, in the Crimea, in Asia Minor, &c., always on the ground, where it is carried either by the winds or by its falling from the neighbouring mountains. It there sometimes forms beds several inches in thickness. The sheep are nourished by it, and men make of it a kind of bread, which the poor consume and regard as a true manna sent to them by Providence.

Already, on the 3rd of August, 1828, Thénard had presented to the Academy of Sciences a lichen of a fawn colour, granulated, composed of broken crusts, which had fallen in the neighbourhood of Mount Ararat in Armenia, and which a Russian general of the Persian army had sent to him.

It appears that this lichen dries up during the summer upon the mountains, and is transported by the winds to a great distance, which has caused the inhabitants to say that, *this grain fell from heaven*. This shower was not rare, and under certain circumstances covered the ground, to a depth of five or six inches in several places. The sheep were fond of it, and men were habitually nourished by it.

A shower of this kind was noticed in 1845 in the Crimea at Jenis-Bechir. It covered the ground to a depth of three or four inches, and the inhabitants, following the example of Dr. Levéille, nourished themselves with it for several days.

The lichen is even more common in the Algerian Sahara, and in Arabia. Everywhere they employ it for the nourishment of men and horses.

The specimen lately shown in Paris by Dr. O'Rorke was collected by M. Bellestrot at Boghar, in Algeria, and M. Hardy, Director of the Botanic Gardens of Algeria in 1849, had sent a specimen of it to the Exposition, which was altogether unnoticed.

This lichen, called *takuout* in Arabia, and *ousseh elard* (excrement of the earth) in Algeria, is found in the form of little twisted rounded grains, the largest of the size of a pea, and of a yellowish-grey earthy colour. Its fractured surface is white and farinaceous and contains some particles of sand which crack under the teeth. In flavour it is insipid, amylaceous, and with a feeble aroma of the champignon. When boiled in water this lichen slightly swells, becomes more tender, and can be mixed with milk, butter, and salt, and forms a food which has no bad quality or disagreeable appearance.

In the Algerian Sahara, as well as in Arabia, this lichen does not adhere to any foreign body; it appears to spring spontaneously from the ground after rain; the wind collects it together in certain places in large heaps and they say of it *acquirit vires eundo*, for in its wandering course it vegetates and increases in size. Its surface is covered with