

The names of all the Etruscan Gods given by Varro, have roots which are still found in the Latin language as Vertumnus Volumnus et Nolumnia et Nurtia &c. This is sufficiently accounted for by the number of Etruscan emigrants who settled in Rome soon after its foundation and the great number of other Etruscans, who afterwards removed to Rome

It may be that the discovery made within a few years past of the ancient Egyptian characters and language may be soon followed by the discovery of the language of the Etruscans, which would open a rich mine of archæological lore.

It has already been observed that whilst the Etruscans occupied the centre of Italy, kindred tribes speaking the same language, inhabited the Rhetian Alps. And as some years ago there was found in a retired valley of the mountains in the neighborhood of Verona, a colony speaking pure Saxon German, whom scholars like Maffei and Denina, declared to be descendants of the Cimbri who were defeated by Marius, it would seem probable that there might still be found in the Tyrol, Colonies speaking the Etruscan tongue.

Latterly there has been a Colony found living in the village of Groeden, in the Tyrol, who speak a language the roots of which are altogether different from any known tongue, and which has been conjectured to be the Etruscan. It is highly probable that this conjecture is true, and if so then it will be our lot to have lived to see a discovery but little inferior in importance, and certainly as little looked for as that of the Hieroglyphics of Egypt.

ART. IX.—*Notes on the Country in the neighbourhood of the falls of Moulmorency, by William Green Esquire.*

The bed of the Saint Lawrence appears to be here composed of Clay Slate, or of that Rock and Grey wacke alternating with each other.

The

The amphitheatric Section in the middle of which are the Falls of Montmorenci appears to consist at both its outer (or southern) ends of a shaly rock exhibiting a broken stratification dipping to the south inclined at an angle of 43° . as represented in No. 2, and at its northern ends abutted on gneiss which emerges from beneath the bed of the Saint Lawrence.

The gneiss supports a mass of limestone, in some parts more, in others rather less than fifty feet in thickness, stratified horizontally.

A Section of this mass bearing northerwards with a sinuous course contains the River Montmorenci: This stream is reported to be from its source to its mouth a torrent, and is ascertained to be so in many miles of the southern portion of its course. It enters the St. Lawrence at Montmorenci, there forming the well known Cataract of that name. At low water in the St. Lawrence, these falls are two hundred and twenty-eight feet high.

At a point north of the Bridge and within thirty yards of it, on the east bank of the Montmorenci, at the level of high water there, one horizontal bed of conglomerate a foot thick rests immediately upon the gneiss and immediately under the limestone. It contains pieces of white and of bluish white translucent opaline stones, rounded and varying in size from that of a duck-shot to that of a bean. This bed is parallel to the limestone, and bears to the strata of gneiss the relative direction represented in No: 5:

At another point South of the Bridge, on the West Bank, diagonally opposite to the situation last described and distant from it about 100 yards at the level of high water in the Montmorenci there appears the edge of a bed of Rock, similar in aspect,

† To those who know the place, it need not be said that the tide has no influence in the Montmorenci.

aspect, and also in position, (relatively to the river and to the gneiss,) to the conglomerate already mentioned—but differing from it in position relatively to the incumbent limestone in this—that between the [supposed] conglomerate now mentioned and the superior limestone, and in immediate contact with both, gneiss appears—gneiss being also beneath this [supposed] conglomerate, in horizontal continuation of that surface which is the bed of the river—whereas in the case first mentioned, gneiss is under, *not above* the bed of conglomerate.

In the present nearly vertical state of the cliff it is not practicable to descend sufficiently near the subject of inquiry to ascertain whether the masses of gneiss which are above the conglomerate be peaks of their main rock protruding through the conglomerate, or whether they be boulders. If the latter, their situation is peculiar in this—that they are imbedded in the limestone and project through its main mass and not through its *Débris*. The subjacent conglomerate, from its aspect and the conformity of its position to that of the opposite conglomerate, would appear to have been a portion of the same bed, as much as the opposite strata of limestone now divided by the Montmorenci seem to have been formerly united—as much also as the opposite shaly banks which form the ends of the curve that includes the fall and are now separated by a bay of the Saint Lawrence, seem to have been once connected.

These masses of gneiss are represented in No. 4, at the letters a. a. a. The summit of the limestone is covered with a diluvial deposit containing throughout its mass and scattered over its surface boulders of granite, gneiss and quartz. On both sides of the river are found grape shot and other projectiles; vestiges of the military operations conducted near these falls by Wolfe and Montcalm.

The sand of the Montmorenci is large grained and angular with fine grained rounded black iron sand in small proportion,

mixed with a very little of an equally fine grained rounded sand, translucent, of a pale red colour. The latter notwithstanding its superior specific gravity, is always washed higher upon the shore than the other and is deposited upon it—and this occurs elsewhere, Mortar made of Beauport lime and these sands becomes extremely hard. That used in building Haldimand house at this place forty five years ago affords proof of this.

