Frank D. Adams
Duplicate

NOTES ON

PREHISTORIC MAN IN EGYPT

AND

THE LEBANON.

BY

SIR J. WILLIAM DAWSON, K.C.M.G., F.R.S.

PRESIDENT OF THE BRITISH ASSOCIATION, 1886.

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NOTES ON

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IN my recent visit to Egypt and Syria, I was very desirous to learn as much as possible respecting the traces of prehistoric men in these countries. In Egypt I was unsuccessful in obtaining any certain evidence of the existence of man earlier than the historical period; but in Northern Syria, following in the footsteps of Canon Tristram and other explorers, more satisfactory results were obtained, and which may contribute something to the facts already known.

Considerable attention has recently been given to the question of the existence of prehistoric man in Egypt, in consequence of the discovery of worked flints in various parts of the country. More especially I may refer to the papers of Sir John Lubbock, Mr. Fisher-Browne, Captain Burton, Mr. Greg, and General Pitt-Rivers, in the *Journal of the Anthropological Institute*, and that of Professor Haynes in the *Journal of the American Academy of Sciences*.

Egypt abounds in material for flint-working. Certain beds of the Eocene limestone hold numerous, and often large flint nodules, and, where these beds have been removed by denudation, the residual flints are widely scattered over the desert surfaces. There are also beds of gravel largely composed of entire and broken specimens of these flints. That the ancient Egyptians worked the flint nodules, and used flint arrows and knives, is well known, and it is also believed that flint flakes were used in the cutting of hieroglyphics on the softer limestones. Careful examination with the lens of

* Read at a meeting of the Victoria Institute ;—The large number desiring to be present rendered it necessary to hold the meeting at the House of the Society of Arts : the Chair was taken by Sir H. Barkly, G.C.M.G. K.C.B. F.R.S.

sculptured surfaces of limestone convinces me that the hieroglyphics were usually scratched with sharp points rather than chiselled, and splinters of flint would be very suitable for this purpose. Bauerman has described* flint picks of triangular and trapeziform shape found in the mines worked by the Egyptians at Wady Meghara, in the Sinai peninsula, and states that the marks on the stone are such as these tools would make. The manufacture has been continued to the present time, flints for muskets, and also for strike-lights, to be carried with steel and tinder of vegetable fibre in the tobacco-pouch, being still commonly made and sold. This manufacture is carried on at Assiout, and also at the village of Kadasseh, near the Gizeh pyramids.

It follows from this that the occurrence of flint chips or flakes on the surface, and especially near "ateliers," village sites, or tombs, &c., carries with it no evidence of age, except such as may be afforded by the condition or forms of the flints; and the former is somewhat invalidated by the considerations that some flints weather more rapidly than others, and that under certain conditions of exposure weathering occurs very rapidly; while the latter is of little value, as the rudest forms of flints have been used for strike-lights and other purposes in the most modern times. Nor is it remarkable that worked flints are more common on the desert surfaces than on the alluvial plain, since it is on the former that the material for their manufacture is to be found, and on the latter they are likely to have been buried by recent deposits.

The well-known locality near Helouan forms a good example of the mode of occurrence of modern flint implements. At this place the worked flints, which are mostly of the form of long, slender flakes and pointed spicules, occur on the desert surface, or only under a little drifted sand, and the locality where they are found is evidently an old village site, as it has remains of foundations and tombs, worked blocks of limestone, and numerous fragments of burned brick, which occur along with the flakes. The character of the bricks would seem to indicate that the site was inhabited in the Roman time, or later. The flakes may have been made for use on the spot, perhaps in carving stone from the neighbouring quarries; or they may have been sold in Helouan or in Memphis, as they now are in Assiout and Cairo. Arrow-heads are said to have been found at Helouan, but I saw none of these, unless, indeed, some of the pointed flakes might

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* *Journal of the Geological Society*, vol. xxv.

have been intended for this use. It is worthy of remark that the desert near Helouan is less abundantly supplied with flint nodules than most other places, so that the material may have been brought from some distance. The flakes are usually much discoloured on the surface, many of them being of a kind of flint which blackens on weathering; but some of them of a different kind of flint are comparatively fresh in appearance. The principal locality is about half a mile south-west of the present town, and apparently on the line of an old track leading from the quarries to the river. (Pl. II., Figs. 6, 7.)

