

very considerable, and it is impossible not to admire the earnestness and devotion of the great scholars of Europe in their several departments of science. It is to be regretted that so many are men of a single subject, shutting their eyes absolutely upon all that lies beyond their particular study. Perhaps this is necessary to secure accuracy, and actual advance in knowledge. The days of omniscient *savants* is passed. The division of scholars into National parties is the safeguard of Truth. When French and German scholars agree in a discovery, it may be accepted as a fact.

DISCUSSION.

Mr. Cust remarked, with regard to the suggestion that the French language should be exclusively used in International Congresses, that the objection was, that it placed the representatives of other nations at a disadvantage, when brought into collision in argument with French, Swiss, or Belgians. It was as much as most men could do, and more than many men could do, to be courteous, and yet incisive in their own language, and no one liked to make such blunders as expose him to ridicule; and yet nothing but constant practice could prevent such happening. The only fair way was to let every one speak his own language, and have a good interpreter, where required.

Mr. J. PARK HARRISON, M.A., read a paper "On some Characters Tattooed on a Motu Woman." The publication of this paper is postponed for the present, Mr. Harrison awaiting further information.

STONES and BONES from EGYPT and MIDIAN.

By Captain R. F. BURTON, H.M. Consul at Trieste.

SIR JOHN LUBBOCK ("Notes on the Discovery of Stone Implements in Egypt:" "Journ. Anthropol. Inst." Vol. IV, December, 1873) tells us that M. Arcelin, in February, 1869, communicated a note to the periodical, *Matériaux pour l'Histoire de l'Homme*, announcing that he and the Vicomte de Murard had found in sundry parts of the Nile Valley rude stone implements resembling those of Western Europe. The only opinion expressed concerning their age was that they are not ancient. In a subsequent Report to the Minister of Public Instruction (June 26, 1869), also published by the *Matériaux*, the same writer concludes that Egypt generally possessed *une industrie*

fort ancienne, probablement préhistorique; and in particular that the station Abú Mangar, a little below Syene, had yielded specimens bearing the well-known characteristics of the neolithic or polished Stone-age. He replied to all objectors in *L'Age de Pierre et la classification préhistorique d'après les Sources Égyptiennes*, 1872; and in the *Correspondant*, 1873, his paper, "La Question Préhistorique," summed up the subject. MM. Hamy and Lenormant communicated also in 1869 to the Société d'Anthropologie of Paris ("Bull." p. 685 of 1869; and p. 15, Vol. V, 1870), the discovery of rude silexes, *hatchettes*, *couteaux*, *grattoirs*, *perçoirs*, *nucleus* (cores), *percuteurs* (hammers), &c., on the hills overlooking the "Tombs of the Kings" (Thebes), and subsequently a hatchet of the St. Acheul type at Dayr el-Bahari. In his conviction that these specimens belonged to the true Stone-age, M. Hamy was supported by MM. Broca and de Mortillet. Dr. Gaillardot, of Cairo, also asserted that worked flints with bones and charcoal have been picked up by M. Prisse d'Avesne in the raised terraces of clay about "Manga" (Abú Mangar?) at Assouan (Syene), and in the crevices of Jebel Silsilah.* This savant sees no reason why man should not have been coëval with the powerful quaternary vegetation bordering on the Great River. M. Pruner Bey, though leaning to the same conclusion, required more evidence (*loc. cit.*, pp. 708-19).

On the other hand, Dr. R. Lepsius, *Ueber die Annahme einer sogenannten prähistorischen Steinalten in Ägypten*, boldly expresses the opinion that these flint flakes are natural fragments splintered by the action of the sun and by excessive alternations of temperature. He asks† why, if they be the produce of industry, hundreds and thousands of perfect and serviceable instruments should have been left neglected on the ground, as if unworthy to be picked up? He also wants to know "why better worked specimens have not been met with?" and here we may object to him the finds of "Helwán." He doubts whether the so-called "scrapers" could ever have been used for scraping. He maintains (*loc. cit.*, p. 113) that the secondary fractures, or chippings, on many of the supposed implements are fresher, of a different colour, and therefore more recent than the main cleavage. Moreover, as Rosellini, the companion of Champollion, mentions that flint flakes had on several occasions been met with in conjunction with mummies; and as he himself had found six flakes in the tomb of Snetemhet, a functionary of the fifth Dynasty; and as, lastly, stone knives were used for

* "Bull. de l'Inst. Égyptien," No. 18, p. 58.

