

Mechmiché and Meyrouba: two palaeolithic stations in Lebanon

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(with plates II—III and VIII figures)

Introduction

This paper deals with two Palaeolithic open-air stations in Lebanon. Both are located in the region of Beirut, on the spurs of the Lebanon Range. The sites were discovered in the 1930's. It was thought advisable to publish the material from these stations because of the paucity of closely described Palaeolithic remains from the region. Also the proximity of Ksâr 'Akil, awaiting publication, and the relative nearness of Jabrud, gave an added incentive to this paper.

The assemblages are described morphologically in histograms of tool types. These tool types are based on obvious functional differentiations from type to type. All typological refinements which seemed arbitrary and subject to varied interpretation have been excluded. Wherever such refinements appeared meaningful, they are discussed in the section dealing with the super-types of the histograms. Each section

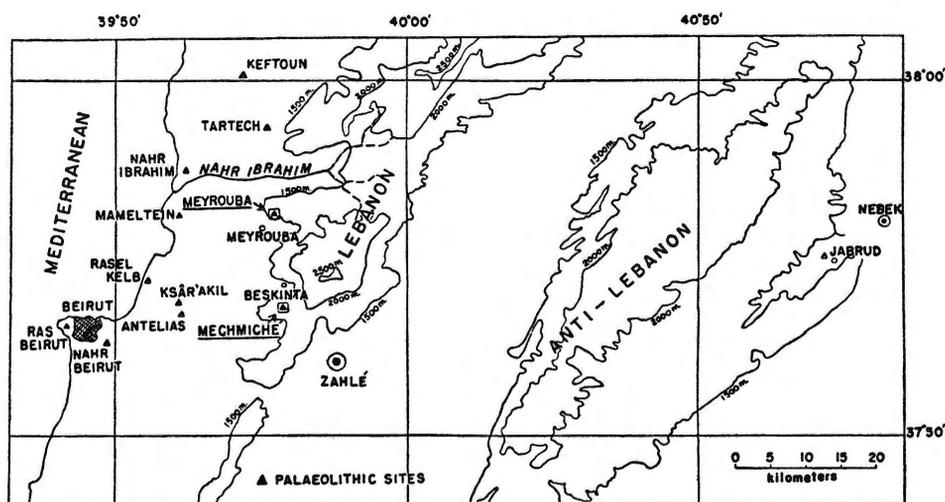


Fig. I. Map of Palaeolithic sites near Beirut.

contains a technological breakdown of the tools comprising it. A table grouping the tools according to length or maximum diameter, as the case may be, based on intervals of two centimeters, is presented in Figure VII. Following a description of the archaeological material, an attempt will be made to place these sites in their wider setting.

M e c h m i c h é

The site of Mechmiché was discovered in 1937 by Fathers J. Doherty, S. J., J. Murphy, S. J., and G. Mahan, S. J., following a lead given them by the Fattal brothers, two local Egyptian Copts. The site is located on a limestone plateau, about five kilometers south of the small town of Beskinta. This town in turn is situated about 30 kilometers northwest of the town of Zahlé. The site lies in the district of Mechmiché, less than one kilometer due east of a double spring, which is shown on the map (sheet Zahlé, Levant 1:50,000, File N1-36-XII-4d) three-quarters of a kilometer south-south-east of the intersection of 35 47' long., and 33 55' lat. The elevation of the mountain spurs which form the plateau is somewhat above 1500 meters. To the south and south-east, these spurs rest against the Djebel ech Choukat, with a maximum elevation of 1999 meters. In the background to the east is the main range of the Lebanon Mountains; and to the north the view opens on a valley at the head of which the town of Beskinta is located. To the west the terrain falls away toward the Mediterranean. There are no roads leading to the site; only footpaths of a temporary nature.

The Palaeolithic encampment covers an area of about 250 by 75 meters. The ground is thickly strewn with artifacts and débitage. The vegetation around the site is poor, and typical of a karst landscape.

The authors were fortunate enough to obtain from Father Doherty information regarding the manner in which the tools were collected. The small amount of débitage noted on the histogram is due to selective collecting; on the other hand, the ratio between racloirs and retouched points does correspond with the actual distribution at the site. Mechmiché seems to represent a single occupation. At least Father Doherty found no evidence of extraneous materials. The entire collection of 270 artifacts has been examined.

The following is a descriptive and graphic breakdown of the material from Mechmiché:

Retouched Points, 63 (Fig. II, 1—6): This category includes true Levalloiso-Mousterian points; the type of retouched point which F. Bordes calls "pointe levalloisienne retouchée" (1950, p. 20), and one specimen with fine but untidy retouch. Three of the specimens are badly broken. Broad triangular points predominate; narrow triangular and leaf-shaped forms are rarer. Clearly intentional ventral retouch was noted on three specimens only. The points are on the whole quite thin and carefully worked. In the case of three pieces the striking platform has been deliberately removed by thinning on the ventral side (Fig. II, 2).

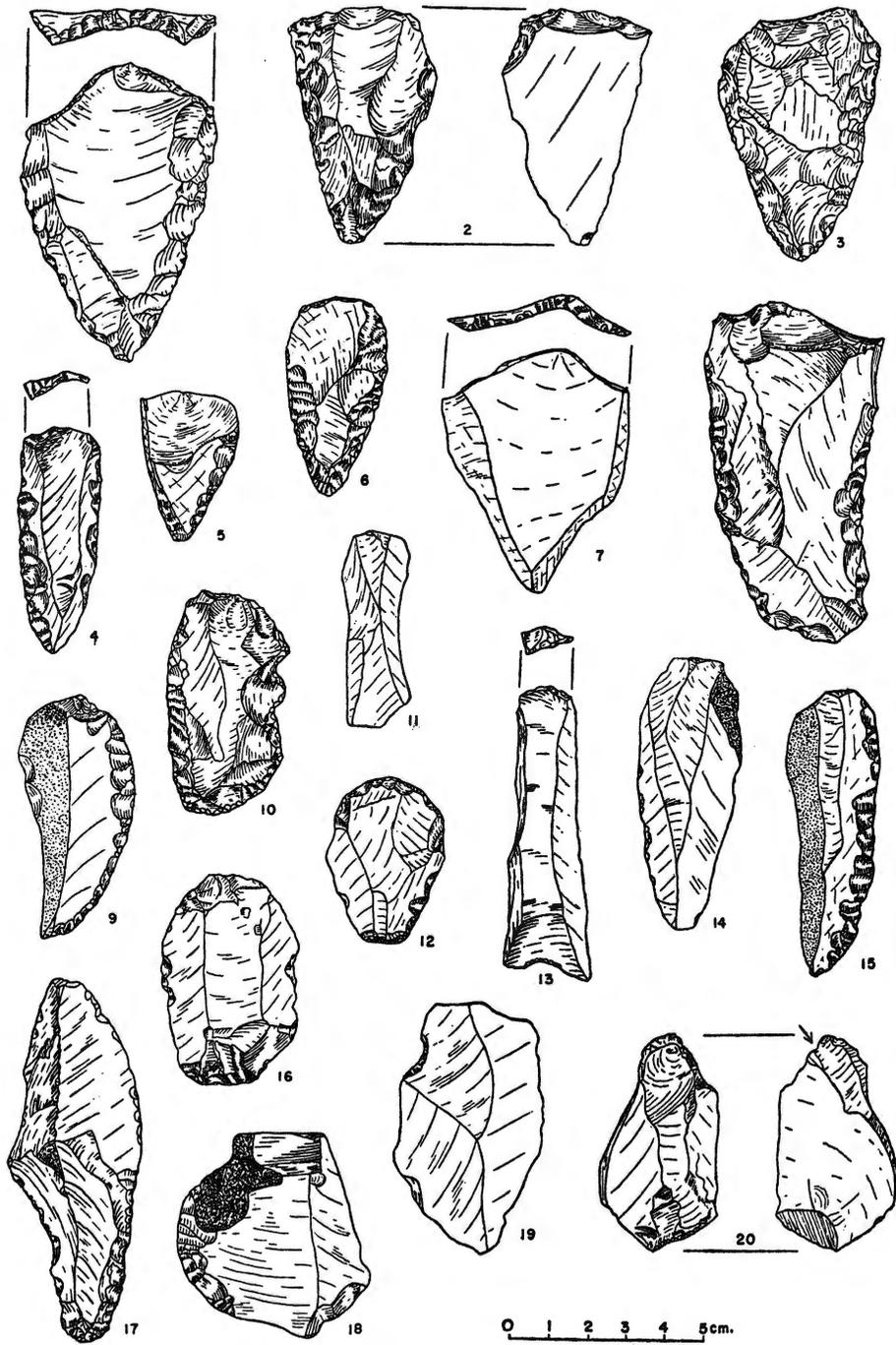


Fig. II. Artifacts from Mechmiché.