A different conclusion would be warranted if such worked flints were found in old deposits, anterior to the times of Egyptian civilisation. A case of this kind seems to be furnished by the discovery, reported by General Pitt-Rivers, in the *Journal of the Anthropological Institute*,* of flint flakes in an old gravel at a place called by the natives Jebel Assart, at the mouth of the ravine of Bab-el-Molook, in which are the tombs of the kings, near Thebes. I have examined this place with some care, and am convinced of the antiquity of the gravel. It constitutes a stratified bed of considerable area, 25 feet in thickness, and with intercalated layers of sandy matter mixed with small stones. These layers are entirely different from the Nile mud, and are made up of fine *débris* of the Eocene rocks, with small stones and broken flints. They indicate more tranquil deposition, proceeding in the intervals of the gravel deposits and under water. General Pitt-Rivers refers to only one of these beds, but in the deeper sections three may be observed (Fig. 1). The whole mass has been cemented by calcareous infiltration so as to constitute a rock of some hardness. It is true it consists of the same materials now washed down the ravine by the torrents caused by winter rains, namely, partially-rounded masses of limestone and flints, whole and broken, but it must have been formed at a time when the ravine was steeper and less excavated than at present, and probably subject to more violent inundations, and when it must have carried its gravel into a larger Nile than the present, or possibly into an arm of the sea. It is, in all probability, one of the Pleistocene gravels of the valley, which belong to a period of subsidence indicated by similar beds in other places, and also by the raised beaches and the rocks covered with modern oysters and bored by lithodomous shells, which are seen near Cairo and at Gizeh, at the height of 200 feet above the sea.

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* No. 39, May, 1882.

Along a wady or ravine cut through the bed by the modern torrents, the ancient Egyptians have excavated tombs in the hard gravel. But, independently of this, a geologist would have little doubt as to its prehistoric age. The doubt here lies with respect to the flints. The bed is full of broken flints, as are the modern gravels carried down the ravine at present, and indeed all gravels formed by powerful torrents or surf-action in flint districts. These result from the violent impinging of stones on the flints, and therefore have all the characters of specimens broken by hand, except that they have no determinate forms. In this respect the broken flints found in these beds differ from those found at Helouan, or in the bone caves of the Lebanon, and resemble those which may be found in any bed of gravel formed by violent mechanical action. It is true, a few out of thousands of shapeless flakes might be likened to flat flakes formed by man; but the same proportion of such forms may be found in the modern *débris* of the torrents. The main point at issue in respect to these forms is the importance attached to what is termed a "bulb of percussion," produced by a sharp blow striking off a flake. That this is usually an evidence of human agency may be admitted; but since it may be produced by the action of a water-driven stone, it cannot be regarded as an infallible proof, except when sustained by other evidences of the presence of man.

The specimens figured as from this bed by General Pitt-Rivers are in no respect exceptions to this, and I dug out many similar ones from the same beds, but none which could with any certainty be assigned to human agency. I do not, of course, refer to those which he describes from tombs and from the surface, one of which is a finely-formed knife, with edges modified by pressure. Another, supposed to be for scraping or polishing shafts of spears, is like specimens of worn strike-lights from the pouches of modern Arabs. (Pl. II., Fig. 8.) The annular nodules figured by General Pitt-Rivers, which are numerous in some of the limestones, of course have no connexion with the worked flints, and the specimens which he figures from the surface, though some of them are no doubt ancient, are probably in part natural and in part from the little heaps left by Arabs and others in places where they have been shaping flints for muskets or for strike-lights. I obtained numbers of such surface specimens, evidently of more recent date than the old gravels above referred to, and whose mode of occurrence renders it impossible to decide as to their origin or antiquity. There is no foundation in fact for the statement that flint in Egypt has

been imported from a distance for the manufacture of implements. Flint nodules occur in the limestones throughout the Nile valley, and are abundant in the *débris* derived from their waste; and though flakes and chips are numerous near tombs, quarries, and village sites, they are also very abundant in the places where the flint is found. I found no large hatchets of "palæolithic" form in Egypt, but purchased a spear-like weapon of polished slate, said to have been found in a tomb, and a beautiful little polished hatchet of jade, perforated for suspension as an ornament.

I may add that the hardened gravel and silt above referred to afforded no fossils, except those in limestone pebbles, and a few irregular root-like bodies in the finer bands, and which may have been aquatic plants, and would go to confirm the conclusion that the beds were deposited under water.

The Lebanon Mountains, composed as they are principally of horizontal or slightly inclined beds of limestone of different degress of hardness, and traversed by many faults and fissures, are eminently suited for the production of caverns and rock shelters available for human residence or for sheltering animals, and such caverns accordingly abound in most parts of the range, and have, from the earliest periods, been employed for these purposes. These caverns are, with respect to their origin, of two kinds,—river caverns and sea-cliff caverns.