† "Zeitschrift f. Ägypt. Sprache und Alterthumskunde," 1870. See also "Berliner Ges." und Ungeschichte," Mar. 1873.

ceremonial purposes, for instance, in the circumcision borrowed from the Egyptians by the Jews,* even during historical periods, the German savant concludes that, granting these implements to be of human origin, they would afford no evidence of an Egyptian Stone-age. To all these objections Sir John Lubbock (*loc. cit.*) replies categorically :† 1. What are found in such suspicious abundance are *waste flakes*, with here and there an unfinished implement, or part of an implement. Báb el-Mulúk (Thebes), and Abydos, exactly resemble in this respect Pressigny, Grimes Graves, and other Stone-age settlements or camps. And, if it be objected that a similar doubt applies to these, he adds that the same is true, *mutatis mutandis*, of manufactories where gun-flints are actually worked, as at Brandon or Meunes, and where modern savages (Australians and others) preserve the practice. 2. More finished specimens do occur; but, as might be expected where the palæolithic age prevails, they are rare. 3. As regards the scrapers, a similar implement is used for the same purpose by the modern Eskimos.‡ With respect to the colour of the fractures, Dr. Lipsius§ contented himself with only ten *Splittern*; and these specimens must have been exceptional. In the hundreds examined by the Englishman, and in the 35 implements exhibited to the Anthropological Institute, “the fractures are similarly coloured and obviously coëval.”

M. Chabas,|| who denies a Stone-age to Europe, expressed a decided opinion, part of a general theory, that many of the Egyptian implements are due to natural solar action; and that those of human workmanship, as the specimens figured by M. Arcelin, are of comparatively modern date. He believes that they belong to the times of the Pharaohs, and that they do not point to the existence of an Egyptian Stone-age. But M. Chabas, a distinguished Archæologist and Egyptologist, has made no special studies of flint implements. Thus he figures a steatite knife inscribed *Sam oer Kherp abon, Ptahmes* (the great Sam, the chief of artists, Ptahmes), and which consequently cannot be earlier than the Saite¶ Dynasty (Psametik, &c., B.C. 664–525). But Sir John Lubbock points out (*loc. cit.*): 1. That this specimen does not show the characteristic Stone-age form; that similar tools were used for incising the side of the

* Egypt also circumcised with the flint knife.

† See also Maury, “Bull. Soc. Anthropol.,” p. 711. Paris, 1865.

‡ “Prehistoric Times,” 3rd ed., p. 97. See also No. 2, Specimens, p. 6. “Notes Anthropol. Inst.”

§ *Loc. cit.*, p. 95.

|| “Études sur l’Antiquité historique,” Paris, 1872.

¶ In the original “*Scrite*.”

corpse before burial, and consequently that the date assigned may be true. 2. That the legend is no proof that where a bronze implement, like the celt in the Museum Kircherianum (Rome), was cast with an inscription, the latter must be contemporary, but that letters can be engraved at any period: for instance, there is a German stone axe with an inscription of the sixteenth century; but no one would consider this a proof that stone axes were used in Germany 300 years ago.

M. Chabas asks with surprise, what could have been the use of the small flakes formed in Egypt and elsewhere, except they were *des essais d'habiles ouvriers cherchant à vaincre des difficultés dans leur art?* This is the style of illustration which the logicians called *obscurum per obscurius*. Sir John Lubbock replies that these *éclats* served for various purposes—for preparing clothes, for arrow-piles, spear-points and javelin heads; also they were let into slits in the sides of flat wooden sword-blades.* And he justly remarks that no one who has specially studied stone implements can have the slightest difficulty in distinguishing between the natural and the artificial.