Plain striking platform:	7
Prepared striking platform:	48 (22) ¹
Striking platform removed:	3
Unrecognizable platform:	5
Size Range:	8—10 cms. 7
	6— 8 cms. 18
	4— 6 cms. 33
	2— 4 cms. 5

Unretouched Triangular Points, 54 (Fig. II, 7): Garrod (1937, p. 125) calls these forms triangular flakes. Listed here are only those specimens which are clearly triangular in shape, and which in appearance are therefore unretouched versions of those listed in the previous category. They are all rather uniform in outline and do not fall into broad triangular, narrow triangular, and leaf-shaped forms. All ambiguous pieces are classified under unretouched flakes. All specimens are thin.

Plain striking platform:	3
Prepared striking platform:	47 (34)
Unrecognizable platform:	4
Size Range:	6—8 cms. 11
	4—6 cms. 32
	2—4 cms. 11

Unretouched Flakes, 20: This category comprises all unretouched flakes other than triangular flakes, including débitage. They vary greatly in size, are amorphous in shape, and occasionally show signs of use.

Plain striking platform:	6
Prepared striking platform:	12 (2)
Unrecognizable platform:	2
Size Range:	10—12 cms. 1
	6— 8 cms. 1
	4— 6 cms. 11
	2— 4 cms. 7

Retouched Flakes, 4: Garrod does not list such a category. Included here are all amorphous flakes with intentional retouch.

Plain striking platform:	1
Prepared striking platform:	3 (1)
Size Range:	6—8 cms. 1
	4—6 cms. 2
	2—4 cms. 1

Notched Flakes, 2 (Fig. II, 19): These are intentionally notched flakes without other retouch. The notches are large and not of the kind that were used at Meyrouba to produce denticulate forms.

Prepared striking platform:	2
Size Range:	8—10 cms. 1
	6— 8 cms. 1

¹ The number in brackets refers to the incidence of chapeaux-de-gendarme prepared striking platforms.

Racloirs, 12 (Fig. II, 8—10; Fig. III, 21): These tools include all forms that are known in the Near East as racloirs. They are rather ill-defined and amorphous in shape. Really good Mousterian forms are rare. Mechmiché yielded only end-bulb forms. It is not always easy to separate racloirs from retouched flakes; only unambiguous pieces have been included here. In the case of one specimen the striking platform has been removed by ventral thinning (Fig. III, 21).

Plain striking platform:	2
Prepared striking platform:	7
Striking platform removed:	1
Unrecognizable platform:	2
Size Range:	8—10 cms. 3
	6— 8 cms. 4
	4— 6 cms. 5

Flake Scrapers, 6 (Fig. II, 12, 16, 18): This category of tools is made on flakes and they are, in Garrod's phrase, "rather indeterminate" (1952, p. 124). However, all specimens have one thing in common: the preparation of the functional end, even though it may not always oppose the striking platform, is in the tradition of Upper Palaeolithic end-scrapers on blades.

Plain striking platform:	3
Prepared striking platform:	2 (2)
Unrecognizable platform:	1
Size Range:	4—6 cms. 4
	2—4 cms. 2

Unretouched Blades, 67 (Fig. II, 11, 13, 14): Included in this series are all forms, irrespective of method of production, which are roughly parallel-sided and which exhibit the 2:1 length/width ratio that has been used to define blades. Some specimens show signs of utilization.

Plain striking platform:	17
Prepared striking platform:	38 (9)
Unrecognizable platform:	12
Size Range:	8—10 cms. 3
	6— 8 cms. 19
	4— 6 cms. 40
	2— 4 cms. 5

Retouched Blades, 5: These are blades exhibiting deliberate retouch other than denticulations or notches. It may be mentioned in passing that Garrod does not subdivide her material from Mount Carmel into plain and retouched blades. One piece is extremely well retouched.

Plain striking platform:	2
Prepared striking platform:	3 (2)
Size Range:	8—10 cms. 2
	6— 8 cms. 1
	4— 6 cms. 2

End-Scrapers on Blades, 5 (Fig. II, 17): All the tools included here are true end-scrapers on blades in the Upper Paleolithic sense, although they may be made on flake-blades. They are poorly executed. In the case of two pieces, lateral retouch has been noted.

Plain striking platform:	2
Prepared striking platform:	1
Unrecognizable platform:	2
Size Range:	8—10 cms. 1
	6— 8 cms. 2
	4— 6 cms. 2

Burins, 3 (Fig. II, 20): Mechmiché yielded only three burins. Two of these are made on flakes, and one on a blade with plain striking platform. They are all simple, oblique burins on the angles of flakes or blades.

Plain striking platform:	2
Unrecognizable platform:	1
Size Range:	8—10 cms. 1
	6— 8 cms. 2

Steep Scrapers, 1 (Fig. III, 26): This tool is made on a pyramidal blade core, and has clearly been used. It may be intrusive in this assemblage.

Size Range (height):	2—4 cms. 1
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Choppers, 1:

Size Range (maximum diameter):	4—6 cms. 1
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Cylindrical Blade Cores, 2 (Fig. III, 24): These are of Upper Palaeolithic type. They are remarkably small and well made. They may be intrusive in this assemblage. This question will be discussed below.

Size Range:	4—6 cms. 2
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Pyramidal Blade Cores, 1 (Fig. III, 25): This specimen may have been used as a steep scraper, though it exhibits no deliberate retouch.

Size Range:	4—6 cms. 1
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Flake-Blade Cores, 5 (Fig. III, 22): This series comprises a variety of ill-defined but prepared cores from which flake-blades have been removed.

Size Range (maximum diameter):	6—8 cms. 2
	4—6 cms. 3

Tortoise Cores, 8 (Fig. III, 23): Most of these have been worked down and hence are rather small. One specimen has been prepared for the removal of a flake but was left unstruck.

Size Range (maximum diameter):	6—8 cms. 1
	4—6 cms. 5
	2—4 cms. 2

Amorphous Flake Cores, 11: No blades were apparently detached from these cores. Some of the flake scars are triangular in shape.

Size Range (maximum diameter):	6—8 cms. 2
	4—6 cms. 8
	2—4 cms. 1

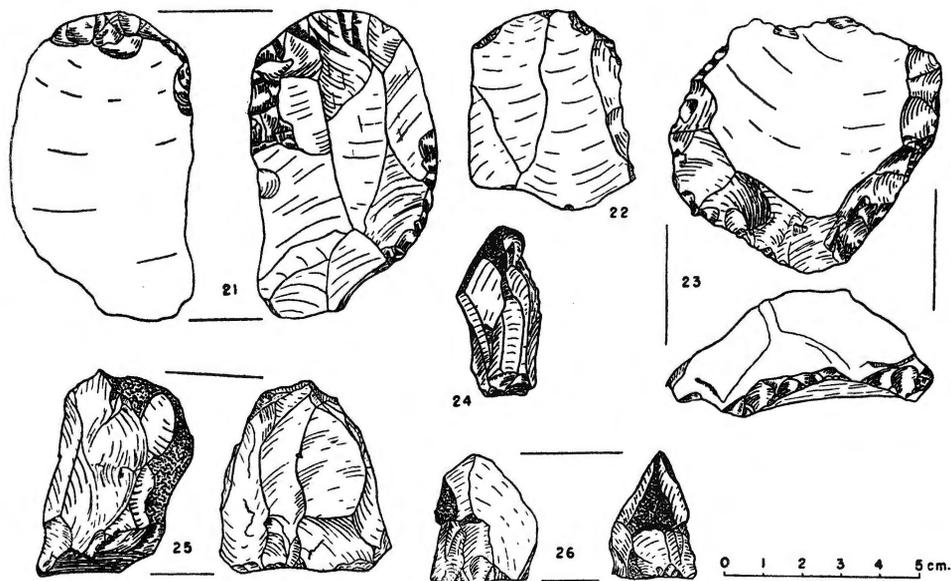


Fig. III. Artifacts from Mechmiché.

Only one plain flake shows signs of rolling, and one of the points has double patination. Three of the tools in the Mechmiché assemblage appear to be intrusive: the steep scraper, and the two cylindrical blade cores.