The former have been excavated by streams running underground along lines of fissure which they have enlarged into tunnels. A remarkable example of this kind is the Grotto of the Nahr-el-Kelb, or Dog River, the ancient Lycus, which was explored in 1873 by Messrs. Marshall, Bliss, Brigstoke, and Huxley, and found to extend for 1,256 yards, and to expand into large halls with magnificent stalactites. Another is that from which the neighbouring mountain stream of Ant Elias issues like a gigantic fountain. These water-caves may ultimately become dry, by the streams finding a lower level, either in the rock itself or in some adjacent ravine, this being, perhaps, sometimes determined by the partial falling-in or choking of the cavern itself. In the ravine of Ant Elias, in addition to the present water-cave, there is one which has become perfectly dry, and there are remains of others which have been cut into and unroofed by the further excavation of the ravine.

The second class of caverns,—those excavated by the sea,—may be seen in process of formation at many places on the coast, where the waves have cut into fissures or have undercut the harder beds. They are usually not very deep, and are

often mere shelters or overhanging ledges. Such caverns are frequent on the old inland cliffs which have been subjected to erosion when the land stood at a lower level. Caverns of both these classes contain evidences of their use by man.

The remains of an ancient cavern were discovered in 1864 by the Rev. Canon Tristram in the celebrated maritime pass at the mouth of the Nahr-el-Kelb, and were thus described by him:—

"The position of this mass of bone was several feet above the height of the present roadway, but below the level of the ancient Egyptian track. The remains extend for perhaps 124 feet, and it has probably formed the flooring of an ancient cavern, the roof of which must have been cut away by Rameses to form his road or to obtain a surface for his tablet. From the position of the deposit, it would seem as though the floor of the cave had once extended to the sea-face of the cliff, and that the remaining portion was excavated by Antonine for his road, leaving only the small portion which we examined." (He then notices the fallen masses of breccia which have been thrown down on the talus formed in making the road.) "The bones are all in fragments, the remains, in all probability, of the feasts of the makers of the rude implements. Four of the teeth have belonged to an ox somewhat resembling the ox of our peat-mosses, and one of them probably to a bison. Of the others, some may probably be assigned to the red-deer or reindeer, and another to an elk."

Lartet has described the caves of this district in his geological report of the expedition of the Duc de Luynes, and Fraas has devoted some space to them in *Aus dem Orient*. The latter specifies as found in these caverns, *Ursus arctos*, *Felis spelæa*, *Rhinoceros tichorhinus*, *Bos priscus*, *Sus priscus*, and remains of *Equus*, *Cervus*, and *Capra*, an assemblage which may well be called prehistoric, even in a country whose history extends so far back as that of Syria. Lartet, however, mentions only species of stag, goat, antelope, &c., all of them believed to have been found in the Lebanon in early historic times.

I had the pleasure of visiting this place in company with Rev. Dr. Bliss, of the Beyrout College, in February last, and endeavoured, as far as possible, to supplement and perfect the observations of Canon Tristram (Pl. I., Fig. 2).

At the point in question, the present road, which is probably nearly identical with that cut by the Romans, is about 100 feet above the sea-level, from which the bank rises in a steep slope, composed of fallen blocks of stone. The road bends inward into the cliff, which here recedes in a little cove facing the

N.W., at the bottom of which was the cave. The remains of this consist of a stalagmite floor, about 18 inches in its general thickness, extending inward from the road toward the cliff about six paces, and in breadth along the road about nine paces. The roof and sides of the cave are gone, but at the back the vertical cliff presents a sort of niche with the top slightly arched, and corresponding to the back of the cave, which must have been nine yards broad and of considerable height, with an arched roof. It has evidently been a sea-cave, excavated at the bottom of a small cove or indentation in the cliff, and at a time when the sea was about 100 feet above its present level. Near the cave, the cliff rises in a series of little terraces, on which grain had been sown; and over the top runs an old road or track which seems to have been that in use when the early Assyrian and Egyptian tablets were cut on the rock, as they are evidently related to the level of this and not to that of the present road.

Whether the roof of the cavern had fallen in before the Roman road was made is uncertain; but it is clear that the floor of the cave was cut into in making the road, and at least the *débris* of its sides and roof used in forming the bank, as large masses, both of the stalagmite and of the limestone rock, lie on the slope, some of the latter holding characteristic cretaceous corals, which belong to the soft bed in which the cave was originally excavated. A large slab of the bone-breccia eight feet in length, now forms part of the parapet of the road, and would make a magnificent museum specimen. The exposed surfaces of the stalagmite, and the pieces on the bank, were carefully searched for teeth and bones and flint knives, and the specimens found will be described in the sequel.* Search was also made in the little terraces near the cave, and a few flint flakes were found, but no other signs of human occupancy. On the flat top of the cliff, over which the old track runs, nothing was seen. The cretaceous limestone has an anticlinal undulation at the locality of the caves, dipping W.S.W. at one end, and N.E. at the other.