The soil is brown of a middle tint relatively to the degrees of intensity of that colour. It is sandy here and there, and occasionally marshy;—on the whole not remarkable either for barrenness or fertility, but sufficiently rewarding the toil of its cultivators. In the woods the pine in several of its species prevails; yet it is intermixed with that variety of other trees which is supposed to indicate a good soil. From the summit of the cliffs of lime upon gneiss represented in No. 3, it is obvious with respect to trees growing on the summit and on the lower points, that vegetation is most luxuriant at the higher levels where their roots may feel the influence of the lime— and that in stature they diminish progressively as they occupy lower stations where they grow out of fissures in gneiss and recede from lime. Not only do they diminish in stature, but the number of their kinds likewise decreases. The species which is most persistent appears to be a stunted black spruce—and at the lower points of the line of vegetation here that spruce is not accompanied by any other tree. This progressive deterioration appears confined to the gneiss cliffs. (see No. 2. A.) ; those which are shaly being, where not too nearly vertical for the attachment of roots, clothed from their summit to their base with a vegetation equally vigorous throughout. The decrease of vegetation above mentioned occurs, notwithstanding the constant presence of vapour from spray and from the adjacent extensive sheets of water, in addition to the common supply of rain.

The limestone passes into sandstone on the east of the falls within a hundred yards of them, and it is said it there terminates. At the point B. (in No. 2.) where there is a lime kiln within that distance, the limestone, (although still retaining that name,) is considered as not fit for the kiln, which is supplied with a better material from other parts of the same field nearer the Falls.

The principal extent of the limestone, is to the west of the Falls; and at its western limit, it joins clay-slate. To the north it is interrupted by a chain of mountains of gneiss which appears to emerge from beneath it, and to be part of the rock over which the Montmorenci rushes. So much of these mountains as is visible from Quebec, forms a ridge of which the general bearing from that place is through all the points between N. W. and N. E. The lower summits are the north western, and the more elevated are at the N. E. The loftiest ascertained point in this tract appears to be that of Cape Tourmente, 2000 feet above the St. Lawrence where it flows along the base of that mountain. This chain encircles many lakes and fertile vallies: yet its northern series is imperfectly known to the European race. It continues to be the hunting ground of the Hurons of Lorette. Along the hither, or southern line of their base—and not higher, so far as is known—the soil contains imbedded shells, among which those of this form and size are the most common. (see fig. 7. a.) This is also true of other parts of Beauport and of Charlesbourg and Lorette. Through those parishes (adjacent to each other) the limestone formation continues. At the west of Beauport it recedes from the course of the St. Lawrence skirting the southern line of the base of the mountains before mentioned through those parishes, and thence declining to the level of the Saint Lawrence which it meets at Jacques Cartier in Cap Santé near a place where the river Jacques Cartier rushes through a narrow gorge in that rock. In this tract the Limestone has continued through every level from that of the

St. Lawrence at Jacques Cartier to three hundred feet and more above the level of the same river at Beauport, an interval of 40 miles. In that distance the declivity of the bed of the St. Lawrence towards the east is supposed to be feet. This declivity is in a direction opposite to that of the land adjacent to the St. Lawrence, which in that space is higher on both sides of the river towards the east and lower towards the west.

The Beauport Limestone contains petroleum, mineral caoutchouc or elastic bitumen and numerous organic remains of marine animals of several kinds. Among these are many of this form No. 7, some of which are more than a foot long. The cavities of these often contain or are filled with quartz which is sometimes white and opaque, sometimes translucent but smoky. The crystals adhere to the circumference, whence they converge—and when there is a cavity, the deficiency of matter is at and next the centre.

This Limestone, by friction or percussion becomes temporarily fetid. Burnt, it is often of a pale green hue, and in the state of quick lime it is seldom perfectly white, but becomes so on being slaked. The colour of the stone is dark grey, which weathering renders superficially much paler. Distinct lithographic impressions have been taken from it, but the darkness of its colour diminishes its utility by rendering obscure to the artist and the printer the effect of their work during the process, especially while the stone is wet.— It is probable that in the numerous cases where *red* (instead of black,) ink might be used, as that colour would contrast sufficiently with the hue of the stone, this objection would disappear, and the stone become useful in this art. Many portions of it are very compact and fine grained, free from veins, spots and visible organic remains: Thin plates of these are sonorous when struck. The fracture of this Limestone is conchoidal.

When

When the St. Lawrence is frozen below the Falls, the level ice becomes a support on which the freezing spray descends as sleet. It there remains and gradually enlarges its base and its height, assuming an irregularly conical form. Its dimensions thus continually enlarging, become, towards the close of winter, stupendous. Its utmost height in each season necessarily varies much, as the quantity of the spray it is formed of depends upon the degree in which the water producing that spray is copious. It has not been observed higher than 126 feet, which altitude it attained in March 1829. The whole of the preceding season had been unusually humid. The face of the cone next the Fall presents a stalactitical structure not apparent elsewhere; and there occasioned by the dashing of water against it, which freezing in its descent, assumes the form which characterizes it under such circumstances. The whole cone is slightly, yet very perceptibly tinged of an earthy hue, which it can only have derived from infinitely comminuted particles of the bed of the Montmorenci abraded by the torrent, and conveyed into the atmosphere with the spray.

The formation of this cone may suggest some explanation of the mode in which Glaciers have been formed.

It is manifest that were the supply of frozen spray never interrupted, as it annually is, by an increase of temperature, it would be incessant—and the dimensions of the cone would constantly increase. It is also plain that if the cone instead of resting on its horizontal base were supported by an inclined plane, its increasing weight and enlarging bulk would at length urge its descent to lower levels. The part thus deposited, would by the like process receive continual accessions from above, and having thus acquired permanence, (as a frozen mass apparently undiminishing, because continually renewed,) our cone would thus have become a glacier.—Now, on lofty mountains, the vapours which are coagulated within the region of perpetual frost, are by those summits continually