The position of the Mechmiché industry in its Near Eastern context remains to be established. The histogram shows retouched points of a rather well-made, thin and delicate type to be the dominant tools of the assemblage. Raclours on the other hand are remarkably rare. In terms of absolute quantity, unretouched blades and flake-blades predominate. Plain triangular flakes, the vast majority of Levallois type (F. Bordes, 1950, p. 20), are also extremely common. Plain flakes and débitage are poorly represented, but this is due to selectivity on the part of the collectors. Burins, flake-scrapers morphologically foreshadowing Upper Palaeolithic forms, end-scrapers on blades, steep scrapers, and true blade cores are all present, but in negligible quantities. There is some doubt as to whether the true blade cores belong in this assemblage. They are small, cylindrical in shape, and at first sight suggest highly evolved Upper Palaeolithic forms.

The upper chronological limit of the Mechmiché industry is indicated by the apparent absence of Emireh points² and the scarcity of true Upper Palaeolithic forms. Hence this assemblage can not be equated with Mugharet-el-Wad F and G (Garrod, 1952).

² The three retouched points and the single raclour with striking platforms deliberately removed by thinning of the ventral base are of interest. To assess this feature is difficult, because it has not been consciously recorded from other Near Eastern sites except in connection with Emireh points.

Abu Halka (Haller, 1946), Ksâr 'Akil, Complex 3 (Ewing, 1947), and other transitional industries. It may therefore be wise to consider the little blade cores (Fig. III, 24) as intrusive. Though Rust has found evidence at Jabrud of very early blade industries in which blade cores such as those from Mehmiché might not be out of place (Rust, 1950, especially cf. Tafel 50, 9 and 9b), evidence from surface stations has to be considered with great caution. Were there any good evidence that the Mehmiché industry represents a transitional industry of the kind identified by Garrod, these cores need not be considered intrusive; Garrod illustrates two pieces of this kind (1952, Plate II, 5, 6).

The general habitus of the Mehmiché industry is that of a Levalloiso-Mousterian. In the Near East this phase has been subdivided into an Upper and a Lower Levalloiso-Mousterian. These two sub-phases are differentiated on the basis of fauna and typology. The Upper Levalloiso-Mousterian, wherever it has been identified in stratified sites, is found in association with a fauna excluding Rhinoceros, Wart-hog, and Hippopotamus, all of which are common in the Lower Levalloiso-Mousterian. Typologically, the Upper Levalloiso-Mousterian is characterized by an increasing number of points as against racloirs. The reverse is true of the Lower Levalloiso-Mousterian. On the basis of Garrod's work at Mount Carmel, it would appear that in terms of over-all dimensions, the Lower Levalloiso-Mousterian tools tend to be larger in size than those of the Upper Levalloiso-Mousterian. The Mehmiché industry falls well below the average size of the Lower Levalloiso-Mousterian at the Mount Carmel caves. It is not easy, in the absence of faunal remains, to differentiate the two series on the basis of typology alone (Waechter, 1952, p. 12). In the following paragraphs, the Mehmiché material will briefly be compared with other Levalloiso-Mousterian assemblages.

At Tabun (Garrod, 1937), the Upper Levalloiso-Mousterian of Chimneys I and II, and Layer B, is typologically quite close to Mehmiché. Only the absolutely larger number of racloirs over points is disturbing. It must be kept in mind however that the changing ratio of points and racloirs between the two Levalloiso-Mousterian industries is a relative change. Thus it might be postulated that a very small proportion of racloirs, as against points in a given industry, is indicative of an Upper Levalloiso-Mousterian. The size range of the Upper Levalloiso-Mousterian at Tabun, with an average range of 4—6 centimeters, compares favorably with Mehmiché.

The Upper Levalloiso-Mousterian of Layer D at Shukbah (Garrod and Bate, 1942) presents a situation similar to that at Tabun. A disturbing factor is the presence of three handaxes here. The industry was placed in the Upper Levalloiso-Mousterian mainly on the basis of the fauna. The presence of handaxes may be of less significance than might at first appear. In Waechter's words: "As these handaxes are all types which occur in the Acheulian, it is difficult to decide whether the Levalloiso-Mousterian people made their own or collected those of their predecessors" (1950, p. 12).

The stratified site of Chekka, in Lebanon (Haller, 1940), has yielded what is stated to be an Upper Levalloiso-Mousterian. From the illustrations this assemblage appears to be rather similar to Mehmiché. Unfortunately, Haller gives neither the number

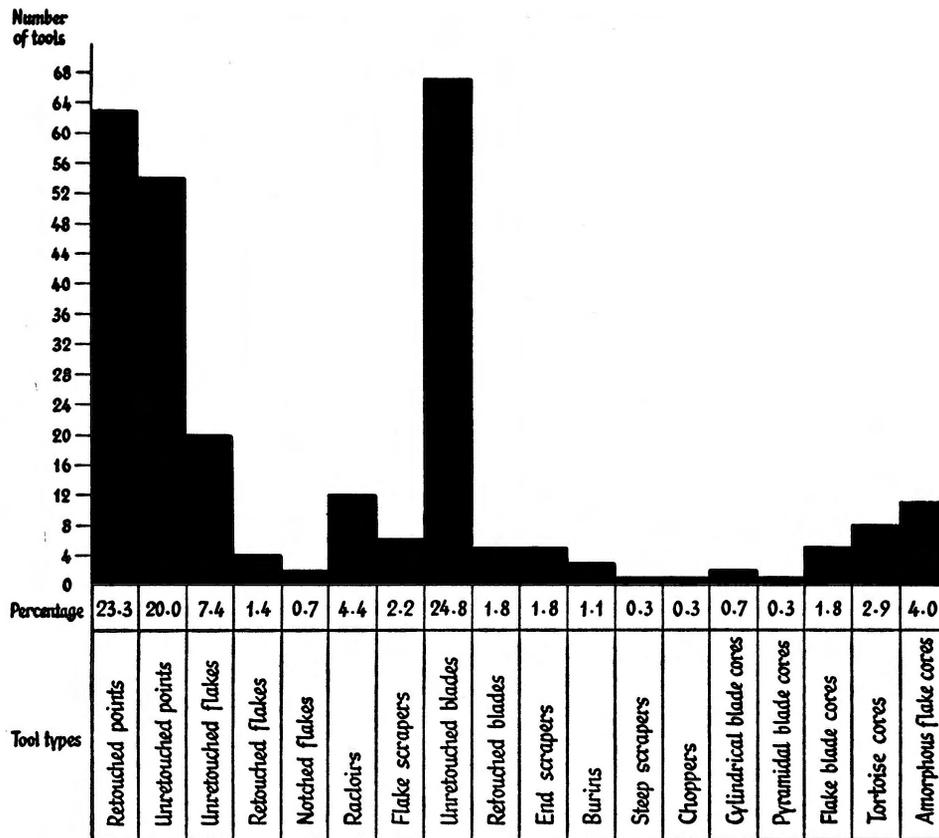


Fig. IV. Histogram of the Mechmiché Industry.

of tools in his assemblage nor a typological breakdown. Furthermore, the dimensions of the tools can not be ascertained, since the illustrations are not provided with a scale.

The three lowermost levels (8—10) of the Abri II at Jabrud (Rust, 1950), have yielded a 'Jungmoustérien', which in Waechter's opinion is a straightforward Upper Levallois-Mousterian (1950, p. 20). The identification here is typological since, curiously enough, the Jabrud caves have produced virtually no faunal remains. No handaxes were found. Retouched points absolutely outnumber racloirs. Burins, end-scrapers, and flake-scrapers occur in small quantities. The alleged Chatelperron points, in Rust's own words, are atypical. Most of the blades, which occur in moderate numbers, have prepared striking platforms. The saws (Säge) are evidently denticulate forms. These have not been noted at Mechmiché. The dimensions of this 'Jungmoustérien' are quite in keeping with those observed at Mechmiché.