In the same cove with Tristram's cave, a little to the south and thirty-five feet higher in the bank, another, though smaller, cave exists, with its roof still entire. The floor of this cave is of soft earth, and in digging in it nothing was found. Near the mouth, however, was an oval bed made of stones, lined with green rushes, on which some one had slept

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* See appended Note. Prof. Boyd Dawkins, F.R.S., has kindly undertaken their more detailed examination.

within a few days, furnishing an example of the recent use of this cavern.

In the next adjoining cove to the south-west of Tristram's cave, Dr. Bliss was so fortunate as to find the floor of a second cavern still richer in remains than that of Tristram's cave, from which it is distant two hundred and ten paces along the road. Its roof is entirely gone, the material having apparently been for the most part removed to form the road, though some large blocks remain. The stalagmite floor is ten paces broad, and in some places as much as four feet thick. It is somewhat softer, and of a more yellow colour, than that in the other cave, but its contents in bones and flint knives appear to be similar.

Between the two caves the road passes round a point of rock concealing the one from the other, and commanding an extensive view of the coast from Beyrout to Tripoli. At this point are the remains of a foundation of hard concrete, and near it a plain shaft of grey granite projecting from the parapet of the road, as if some monument had been erected, probably in Roman times, at this point.

It is to be observed that when these caverns were entire, and before any road was cut around the cliff, their occupants would enjoy a position difficult of approach by enemies and commanding an extensive view along the coast. There would also be easy access to the shore and to the top of the cliff, and small terraces of ground capable of occupation and even of culture, and, in any case, of sustaining trees available for shelter and fuel. No running water is known nearer than the river, but there are cavities in the rock which retain rain-water, and, if, at the time of the occupancy of the caverns, the land was a little higher than now, the flat country found at other parts of the coast may have extended around this promontory, and there may have been springs at the foot of the cliff. The ledges of rock at the foot of these cliffs abound in limpets and other shell-fish, and at the time of my visit I saw boys engaged in collecting these. If the sea had been as near at the time of the occupation of the prehistoric caves, we should have expected that their inhabitants would have availed themselves of this source of food, and that numbers of shells would have been found in their kitchen-middens. As this is not the case, we have an additional reason to suppose that the sea was then distant. If, at the period in question, the maritime plain of this coast was much wider than at present, this would have enabled herds of horses and deer to migrate from north to south, and to find suitable pasturage, and would also have afforded fit haunts for the rhinoceros.

It is evident, however, that any such condition of the coast must have been anterior to the times of Phœnician history.

It is also probable that the caves may have been occupied occasionally, or at certain seasons, rather than continuously. The bones and knives are not merely covered with stalagmitic matter, but mixed with it, indicating that the deposit was in progress when these remains were being accumulated. This would also give evidence of a more moist climate than that prevailing at present, and probably a wooded condition of the country, such as that referred to in the descriptions of Lebanon in the Old Testament, and which must have continued from the earliest times till the hills were finally denuded of their trees by the agency of man.

Though it is possible that these caves may have remained intact until the cutting of the Roman road, it seems more probable that their roofs were removed previously, and the appearance of the rock, along with the absence of any evidence of late residence, agrees with the character of the animal remains in indicating that their occupancy by man had been brought to a close anterior to the times of history, and possibly in the great submergence which closed the second continental or antediluvian period. There is, in any case, no evidence of any later occupancy than that by the early people whose *débris* is enclosed in the stalagmite.

I may remark here that the knives in these caves are made of the flint found in the immediate vicinity, and that they differ in no respect from those of the later caves and rock shelters of this region, except in perhaps being a little broader and more massive. (Pl. III.)

On the border of St. George's Bay, between the caves and Ant Elias, I observed, near the shore, and at no great elevation, a band of red loam and stones in which were a few similar flint flakes. The red earth in question is a *remanié* deposit derived from the older red earth to be noticed in the sequel, and which contains no stones or flints. The flakes contained in this *remanié* earth may have been washed out of old caverns, or from the surface of the ground at higher levels; but probably at a period historically very ancient.

The stream of Ant Elias, between Nahr-el-Kelb and Beyrout, bubbles up from the bottom of a ravine, in front of a cavern, along which its waters are carried as in a tunnel. On the opposite or northern side of the valley, and a little higher up, is another cavern, with a high arched entrance, and about fifty feet above the bottom of the ravine (Pl. I., Fig. 3). On entering the cave it is found to be a tunnel