The highly distinguished M. Auguste Mariette Bey is exceedingly reserved upon the subject, and he is evidently right to speak only of that he has seen during his life-long experience in excavation. He evidently, however, leans to the theory that the flint implements belong to the historic age.†

He remarks (Notice, &c., 6th edit., pp. 81–2): “The question of a Stone-age in Egypt is not yet resolved. Our collection, though certainly showing signs of the human hand, gives us no right to conclude, as so many have done, that these remains belong to the remote period vaguely characterized as prehistoric. Before pronouncing upon this point, we must carefully investigate the peculiar circumstances under which the monument was found. If the flint be taken from virgin ground where time has imprisoned it, the problem may be considered solved. On the other hand, when the silex is superficial, the marks of art have evidently no significance: in the most flourishing epochs of Egyptian civilisation flints may have been used as lance-heads and arrow-piles, or even as knives to incise the dead for mummies (‘Herodotus’).‡

“Now the latter is the condition of all the objects in the glass-

* Nilsson “On the Stone Age,” Pl. VI, figs. 124–126. “Lubbock’s Prehistoric Times,” 3rd ed., p. 442, &c.

† “Bull. de l’Inst. Égyptien,” 1869–71: quoted in the “Matériaux pour l’Histoire de l’Homme,” 1874, p. 16.

‡ The same prejudice in favour of ancient and primitive custom; in fact, a survival, a “superstition” in the literal sense, perhaps induced the Israelites to retain the flint circumcision knife, till a late period of their national life.

case AY; * they were found on or near the surface, and consequently it would be rash to date them. Under the burning suns, and during the dew-drenched nights of Egypt, the *patina* is so easily formed that it is no proof of age; the flints may belong to the Pharaohnic eras, to the time of the Greeks, or even to the Arab epoch. We do not, therefore, exhibit them as prehistoric remains: we simply collect and prepare the elements for discussing a question which is still *sub judice*."

Sir John Lubbock, being "extremely anxious to visit the interesting spots, and by an inspection of the localities themselves, to form, if possible, an independent judgment," visited Egypt in the autumn of 1872. He found worked flints at various spots along the Nile, especially in the Valley of the "Tombs of the Kings" (Thebes) and at Abydos, and generally on the slopes of the hills, and on the lower plateaux above the level of the inundation, wherever flint was abundant and of good quality. He had no opportunity of verifying M. Arcelin's important observation at Abú Mangar: *le gisement se prolonge sous les sédiments modernes; and ne passe pas dans ces sédiments ou je n'ai trouvé aucune trace de pierre taillée*; but he could affirm that the layer of flint implements did not extend over, nor, as far as he could see, into, the alluvial soil.

In replying to the question whether these implements are prehistoric, belonging to a true Stone-age, or whether they are referable to more recent epochs, our author "sees no reason to believe that since the time of Menes, stone has been habitually used in Egypt for cutting purposes." In the ancient ruins, and the immense rubbish heaps, veritable hills which mark the sites of Egyptian cities and towns, he found broken pottery and bits of raw brick strewn about in wonderful profusion, while fragments of stone implements were entirely wanting. He justly considers this "a stronger argument than might at first sight appear, against the general use of stone implements in historical times." Similarly, Dr. Gaillardot (*loc. cit.*) asserts that nowhere in Egypt has been found the medley of worked stones and metals like that which occurs at Hissarlik. Dr. Schliemann ascertained in

* The collection in the Bulák Museum (*Salle de l'Est, Vitrine AY*), mostly palæolithic, is divided into the following five parts:—

1. Pierced agate, etc., rough spear-heads and flakes, from the plateau-summit of the Bibán el-Mulúk, the Valley of the Kings at Thebes.