Levels B and C at Abu Sif, in the Judean desert (Neuville, 1951), have yielded industries with many retouched points and few racloirs. Garrod (1937, p. 116) bases her

Lower Levalloiso-Mousterian dating of this site partly on the slender forms of the points, resembling the Lower Levalloiso-Mousterian of Tabun. Mainly however, her argument seems to be based on the presence of a series of handaxes at Abu Sif. Neuville, in his earlier publication (1934), published before the Mount Carmel work, did not clarify the association of these tools. In his recent publication (1951, pp. 49—50), Neuville remarks that that the handaxes were obtained from Layer E (? equals Umm-Qatafa D). Levels B and C, the Levalloiso-Mousterian levels, have yielded an industry "uniquement composée d'éclats" (Neuville, 1951, p. 51). The fauna of both these levels suggests that they date from after the faunal break. Thus these industries may well be Upper Levalloiso-Mousterian phases, even though Neuville places both levels between the Lower Levalloiso-Mousterian and the Upper Levalloiso-Mousterian of Tabun, in chronological terms. Typologically, they are supposed to be close to the Lower Levalloiso-Mousterian of Tabun. Though in terms of fauna and point: racloir ratio, Abu Sif may represent two Upper Levalloiso-Mousterian industries, the tools, which include asymmetrical points, do not seem to support this hypothesis. No quantitative data are given, but the tool dimensions seem to be within the range of Mechmiché. Thus the position of Abu Sif is not very clear, and only with caution should it be compared with Mechmiché.

Levels B and C at Sahba, in the Judean desert, are supposed to show an advance over the industries from Abu Sif; particularly Level B is said to be "intermédiaire entre les Levalloiso-Moustérien inférieurs et supérieurs d'Et-Tabun" (Neuville, 1951, p. 67). This does not seem very convincing. Judging by the illustrations, the assemblage from B appears considerably more advanced in type than an Upper Levalloiso-Mousterian. Level C, however, appears to be quite close to Mechmiché. Again, points are more abundant than racloirs; asymmetrical points are rare; and handaxes are absent. Types suggesting Upper Palaeolithic forms are uncommon. The fauna permits both levels to date from after the faunal break. Hence an Upper Levalloiso-Mousterian dating is possible. There are too few illustrations to permit judgment of tool dimensions. No quantitative data are given.

Level C of Et-Tabban, in the Judean desert, has yielded an industry which Neuville considers to date from after the faunal break (1951, p. 77). No quantitative data are given. However, retouched points and poorly made racloirs are stated to occur in roughly equal numbers. A few burins and coarse scrapers have also been noted. Handaxes are absent; blades and plain triangular points are numerous. No information is given on tool size, but the statement is made that on the whole the artifacts are rather large and thick. The dating of Et-Tabban is based on the position of Level C within the stratigraphy of the site, underlying as it does, the Upper Palaeolithic of Level B. In view of the size and the coarseness of the assemblage, and the absence of information on the fauna, the present authors hesitate to express an opinion on this industry, or to equate it with Mechmiché.

At the cave of Umm Naqus (Neuville, 1951), in the Judean desert, Level C yielded an industry which Garrod calls Upper Levalloiso-Mousterian (1937, p. 116). Hand-

axes are absent. As in the case of Et-Tabban, retouched points and poorly made racloirs occur in roughly even numbers. Blades and flakes are common, but Upper Palaeolithic forms are rare. No quantitative data are given, nor are there any details on the size of the tools. The illustrated tools resemble those of Mechmiché, but of course, this need not be conclusive. The fact that the racloirs are poor and atypical (in the European sense) lend support to such a comparison. At Et-Tabban this feature has also been noted, but there the general massiveness of the industry made an equation with Mechmiché difficult. Neuville (1951) gives no information on the fauna of this site.

At Qafzeh too, an Upper Levalloiso-Mousterian has come to light. The position of Turville-Petre's (1927) industry at Mugharet-et-Zuttiyeh is dubious for comparative purposes because of the presence of many handaxes, and because of the occurrence of Hippopotamus. Zumoffen's (1900, 1908) rock shelters of Nahr-el-Djuz, near Batroun, and the caves of Nahr Ibrahim, north of Beirut, are said to be Upper Levalloiso-Mousterian on typological grounds as well as on the basis of the fauna (Garrod, 1937, p. 116). The Upper Levalloiso-Mousterian of Ksâr 'Akil awaits publication.

On three counts it is difficult to place Mechmiché in the Lower Levalloiso-Mousterian. In the first place, as regards size, Mechmiché falls below the range of the Lower Levalloiso-Mousterian of the Mount Carmel caves. The Mechmiché industry does not appear to fit into what is presumed to be, at least in part, a Lower Levalloiso-Mousterian at Jabrud Abri I. The second criterion is the point: racloir ratio, which makes it difficult to put Mechmiché into the Lower Levalloiso-Mousterian. Finally, in the Lower Levalloiso-Mousterian of Tabun C, Garrod states that there are comparatively few retouched tools. This too is in contradiction to the evidence from Mechmiché. Moreover, at Skhul B, plain striking platforms outnumber prepared ones.

It would appear from the above remarks that the Levalloiso-Mousterian of the Near East may be more diversified than has been thought. There may be regional differences expressed in such industries as those from Abu Sif and Et-Tabban. The closest industry to Mechmiché from every point of view seems to be that of Jabrud Abri II, Levels 8—10.

In conclusion therefore, the Mechmiché industry may be assigned to the Upper Levalloiso-Mousterian. Of course, it should be kept in mind that the relative position of a surface station can never be absolutely certain.

Meyrouba³

The site of Meyrouba was discovered in 1938 by Fathers J. Doherty, S.J., and F. Ewing, S.J. It is located about two kilometers to the north of the small town of

³ Burkhalter (1946—1948, pp. 144—145) lists under number 22 a site at Meyrouba (Meyrouba) at an altitude of 1100 meters. He calls the assemblage Levalloisian. Burkhalter states that this site is in the town of Meyrouba proper, and Father Doherty has confirmed that it is not the site which is discussed in his paper.

Meyrouba, which in turn is situated at a distance of some 30 kilometers north-east of Beirut. It lies nearly 15 kilometers to the north of Mechmiché.

Meyrouba is also an open-air site, located on an uneven spur just above a spring⁴. The elevation is somewhat above 1500 meters. The plateau faces the Nahr Bouraka to the south, on the right bank of which the town of Meyrouba is located. To the north and north-east, the terrain rises towards a maximum elevation of 2000 meters. Beyond these peaks the elevation falls off into the Nahr Ibrahim. The background to the east is formed by the main axis of the Lebanon Mountains. To the west the terrain drops toward the Mediterranean.

The area is characterized by sandy soil, and pine trees are the common form of vegetation. The artifacts were recovered from the sandy surface of an undulating plateau. The encampment of Meyrouba is somewhat smaller than that of Mechmiché. It is interesting to note that in 1900 Zumoffen made some collections in a nearby Neolithic cave, without reporting the existence of the Palaeolithic station. Father Doherty confirmed the impression given by the histogram that points are rare at Meyrouba, while ra cloirs are common. As at Mechmiché, Father Doherty did not find evidence for a mixture of industries at this site, which is thickly strewn with artifacts. The present authors have based their study on the collection of Father Doherty, comprising a total of 307 flints. In the following analysis, the same criteria have been used as were applied to the Mechmiché assemblage.

Retouched Points, 24 (Fig. V, 1—3): Few of these are fully retouched on both margins. They are on the whole carelessly made and untidy in appearance. Two points are asymmetrically curved. The typical retouch associated with Mousterian points is much less common than at Mechmiché. Narrow triangular forms and leaf-shaped forms have not been noted. Five specimens have ventral retouch and two of these are notched.

Plain striking platform:	4
Prepared striking platform:	18 (7)
Unrecognizable platform:	2

Size Range:	8—10 cms.	1
	6— 8 cms.	3
	4— 6 cms.	19
	2— 4 cms.	1

Unretouched triangular Points, 7: Some of these show signs of utilization.

Plain striking platforms:	2
Prepared striking platforms:	4 (2)
Unrecognizable platform:	1

Size Range:	4—6 cms.	6
	2—4 cms.	1

⁴ Sheet Kartaba, Levant 1:50,000, File N1-36-XVIII-26.