penetrating for about fifty yards into the limestone rock, in the direction of N. 60° E., and then turning off at right angles to its former course, the strike of the cretaceous limestone being N. 60° W., with dip to the S.W. Within, its floor is much encumbered with fallen blocks, but near the entrance it presents an earthen floor with only a few stones, some of them of large size. Against the sides are masses of stalagmite, some of which rise to a height of six feet above the floor, and at the mouth is a ridge of similar stalagmite, extending beyond the mouth of the cave, and indicating that the roof formerly projected farther than it does at present. On the side of the cliff there are also the remains of an old tunnel, long since cut away, and showing only a part of one side. The stalagmite of this cave contains a few flint knives and bones, but differs in appearance from that in the Nahr-el-Kelb caves, and is less rich in remains. The earthen floor is a very rich deposit of flint knives and bones, the former very thin and well made, and accompanied by a few small cores (Pl. II.). It is possible that the stalagmite of this cave may belong to the time of the primitive people who lived in the Nahr-el-Kelb caves; and that, after their deposits had been sealed up in this material and some portions of the front of the cavern removed by erosion, it had been again occupied by a similar rude people, whose *débris* is found in the earth. But it is also possible that the stalagmite may be no older than the cave earth; and the excavations I was able to make are not sufficient fully to decide this question. The cave earth I would refer to the same age with that of certain rock-shelters discovered on the banks of the Nahr-el-Kelb, and which are stated by Lartet to contain remains only of the recent animals of the country.

Among the remains in the Ant Elias cave are bones of birds, and shells of the large Helix (*H. pomatia*) now common in the country, and still used as food. This species was not seen in the older deposits. A shell of a species of *Turbo* still common on the coast was also found.

The cavern at Ant Elias is large enough to have accommodated a considerable tribe of ancient Troglodytes, and the time during which it was so occupied need not have been very long, provided the occupants were numerous. The country at the time was no doubt wooded and well stocked with game, and the primitive people may have been prodigal of flint knives, as abundance of material for their manufacture exists in the neighbouring limestones. They may also, as it seems likely the Belgian people of the Reindeer age were accustomed to do, have instituted *battues*, and made up

quantities of pemmican or preserved meat for subsequent use with the flesh of the animals slaughtered.

Mr. West, of the Beyrout College, has promised to make further explorations in this cave, and to give particular attention to the teeth of mammals, to any objects of art other than flint knives, and to any stratification that may exist in the deposit.

Connected with the questions raised by the caverns, are the flint flakes and implements found at the Ras of Beyrout, and I believe first noticed by Mr. Chester in his report to the committee of the Palestine Exploration Fund.*

The oldest rock seen in passing from Beyrout around the point by the Lighthouse and Pigeon Island is the cretaceous limestone, which at this place is remarkably rich in large flint nodules. Upon the limestone rests a soft grey sandstone, used for building in the town, and containing in places fragments of recent shells. It is similar in its character to the modern sandstone of the Jaffa coast, and is, no doubt, of the same age. At one of the quarries a stratum of indurated deep red sand was seen to occur in the middle of the grey beds, and large sand-pipes, which traverse the grey beds perpendicularly, were filled with the same red sand, which also overlies the grey beds, and forms the surface of the highest part of the point, where it is more or less covered with loose wind-blown sand of a greyish colour. In one place, the lower grey sandstone was seen to be about forty feet in thickness, and the red sand is in some places as much as ten feet in thickness. The summit of these deposits rises as high as 250 feet above the sea-level. These sands are, probably, in great part products of the waste of the red and grey arenaceous beds of the lignitiferous zone of the Lebanon cretaceous, which occurs in the hills some distance behind. They belong to the modern or Pleistocene age, and to a time when the coast was submerged to the amount of 250 feet below its present level. At a place called the Bishop's Garden, behind Beyrout, and opposite the mouth of the ravine of the Beyrout river, there occurs a thick bed of grey and red conglomerate, capped with red sand, and which I believe to be a more inland representative of the coast deposit.

At the Ras of Beyrout the bed of red sand contains no stones or other foreign bodies, except near the surface, where it seems to have been disturbed and re-deposited by the action of the rain-water; but on its surface it holds small

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* Quarterly Statement.

stones, fragments of coarse pottery, and even of glass, and flint flakes and implements, which are partly covered with blown sand (Pl. II.). Among the stones I found fragments of vesicular trap, which may have been imported for millstones, and a small piece of Egyptian granite. All these bodies are mixed together, without anything to determine their relative ages, and they are most abundant at the surface of the red sand, and immediately under the drifted sand, or where it has been removed by the wind. The flint flakes are much whitened by weathering, and evidently of great antiquity, and with them are many large and irregular flakes, probably rejected as useless. A few spear and arrow heads have been found at this place. I found only one fragment of a lance or spear, but this had evidently been worked with some skill by pressure on the edges, in the manner now employed by the American Indians (Pl. I., Fig. 1). A small flake of obsidian, with a rounded indentation at the edge, as if intended for use as a hollow scraper, was also found, and may indicate the importation of this material for the manufacture of implements.