2. M. de la Noue's finds (chiefly rough flakes and cores) at Jebel-Kalabiyah, near Esneh.

3. The collection of the same geologist from Girget or Girgeh (only cores).

4. The flints of Halwán, presented by Dr. Reil; and

5. Miscellaneous finds from the Necropolis, especially the tombs of the Greek epoch, consisting of four polished stones and six flakes, the central and winged and tang'd arrow-head. My *collaborateur*, Mr. Hayns, has not yet been able to find out what Cities of the Dead are here alluded to.

the Troad the existence of a transitional period amongst the Pelasgi, since 3,500 years ago, when the people used arms of stone and brick huts, whereas the chiefs possessed gold, silver, copper, and stone buildings. Our author observes that the use of stone knives for opening corpses to be embalmed* may, like the Jewish circumcision knife, be a survival, a "superstition;" and the very fact of the old Egyptians refusing to substitute for it a newer substance (bronze, &c.) appears to him "an indication that they had passed through an Age of Stone, and had even made considerable advances in civilisation before they were acquainted with the use of metal."

Of the 25 specimens described by Sir John Lubbock (Plates XIII—XVII), he remarks that the forms closely resemble those of Western Europe. The figures are all of natural size; consequently more useful for comparison. The finds come from two places, Thebes and Abydos; they consist of one nucleus (core), one awl, and four scrapers, mostly spoon-shaped: No. 8 (Plate XIV, fig. 2) has a single central spine, and shows marks of use on both sides as well as at the end. The rest are flakes, flat and ridged, leaf-shaped and circular; many have the bulb of percussion well-marked, and the edges and extremities either chipped or bearing marks of wear. No. 18 (Plate XVI, fig. 1) is a chocolate-coloured leaf-shaped implement, closely resembling some of the St. Acheul specimens, but of rather fine workmanship; the shape being given by a great number of facets. The two following are also of the same type. Finally we may accept Sir John Lubbock when he says, "After carefully considering the facts, and arguments brought forward by MM. Lepsius and Chabas, I am disposed to agree with MM. Arcelin and Hamy in considering that these flint implements really belong to the Stone-age, and are ante-Pharaohic."

But it is a "very pretty quarrel as it stands," and the knotty question is not so easily settled. In this case we have more to debate than the normal three stages: uncritical acceptance, hypercritical rejection, and discriminating belief. The thorough-going Egyptologist who holds, despite Herodotus, that "Art had no infancy in Egypt," has a personal aversion to a prehistoric Stone-age, which he denies *à priori*. He finds, it is true, that the stone-hatchet was adopted by the hieroglyphs and that it now represents (𓆎) "Nuter," a god. But he prefers to postulate a Kushite immigration, one of the wildest theories ever propounded by mortal man, in order to account for the

* The siliceous knives of the ancient Egyptians are well known. Wilkinson (II, 7) translates Ethiopic Stone (Obsidian?) by "flint;" and divides the implements into two forms, the broad-flat and the narrow-pointed.

Caucasian type and the Aryan "miscegenation" in the races and languages of Egypt. He begins by inventing a people settled somewhere near India. Having passed through the preliminary stages and reached the "apogee of its civilisation," this people emigrates bodily westward, leaving no trace of itself in the old home, no signs of its exodus, no notice in history. It reaches Egypt, falls to making pyramids and other masterpieces of the highest art which afterwards begin to decay and become Egyptian. Marvellous to relate, this is the belief of sound and ripe scholars; let me quote, for instance, Dr. Heinrich Brugsch-Bey.* These gentlemen ought to begin by telling us what was the indigenous name of the race which they call Kushite. We will then consider the reason why Asia has had its Stone-age, whilst Egypt its limitrophe has been privileged with a civilisation so different and so superior.

The "Solar theory," as I will term it, found many a doughty defender in Egypt. The expedition led by M. Gerhard Rohlfs to explore the Oases, and to traverse the wilderness between El-Siout and Kufra, which, by-the-by, was not reached, found the Libyan Desert, especially in the regions of the lower nummulites, covered with brown and black flint flakes. Their existence, by millions, is attributed to the violent heats of day and the cold of night in an atmosphere whose radiation must be excessive. None, however, had the characteristic forms of the worked silex; nor did the Desert furnish a single habitation of the Stone-age. Yet Dr. Zittel, the geologist of the expedition, found reason to believe that the wilderness was not unvisited by man at an early period. About 20 geographical miles west of the Dakhel Oasis, and in a country perfectly inaccessible to the people of the "Wadys," where the so-called Nubian grits (*grés de Nubie*) form the ground, and where, consequently, silex is rare, he picked up three flakes, long, thin, and three-ridged, "so common in the caverns of Périgord, in those of Germany, and in the prehistoric *ateliers* of Egypt." The extreme isolation of the site, and the rarity of the type, suggested certain doubts: these, however, were removed by the unanimous decision of MM. Fraas, Suess and Desor, and subsequently by the International Congress of Stockholm. Considering the enormous sheets of *travertino* (tuffs), near the Kharghah Oasis, as proving the existence of a flourishing vegetation during the diluvial period, Dr. Zittel is of opinion that the men of the Stone-age might in those days have crossed regions now inaccessible and uninhabited.