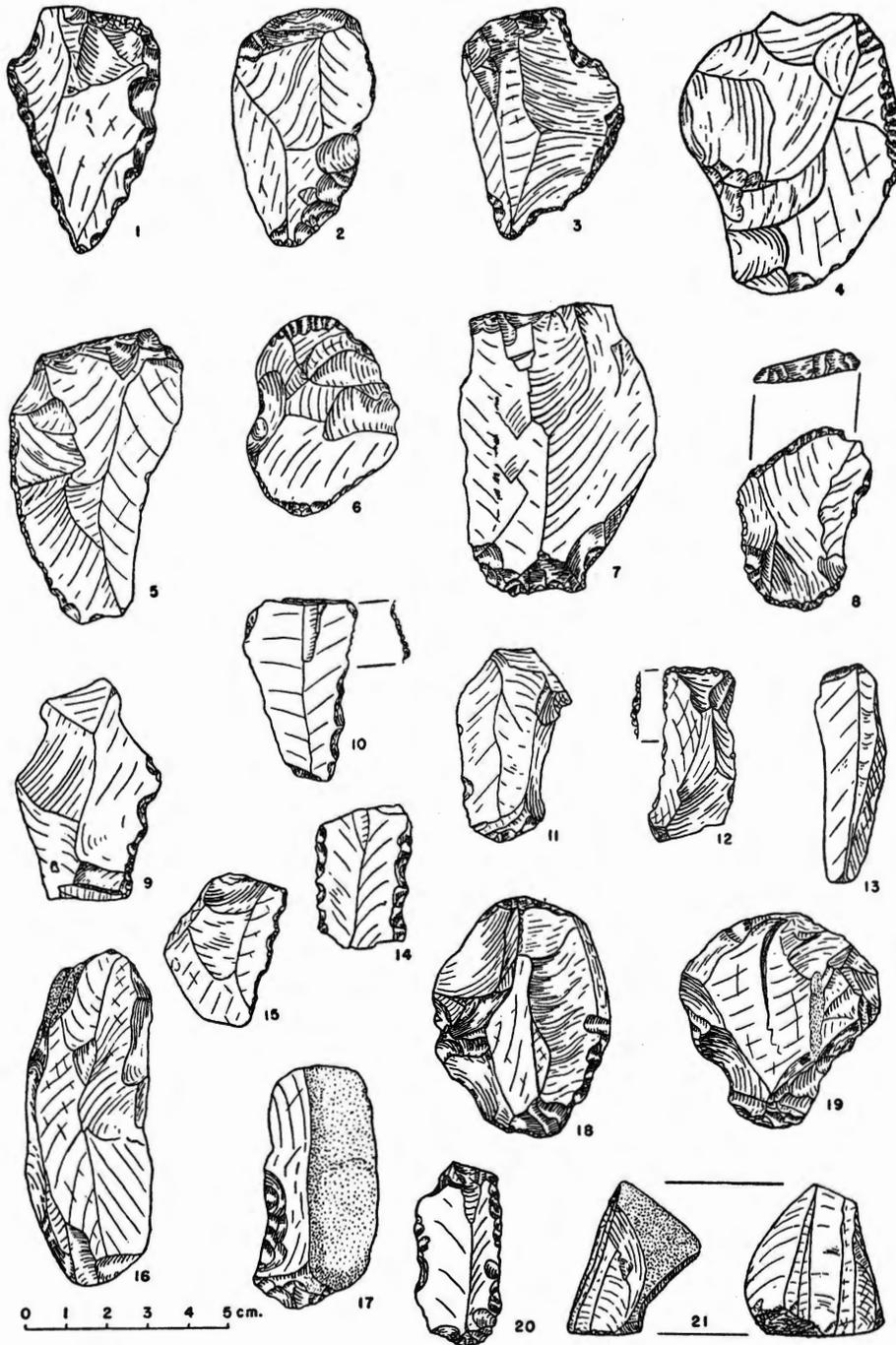


Fig. V. Artifacts from Meyrouba.

Unretouched Flakes, 58: Some pieces show signs of utilization.

Plain striking platform:	10
Prepared striking platform:	38 (9)
Striking platform removed:	4
Unrecognizable platform:	6
Size Range:	10—12 cms. 2
	8—10 cms. 2
	6— 8 cms. 15
	4— 6 cms. 38
	2— 4 cms. 1

Retouched Flakes, 12: This series includes all retouched flakes other than racloirs, notched flakes, and denticulate flakes. It includes six specimens with ventrally retouched margins; one of these is also notched.

Plain striking platform:	2
Prepared striking platform:	8
Striking platform removed:	1
Unrecognizable platform:	1
Size Range:	6—8 cms. 2
	4—6 cms. 9
	2—4 cms. 1

Notched Flakes, 6 (Fig. VI, 32): This series includes flakes with one or more large notches only. Other forms of notching are listed with denticulate and retouched forms. In three cases the notch has been worked out ventrally.

Plain striking platform:	1
Prepared striking platform:	3 (1)
Unrecognizable platform:	2
Size Range:	6—8 cms. 1
	4—6 cms. 5

Denticulate Flakes, 11 (Fig. V, 9, 10, 15): This series includes flakes on which denticulation was intentionally produced by means of small consecutive notches. This is important since the majority of the retouched flakes and blades appears somewhat serrated due to untidy retouch. Three specimens have ventral marginal retouch.

Plain striking platform:	1
Prepared striking platform:	8 (1)
Unrecognizable platform:	2
Size Range:	6—8 cms. 2
	4—6 cms. 7
	2—4 cms. 2

Racloirs, 54 (Fig. V, 4, 5): True Mousterian forms are rare in this series. Most of the specimens are rather carelessly worked, though finer pieces are not wanting. In ten cases ventral retouch was noted; among these, five artifacts are also notched. Two specimens have dorsal notches. Concave, convex, straight, double-sided and merging forms are all present. Only four side-bulb forms have been recorded.

Plain striking platform:	22
Prepared striking platform:	24 (4)
Striking platform removed:	7
Unrecognizable platform:	1

Size Range:	10—12 cms.	1
	6— 8 cms.	24
	4— 6 cms.	28
	2— 4 cms.	1

Flake Scrapers, 10 (Fig. V, 6—8): This series includes a variety of scraper forms on flakes, clearly foreshadowing Upper Palaeolithic types. Five of these are ventrally retouched; one of the latter has a large notch.

Plain striking platform:	1
Prepared striking platform:	6 (1)
Unrecognizable platform:	3

Size Range:	6—8 cms.	3
	4—6 cms.	7

Nose Scrapers, 6 (Fig. V, 19): This series consists of a number of flakes, the ends of which were fashioned into nose scrapers of roughly Upper Palaeolithic type. Four of these also have lateral retouch.

Plain striking platform:	2
Prepared striking platform:	3
Unrecognizable platform:	1

Size Range:	6—8 cms.	1
	4—6 cms.	5

Unretouched Blades, 23 (Fig. V, 13, 16): Most of these blades are rather rough and thick. Many of them show signs of use.

Plain striking platform:	7
Prepared striking platform:	10 (1)
Unrecognizable platform:	6

Size Range:	10—12 cms.	1
	8—10 cms.	3
	6— 8 cms.	10
	4— 6 cms.	9

Retouched Blades, 10 (Fig. V, 14): This series consists of blades with fine but untidy retouch. No heavy retouch has been recorded. The edges generally look serrated, but this does not seem to be intentional. Three specimens are ventrally retouched.

Plain striking platform:	4
Prepared striking platform:	2
Unrecognizable platform:	4

Size Range:	6—8 cms.	3
	4—6 cms.	7

Denticulate Blades, 7 (Fig. VI, 30, 31): What has been said regarding denticulate flakes applies here as well. Two specimens have ventral retouch.

Plain striking platform:	2
Prepared striking platform:	3
Unrecognizable platform:	2

Size Range:	6—8 cms.	2
	4—6 cms.	5

End-Scrapers on Blades, 8 (Fig. V, 11, 12, 17, 20): These tools are rather small. The blades on which they are made are untidy and irregular in appearance. Four specimens are laterally retouched; among these three are also ventrally worked. The lateral retouch is careless and gives the edges a serrated appearance. Three of the tools have straight-ended scraping edges.

Plain striking platform:	3
Unrecognizable platform:	5

Size Range	4—6 cms.	7
	2—4 cms.	1

Burins, 9 (Fig. VI, 26—28): Five of these are made on massive flakes, one is set on a blade, and three on cores or core fragments. In the case of the flakes, the burin facets are set against the stone without particular regard to the orientation of the flake. The burins on flakes include one double-ended burin. All of them are simple burins on the angle of flakes and blades. They break down as follows:

Plain striking platform:	3
Unrecognizable platform:	3

Among the core burins there is one which has been made on a small tortoise core.

Size Range (all burins):	6—8 cms.	4
	4—6 cms.	5

Steep Scrapers and Heavy Core Scrapers, 11 (Fig. V, 18; Fig. VI, 22, 23): Most of the tools in this series are massive and thick. Two specimens are rather fine and seem to be intrusive in this assemblage (Fig. VI, 23).

Size Range:	6—8 cms.	1
	4—6 cms.	10

Choppers, 2: These tools are rather small.