The fact that these flint implements occur along with pottery and other city refuse, probably implies that they belong to the historic period; and the reason of their occurrence here may be that the place was occupied by native tribes who came to trade with or to attack the Phœnician colony; or that it was resorted to by such people, because of the abundance of good flint in the limestone near this place. The deposit might thus seem to connect the time of the foundation of the early Phœnician colony with that of the later flint folk. It is, however, possible that an older deposit of flints may have subsequently been buried with city refuse, which is still being carted out to this place; or, on the other hand, that the citizens of Berytus may have continued to use flint flakes and arrows at the same time with pottery, and when they were building edifices of stone.

A curious instance of this connexion was mentioned to me by Mr. Sarruf, of the Beyrout College. He had found in a grave in the Lebanon, lance-heads of bronze and copper, along with flint flakes, thus showing the continued use of the latter after the natives had obtained weapons of bronze. On the other hand, Dr. Jessup, of the American Mission, has found, near Tyre, ancient tombs excavated in the bone-breccias of older prehistoric caverns.

Thus, in the Lebanon, we appear to have evidence of ante-diluvian or post-glacial cave-dwellers, belonging to the earliest known races of men, and of later Troglodytes and flint people, who must have continued in the country till it was colonised

by the Canaanites and Phœnicians, and who may have occupied the remoter glens of the mountains down to a comparatively recent time.

It is to be observed here that the present bare condition of these mountains must be quite different from their primitive state, when they must have been clothed with forests, and were probably inhabited by many kinds of game long since extinct. In this state, also, they would be much more abundantly watered than at present, and would possess a more equable, though on the whole cooler, climate.

It is also interesting to note the possible connexion of at least the later cave-dwellers of the Lebanon with some of those primitive peoples referred to by Moses in the Book of Deuteronomy, as having inhabited Palestine before its colonisation by the Canaanites and Semites.

If we endeavour, in conclusion, to sum up the later geological history of the Lebanon district, we may conclude that, like other parts of Syria, it experienced considerable elevatory movements at the close of the Eocene period, and further elevation in the Pliocene; that in the Pleistocene period it was submerged to the extent of several hundred feet, and at this time many of the ancient sea-cliffs and caverns were cut; and that in the early modern or post-glacial age it partook of the elevation which at this time seems to have affected the whole coasts of the Mediterranean. It may have been in this time of elevation, when there was probably much more land at the eastern end of the Mediterranean, that men first appeared and took possession of the country, and established themselves in the caves. These, however, they probably occupied only at those seasons when they needed such shelter, or when they resorted to the hills in pursuit of game. They may have had other stations, now submerged, in the low grounds or by the sea-coast. This state of things was closed by the great post-glacial submergence or deluge, of which we are now finding so many evidences in different parts of the world, and after this the present geographical conditions were established, and the period of history commenced. In this, the country, then wooded and tenanted by wild animals, was first occupied by rude tribes, probably of Turanian or Hamite origin, and afterwards by the more civilised Phœnicians.

NOTE ON TEETH AND BONES, AND ON FLINT IMPLEMENTS.

Prof. Dawkins has been so kind as to examine in a preliminary manner the specimens of teeth, &c., collected, and has authorised me to state that the breccia from the Pass of Nahr-el-Kelb contains remains of *Rhinoceros* (probably *R. tichorhinus*), *Cervus*, *Bos*, and *Equus*. In the earth of the probably more modern cave of Ant Elias are teeth of the hog, and of the goat or sheep, and an antler of the roe-deer. These facts are sufficient to indicate the earlier date of the Nahr-el-Kelb caverns, as stated above ; but more detailed examination of the fragments of breccia collected will, no doubt, develope other points of interest. It is to be observed here that at the Nahr-el-Kelb River, Lartet has found a rock shelter which contains remains similar to those of Ant Elias, but these have not yet been found in connexion with the old caverns at the Pass.

In the breccia of Nahr-el-Kelb there are large and small knives of the ordinary form, curved flakes roughly chipped at one side, triangular flakes chipped at the edges (Pls. II. and III.), and a flake with the point rounded, and slightly chipped as if for a scraper. There are also remains of cores, and many minute chips, indicating that implements were made on the spot. No large implements of the Palæolithic type were observed. No charcoal was noticed, but a few of the fragments of bone have a brown colour, as if from exposure to fire. Some of the flint knives are perfectly fresh on their surfaces, others are much whitened and decayed.

In Plate III. I have represented some additional flint implements worked out from the breccia of the Nahr-el-Kelb Pass. Fig. 1 is a knife or scraper partly embedded in the breccia. One side has been shaped by fine chipping, or perhaps worn by use in scraping. Fig. 2 is part of a large flake, which may originally have been a spear or lance, but has been much worn at one side by use as a knife or scraper. Fig. 3 is a flake, which has had a curved notch chipped in one end, and the upper side chipped by use. Fig. 4 is a rough one-edged knife, much worn and chipped. Fig. 5 may possibly have been the end of a spear or arrow. Besides these there was found in a mass of the breccia a fragment of a stone hammer of diorite, broken by use. It may have been a naturally smoothed stone, or may have been artificially polished. As this kind of stone is not found at the locality, it may have been brought from some distance. It was reduced to a very fragile condition by decay of its felspar. There was also found in the breccia a fragment of crystalline alabaster, which may have been employed in the manufacture of ornaments, but no carvings or ornaments were observed.