Dr. Schweinfurth and Güssfeldt are also inclined to believe that sudden and excessive changes of temperature may have

* See his "Ägypten," *passim*. See the excellent translation "A History of Egypt," by Messrs. Danby Seymour and Philip Smith. London: Murray, 1879.

produced what has been attributed to primitive handicraft. Early in 1876 the travellers visited the Jebel Galálah (Kalat Allah), "a region of mountains and depressions," which extends from the Suez Gulf, about the parallel of Ras Za'faránah, to the Nile, opposite the Beni Suwayf (Suéf) station.* Here are the convents of St. Anthony and St. Paul on the great African Wady Arabah (of the waggons), which bears those venerable buildings. The nummulitic plateaux, and especially the Wady Senúr, are strewn with immense quantities of silex, like those that metal whole tracts in the Lybian and Arabian deserts. The cores had been split to prisms by the abnormal variations of temperature; and, though none were worked, the cleavage was clean, as in our Museum specimens of Stone-age weapons.

In 1874 Dr. Gaillardot ("Bull." *loc. cit.*) who, however, accepts the Egyptologist view, ably resumes the precise actual state of the question as follows:—

1. *Ateliers* and prehistoric foci of silex manufacture have lately been found between Cairo and Assouan (Syene).† A bed, often several centimètres thick, and composed to a certain extent of flint flakes of all forms and sizes, has yielded worked implements, saws, knives, arrow-piles, lance-heads, wedges, hatchets, scrapers, and similar articles.

2. These *ateliers* represent, satisfactorily enough, the divers conditions which in Western Europe characterise those of the stone-cutting age. They occupy the plateaux crowning the hills that form the old geological river-bank, and they often cover considerable space. Till the present time they have been found only in the environs of great cities. No conclusion, however, must be drawn from this fact: they have not yet been sought elsewhere; no exploration of the Nile banks has been pushed by excavation beyond the great centres of ancient population; and we have still to investigate, not only the ancient alluvia, but the mountain chains that part the Nile Valley from the Red Sea and the Lybian Desert. The latter during the quaternary period were, in conditions of climate and vegetation, very different from the present.

3. The implements, as well as the *ateliers* of Egypt, are

* Lithographed sheets describing the trip were issued in Cairo, May 20th, 1876. Notices were also sent to "The Academy" (May 27th, p. 511; and June 3rd, p. 534). In July 7th, 1877, Dr. Paul Güssfeldt began a formal description of his excursion in the late Petermann's *Mittheilungen*. Dr. Gg. Schweinfurth also printed (without place or date) an interesting illustrated pamphlet *Die ältesten Klöster der Christenheit* (St. Antonius und St. Paulus). In "The Gold Mines of Midian" (Chapter iii) I have proposed this block of hills as a Sanitarium.

† The Hamámát collection in the Citadel of Cairo contains a fine axe, slightly injured, which was picked up in the Long Valley. See "The Land of Midian Revisited," for a notice of this mineralogical collection.

absolutely those of the European paleolithic age. There is complete identity in the number and variety of types; in the form, the workmanship and even in the minutest of details, such as the re-working (*la retouche*). We cannot believe all this to be the effect of mere chance.