Size Range:	4—6 cms.	1
	2—4 cms.	1

Cylindrical Blade Cores, 2 (Fig. VI, 29): Both specimens have been used as racloirs subsequent to having served as cores. Though both are of roughly Upper Palaeolithic type, neither their size nor the nature of their secondary retouch makes it imperative to consider them intrusive in this assemblage.

Size Range: 6—8 cms. 1
4—6 cms. 1

Pyramidal Blade Cores, 3 (Fig. V, 21): All three specimens included here have been used as steep scrapers. One of them might be intrusive in this assemblage on typological grounds (Fig. V, 21).

Size Range: 4—6 cms. 2
2—4 cms. 1

Flake-Blade Cores, 2: Both specimens clearly produced blades with prepared striking platforms.

Size Range: 6—8 cms. 1
4—6 cms. 1

Tortoise Cores, 19 (Fig. VI, 25): These are typical Levallois tortoise cores. Most of them are quite small. Two specimens had been prepared for further flaking but were left unstruck.

Size Range: 6—8 cms. 5
4—6 cms. 14

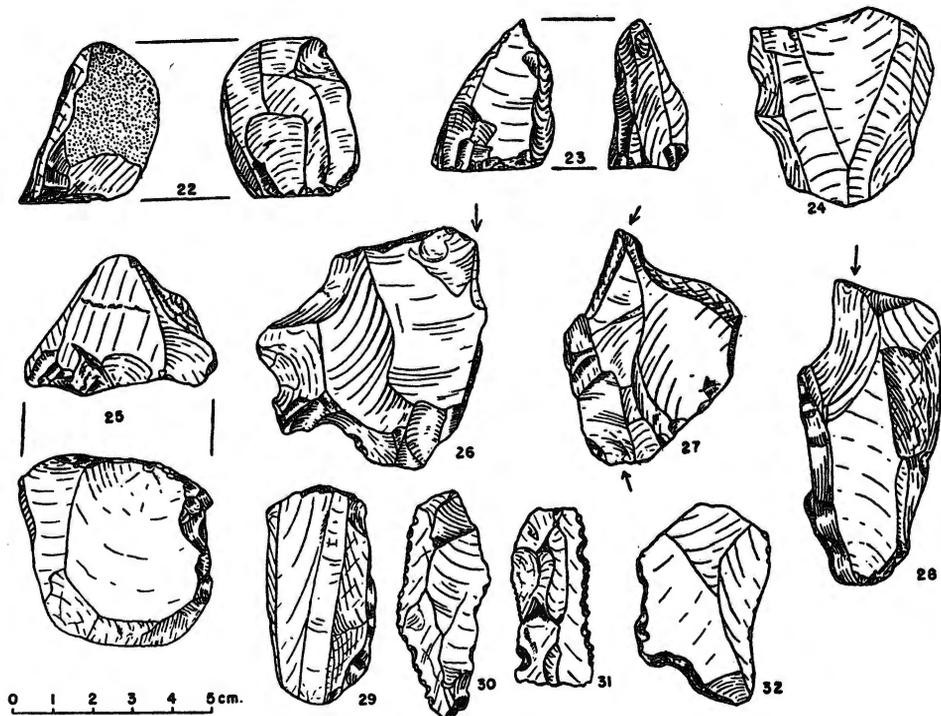


Fig. VI. Artifacts from Meyrouba.

Discoidal Cores, 6 (Pl. III, 3): This series consists of cores with alternate flake scars. They are roughly discoidal and biconical in shape. There is no preparation at the margins; thus they apparently produced flakes with striking platforms.

Size Range: 6—8 cms. 3
4—6 cms. 3

Amorphous Flake Cores, 16 (Fig. VI, 24): This series includes various amorphous flake cores and indistinguishable core fragments. From some of them triangular flakes were removed.

Size Range: 8—10 cms. 1
6— 8 cms. 7
4— 6 cms. 8

Varia, 1: The tool listed here is a thin fragment of a flake set on edge and steeply but delicately retouched. It may be intrusive.

Size Range: 4—6 cms. 1

The tools of Meyrouba show various degrees of weathering. This feature, however, crosscuts typological lines indiscriminately. Thus it would not appear to indicate a mixture of industries. The location of the site in sandy detritus may be responsible for this differential weathering. However, an exception can be made in the case of the four tools that are likely to be intrusive. These are uniformly fresh and unweathered. Only two artifacts show signs of double patination.

Site	Total Number of Tools	2—4	4—6	6—8	8—10	10—12
Mechmiché	270	12.9 %	55.9 %	24.0 %	6.6 %	0.3 %
Meyrouba	307	3.2 %	64.4 %	28.6 %	2.2 %	1.3 %

Fig. VII. Percentage Breakdown of Tools from Mechmiché and Meyrouba in Intervals of two Centimeters.

It is difficult to evaluate the assemblage from Meyrouba in terms of its Near Eastern context. The composition of the assemblage, as outlined above, certainly does not suggest an Upper Levallois-Mousterian. On the other hand, it seems difficult to align it with the Lower Levallois-Mousterian, even though the point:racloir ratio may at first sight suggest this. Typologically, neither the points nor the raclairs are particularly suggestive of a Mousterian industry.

The Upper Palaeolithic elements however, such as end-scrapers on blades, burins, etc., even after the exclusion of presumably intrusive types, are sufficiently strong to give this assemblage a distinctive cast. Retouched forms are less common than plain ones, even though the collectors proceeded selectively at this site. Raclairs are the most common tool type, but on the whole they are very ill-defined. Blades are

not numerous and rather crude, though a few fine ones have been noted. Ventral retouch is common and denticulate forms are well represented. No handaxes were found. Forms with plain striking platforms are more common than at Mechmiché (20 % against 16 %). This seems to be reflected in the series of true discoidal cores. As regards size, the Meyrouba industry has a somewhat higher proportion of large tools than does Mechmiché, although the difference is not great. However, the Meyrouba industry is generally more massive and crude. The butts are heavy and the retouch careless. Fine but untidy retouch is common.

The Meyrouba industry has certain affinities with the Tayacian of Tabun G. However Garrod's description (1937) is not detailed enough to permit close comparison. She does not mention denticulate forms, but as Rust has pointed out in another connection, they may be included in her categories of utilized flakes and variously retouched flakes and fragments (Rust, 1950, p. 147). Prepared striking platforms occur; racloirs are common; but only one point was found.

Meyrouba resembles the Tabun E Layers, were it not for the presence of handaxes at the latter site. Nibbled blades are found (Garrod, 1937, p. 83), which presumably are what the present authors call denticulate blades. Blade cores are described as small and neat, double-ended, and with prepared striking platforms. Except for the discoidal cores, all other forms found at Meyrouba seem to occur at Tabun E. Judging from the illustrations, the racloirs are very well made; it has been shown that this is not the case at Meyrouba.

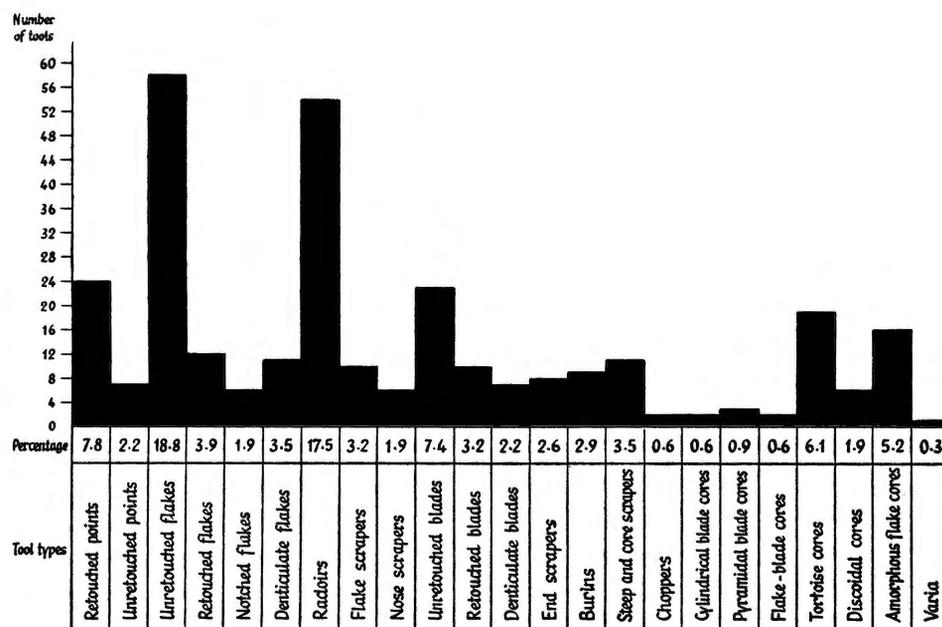


Fig. VIII. Histogram of the Meyrouba Industry.