In the cave earth at Ant Elias there are numerous and well-made flint knives (Pl. II., Figs. 2, 3). Some of these are very thin and delicate. There are also scrapers rounded and chipped at the edges, and many cores and minute flakes. A few of the fragments of bone are distinctly charred. Some of the knives and bones are encrusted with stalagmitic matter, but not in sufficient quantity to cement them together; and at the sides and front of the cave there are knives and fragments of bone enclosed in stalagmite, which is of a different colour and texture from that of Nahr-el-Kelb, and contains shells of a small *Helix*. Several specimens of the large edible *Helix* were found in the cave earth, and one shell of a small *Turbo*. No implements other than knives and scrapers were found, except a pointed instrument about four inches in length, and an inch thick at the butt, which had been roughly fashioned out of limestone.

According to Lartet (*Comptes Rendus*, 1864), Dr. Hedenborg was the first to direct attention to the Ant Elias caves, but he does not seem to have examined their contents. M. Botta was the first to notice the rock shelters near the Nahr-el-Kelb River, which Lartet himself afterwards explored, and which are obviously more modern in their contents than the breccias of the Nahr-el-Kelb Pass.

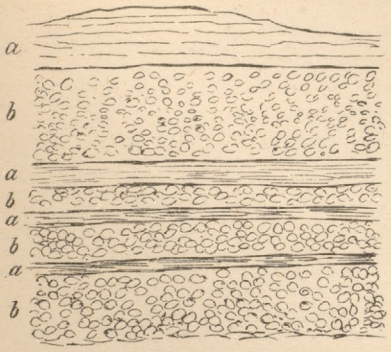


Fig. 1.—SECTION OF INDURATED GRAVEL AND SAND AT JEBEL ASSART—THEBES.

(a) Indurated Sand. (b) Gravel.

Fig. 3.—ENTRANCE OF CAVERN AT ANT ELIAS.