4. To judge from the great mass of *débris* constituting the few *ateliers* of fabrication which have as yet been explored, and which will be discovered in far greater numbers, the amount of implements produced has been enormous. At the same time, outside of these centres a relatively insignificant number has occurred in the ruins, the tombs, and the earthworks disposed along the stream. It would, doubtless, have been far otherwise had the use of the worked stones been continued by the poorer classes, that is the mass of the population, during the thousands of years which have elapsed between the earliest historic ages of the Nile Valley, and an epoch not far removed from our own. Had such been the case, we should have found, as at Hisárlík, the mixture of the two epochs the Stone implement and the Metal instrument; moreover, the first would have lost their predominance, and become rarer as modern ages were approached.

5. Accepting the important and generally recognised fact that "there is no infancy of Art in Egypt"; that the most ancient monuments and manufactures are those which bear the impress of the highest civilisation; whereas, on the contrary, those which follow show signs of marked decadence; we must hold that the old Egyptians settled in the Nile Valley in remote times, but long after they had emerged from the pre-historic period; in fact, when they had risen to the zenith of their ethnic cultivation. Hence we believe that the flint implements were not brought by them.

6. The conclusions warranted by the facts here stated are as follows:—It is at present impossible to prove that a Stone-age existed in Egypt. But many considerations lead us to believe that the Valley of the Nile was occupied before the old Egyptian emigration by a savage tribe or tribes, living under conditions analogous with those whose history has been revealed to us by the caves of Western Europe.

It is hard to agree with the learned doctor upon the non-existence of a Stone-age in Egypt, when he subtilises the question by attributing the work to older Egyptians than the old Egyptians. And that a true Stone-age is known not only in the Nile Valley but in the adjacent provinces occupied by the old Egyptians is suggested by modern discovery in the "Desert of the Exodus,"* and in the Negeb (Negeb) or "South Country" of

* London: Bell and Daldy, 1871.

Abraham and the Hebrews. Messrs. E. H. Palmer and C. F. Tyrwhitt Drake have practically settled the question by large finds of stone implements in the "Wady Igné, properly Gena, or as it is sometimes called, Wady Maghárah," well known for its mines and tablets. "Flints are found in large numbers near the monuments of Sarábit el-Khádim, but do not exist at the other Egyptian mines of Sinai, where no hieroglyphic tablets have been placed" (p. 197). Mr. Bauerman, in a communication to the Manchester Literary and Philosophical Society, had already propounded a theory that the flints were probably employed in the sculpture of the hieroglyphic tables. Prof. Palmer believes that the large caverns or galleries, cut out with vast labour in the steep walls of sandstone, were made with "chisels of bronze, or other hard metal, and not the flint flakes, which are found in such quantities in the vicinity. The Egyptians, we know, were expert metallurgists, and flint implements could hardly have made such marks as those visible on the stone." Both the travellers opine (p. 191) that the *graffiti*, so well known as "the Sinaitic Inscriptions," Aramæan, Arab, Greek, and European, were dotted in with sharp stones, but they do not allude to any discovery of flints near or about this section of the Wady Mukattab. In other places (p. 203) the inscriptions are for the most part chiselled. At Wady Wa'ará (p. 254), in the outlying districts of Sinai, they opened a "Námús" of the stone-circle class, a ring of upright slabs about three feet high. A smaller ellipse in the centre, contained the cist and the coffin; the skeleton was found lying in a doubled-up position and "accompanied by a few shells and worked flints." Such Nawámis (sing. *Námús*), or "Mosquito houses," are so called by the Sinaitic Arabs, the tradition being that they were built by the Children of Israel as a shelter from the Mosquito-plague sent from Heaven to punish their rebellion. These remains, evidently prehistoric, are of two classes (ably described in pp. 139-141, and figured in p. 317): the circular or beehive hut for the living, and the stone circle for the dead. The travellers apparently hold the ruins to be the permanent camp of an ancient pastoral people. I would suggest that of old they belonged to the Hutaym or Hitaym, the "broken tribe," one of whose divisions is still called the *Nawámisah*. This would support the hypothesis of my friends that Sinai was formerly peopled by other than a pure Arab race, and that the present Bedawin came over with the (Mohammedan) Conquest.

In the Tih Desert, north of Sinai, they found the hard unyielding soil "covered in many places with a carpet of small flints, which are so worn and polished by the fine detritus of sand, a constant sand-blast, as to resemble pieces of black glass"