Waechter (1952, pp. 18—19) has suggested that Rust's Pre-Aurignacian⁵, Layers 15 and 13, at Jabrud Abri I amounts to an industry similar to those at Tabun E and Umm Qatafa D1 minus the handaxes, which play such an important role in the latter assemblages. Be that as it may, the Meyrouba material certainly does resemble Rust's Pre-Aurignacian, even though at Meyrouba prepared striking platforms are much more common than at Jabrud. The same applies to Rust's 'Mousterio-Prä-Aurignacien' of Layer 9, and to his 'Prä-Mikro-Moustérien'. This is not the place to discuss Rust's unusual nomenclature. We are merely interested here in the content of these industries. Though Rust does not list racloirs for his Pre-Aurignacian levels, Waechter (1952, p. 20) has rightly pointed out that he must have found them since he illustrates them (Rust, 1950, Plate 36). Retouched points do not seem to be present. The remainder of the industry is quite similar to that of Meyrouba. All the forms noted at Meyrouba can be duplicated in Rust's Pre-Aurignacian, with the exception of the discoidal cores. It is of interest however, that Rust records discoidal cores from the other levels of the Abri I at Jabrud. In the 'Mousterio-Prä-Aurignacien', points of Mousterian type occur, but they are rare. Discoidal cores are absent. No racloirs are recorded, but again, they are illustrated (Rust, 1950, Plate 49). All other forms noted at Meyrouba occur here as well. In the 'Prä-Mikro-Moustérien', rather untidy points and racloirs are recorded and illustrated. Among the cores, discoidal forms are present.

It should be noted in connection with the evidence from Jabrud that the assemblages of Layers 9 and 7 at Abri I and to a certain degree also those of Layers 15 and 13 contain not only those forms which the present authors consider to constitute the homogeneous industry from Meyrouba, but they also have yielded those purely Upper Palaeolithic forms among the scrapers and cores, which at Meyrouba have been set aside as representing possible intrusions. It must be emphasized that Meyrouba is a surface site, and given our present incomplete knowledge of Palaeolithic developments in the Near East, all ambiguous forms can only be bracketed for the time being. At a later stage, when, it is hoped, more material from other sites will be published, it may be possible to decide whether or not these dubious forms are in fact intrusive.

Very hesitantly, the present authors come to the conclusion that the nearest parallels to Meyrouba are the four levels of Jabrud Abri I discussed above, with a closer asso-

⁵ The authors find it somewhat difficult to understand Bordes' statement that Rust's Pre-Aurignacian is a clearly Upper Palaeolithic assemblage „sans doute possible“ (Bordes, 1955, p. 490). According to Rust's own typological breakdown, the industry of Layer 15 contains: 53.3 % flake tools, 6 % burins, 1.7 % end-scrapers on blades, 1.2 % steep scrapers, 22.8 % plain and retouched blades. Bordes' graph however, appears to exclude cores, debitage, and plain or retouched flakes (Bordes, 1955, p. 500). There is certainly a strong Upper Palaeolithic element in this industry, but in fact it is stratigraphically contained in a Lower and Middle Palaeolithic context; hence to call it Upper Palaeolithic in the European sense would seem to be a little unjustified. Such an industry may perhaps best be understood in its local setting, rather than by comparing it typologically or graphically with the European sequence.

ciation at Levels 9 and 7 than at Levels 15 and 13. To narrow the comparison down to any one of these levels is difficult, because the series from Meyrouba is not sufficiently large.

Conclusions

The site of Mechmiché would appear to be a straightforward Upper Levalloiso-Mousterian encampment. In the absence of faunal remains, the determination is based on typology alone. Its nearest parallel appears to be the three lowest levels of the Abri II at Jabrud.

The site of Meyrouba presents certain difficulties which have been outlined above. Even after discounting the possibly intrusive elements, the industry from this site still remains something of a puzzle. It does not appear to be a Lower Levalloiso-Mousterian. Its closest parallels are to be found at Abri I of Jabrud (Layers 15, 13, 9, and 7). Since Waechter (1952, pp. 18—19) suggests a relationship between the Pre-Aurignacian of Jabrud, and Tabun E and Umm Qatafa D1, Meyrouba should by implication be related to these assemblages as well. However, the absence of handaxes at Jabrud makes it difficult to find much meaning in this comparison. Therefore, the present authors refrain from making a comparison between Meyrouba on the one hand, and Tabun E and Umm Qatafa D1 on the other. The vague similarities between Meyrouba and Tabun G may very well be fortuitous, because of the poverty of the latter assemblage. Thus there remains only the equation with Jabrud. In terms of relative chronology this contributes as yet little, since Jabrud has thus far successfully defied integration into the Palaeolithic sequence of the Near East.

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Zusammenfassung

Die paläolithischen Freilandstationen von Mechmiché und Meyrouba liegen im Libanon, in der Gegend von Beirut. Das der vorliegenden Arbeit zugrunde liegende Material wurde in den Jahren 1937—1938 von den amerikanischen Jesuitenpatern Doherty, Ewing, Murphy und Mahan aufgesammelt. Es befindet sich zur Zeit im Peabody Museum der Harvard-Universität. Zweck dieser Arbeit ist es, das Material so vollständig wie möglich vorzulegen und im Rahmen des nahöstlichen Paläolithikums zu analysieren. Zur besseren Veranschaulichung haben die Autoren Typologiehistogramme gezeichnet und versucht, das Material statistisch nach Größenkategorien in Gruppen von zwei Zentimetern aufzuteilen. Ebenfalls wurden sämtliche Artefakte, Kernsteine und Abschlüge nach Gesichtspunkten ihrer Herstellungsmethode gegliedert. Das Ergebnis dieser Untersuchung kann wie folgt zusammengefaßt werden:

Die Station Mezmiché lieferte ein oberes Levalloiso-Moustérien. Messungen ergaben, daß die Längenwerte dieser Industrie unterhalb der des unteren Levalloiso-Moustériens liegen. Schon D. Garrod (1937) hat darauf hingewiesen, aber systematisch wurde dieses Kriterium zur Analyse von Freilandstationen bisher offenbar noch nicht angewandt. Die Industrie von Mezmiché ist durch eine große Anzahl sorgfältig ausgearbeiteter Handspitzen charakterisiert. Schaber kommen nur in geringer Anzahl vor. Klingen, vornehmlich Abschlagklingen, sind reich vertreten. Ein geringer, aber durchaus bemerkbarer Prozentsatz der Geräte besteht aus Formen, die man als morphologisch-typologische Vorläufer jungpaläolithischer Formen bezeichnen kann. Im großen und ganzen läßt sich die Mezmiché-Industrie gut in das obere Levalloiso-Moustérien eingliedern. Der Zusammensetzung nach steht es den drei untersten Schichten des Schutzdaches II von Jabrud am nächsten.

Meyrouba ergab eine Industrie, die sich nicht leicht an das Levalloiso-Moustérien des Nahen Ostens angliedern läßt. Handspitzen sind nur in geringer Anzahl und schlecht gearbeitet vertreten. Schaber kommen häufig vor. Besonders interessant sind die relativ häufig, sowohl an Klingen als auch an Abschlägen, beobachteten Sägen, ferner Stichel, Klingenkratzer und Nasenkratzer. Die Industrie ist recht massiv gehalten, und die Retuschen sind zumeist weniger sorgfältig ausgeführt als in Mezmiché. Trotz des relativ hohen Prozentsatzes von facettierten Schlagflächen läßt sich die Meyrouba-Industrie, wenn auch mit Vorbehalten, mit Rusts Prä-Aurignacienschichten und besser noch mit den Schichten des Mousterio-Prä-Aurignaciens und des Prä-Mikro-Moustériens vergleichen. Damit soll jedoch nicht gesagt sein, daß die Verfasser mit Rusts Gliederung und Terminologie von Jabrud übereinstimmen. Es sei hier hinzugefügt, daß Rust Schaber für das Prae-Aurignacien nicht im Text anführt, solche Typen jedoch abbildet. Da die Schaber des Nahen Ostens oft sehr kümmerlich gearbeitet sind, ist es möglich, daß diese Form in Rusts Kategorie der Abschläge mit Retuschen zu suchen ist. Die Schlußfolgerungen, die sich aus dem Studium der hier bearbeiteten Stationen ziehen lassen, sind folgende:

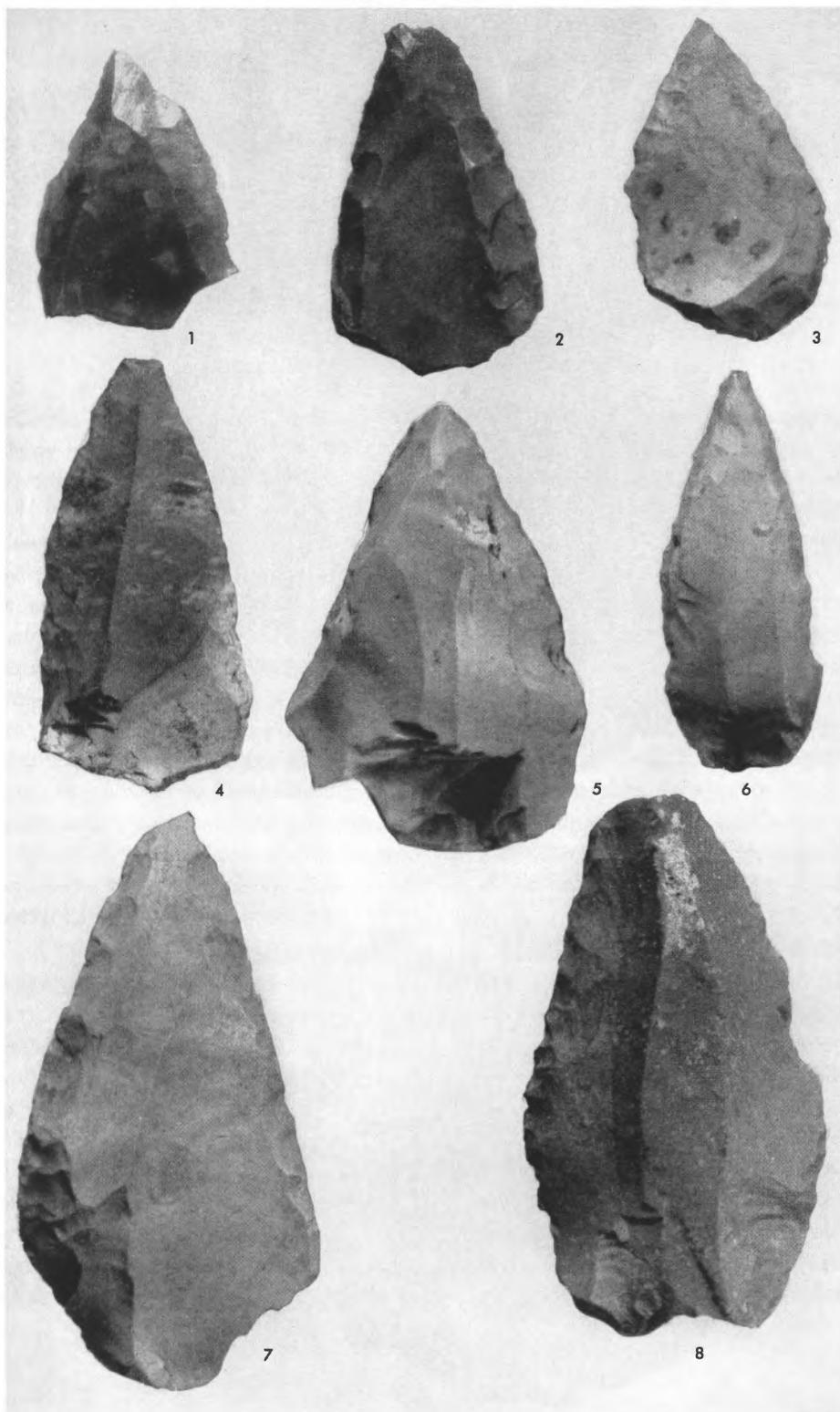
Es ist wichtig, die Frage der höchst interessanten Höhlen von Jabrud kritisch zu revidieren. Ebenfalls glauben die Verfasser, daß das Mittelpaläolithikum des Nahen Ostens bedeutend komplizierter ist, als man es bisher angenommen hat. Das trifft nicht nur auf das sogenannte Prä-Aurignacien von Rust zu, sondern auch auf das Levalloiso-Moustérien, das sich sicher in recht differenzierte lokale Gruppen unterteilen läßt, und dem bisher noch nicht übersehbare jungpaläolithische Züge eigen sind.

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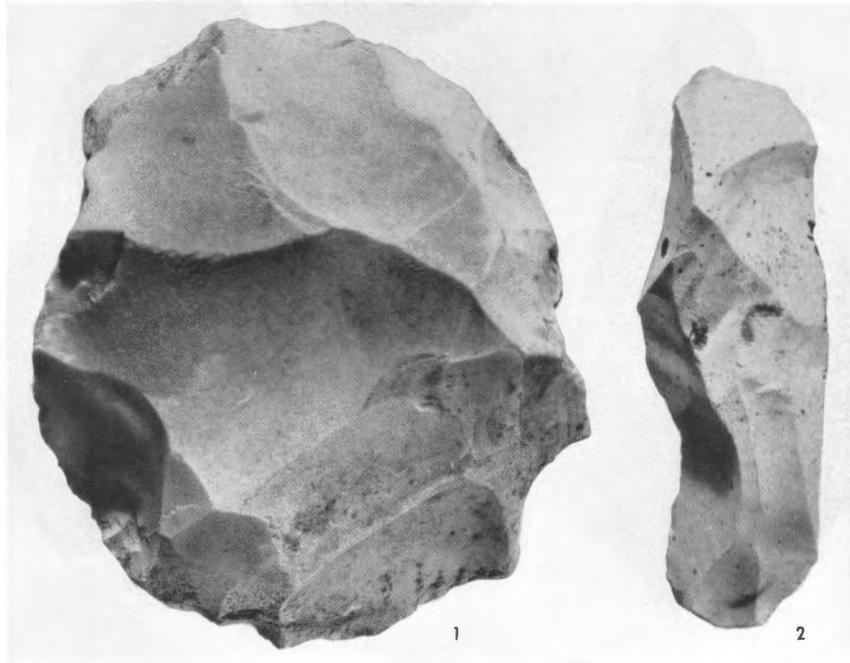
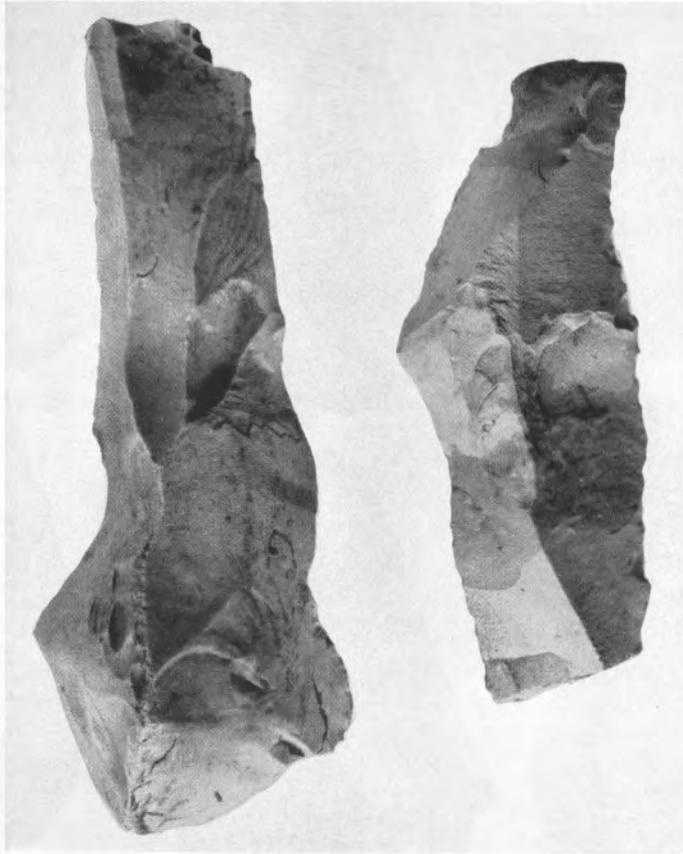
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Artifacts from Mechmiché. $\frac{1}{1}$



Artifacts from Meyrouba. $\frac{1}{1}$