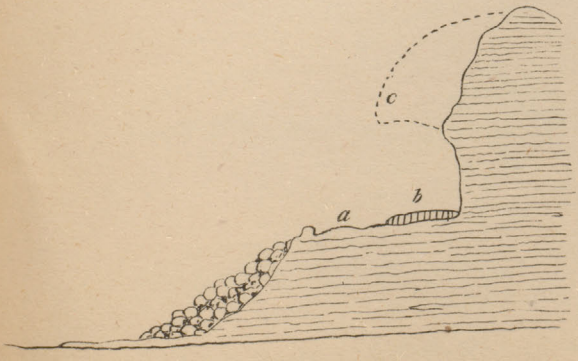
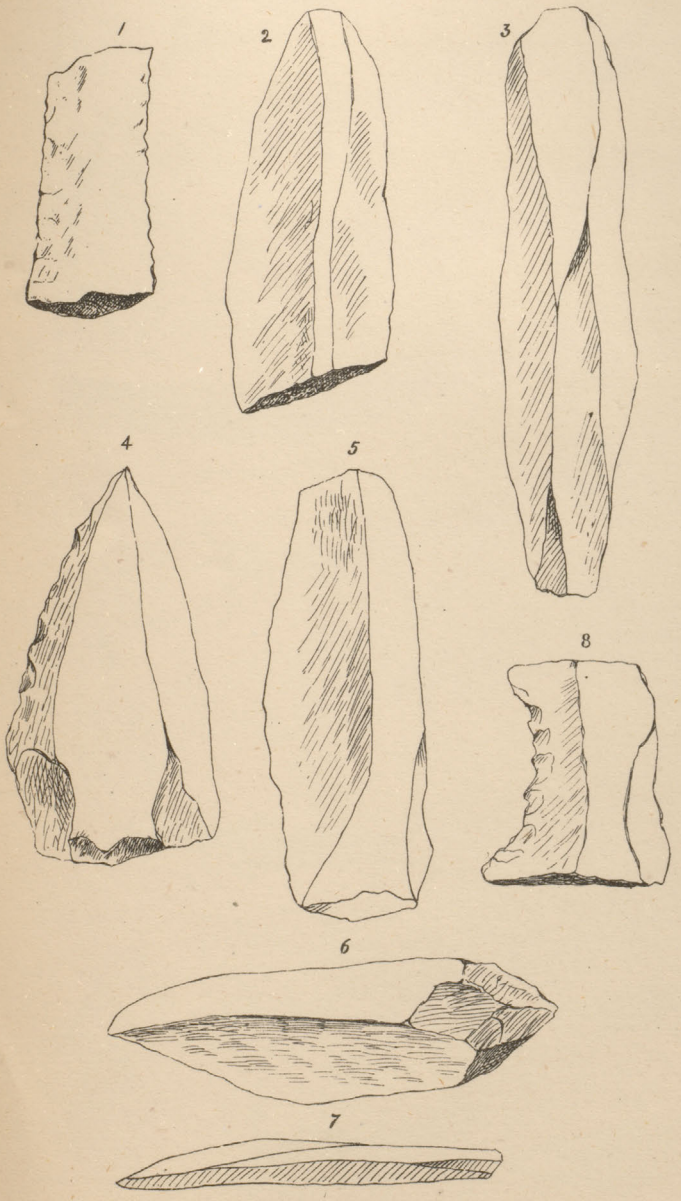
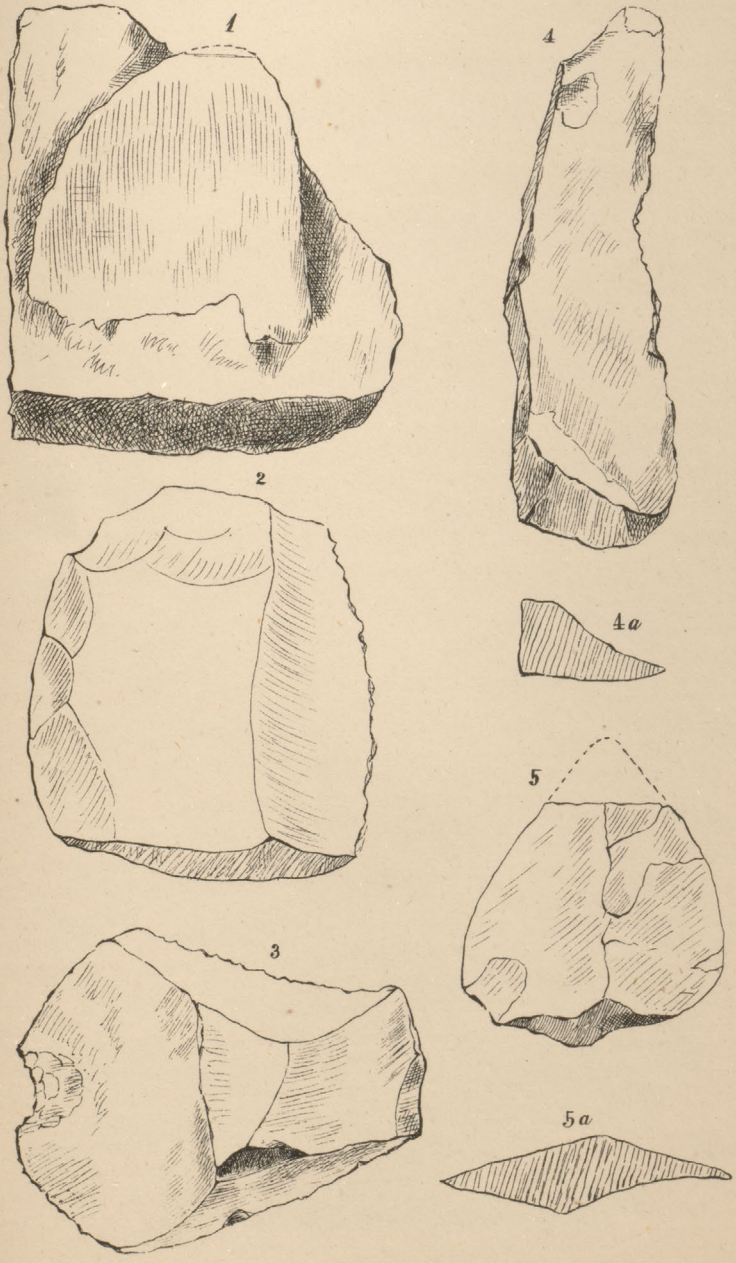


Fig. 2.—REMAINS OF CAVERN ON PASS OF NAHR-EL-KELB.

(a) Road. (b) Breccia. (c) Roof now removed.
(d) Talus of large stones and breccia. (e) Sea.



1, Fragment of Spear, Ras, Beyrout. 2, Knife, Do. 3, Knife, Ant Elias.
4, 5, Knives, Nahr-el-Kelb. 6, 7, Knife and Spicule, Helouan.
8. Modern Strike-light, worn on one side.



FLINTS FROM THE BRECCIA OF THE PASS OF NAHR-EL-KELB.

1, 2, 3, 4, 4*a*, Knives, or Scrapers. 5, 5*a*, Spear? or arrow?

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