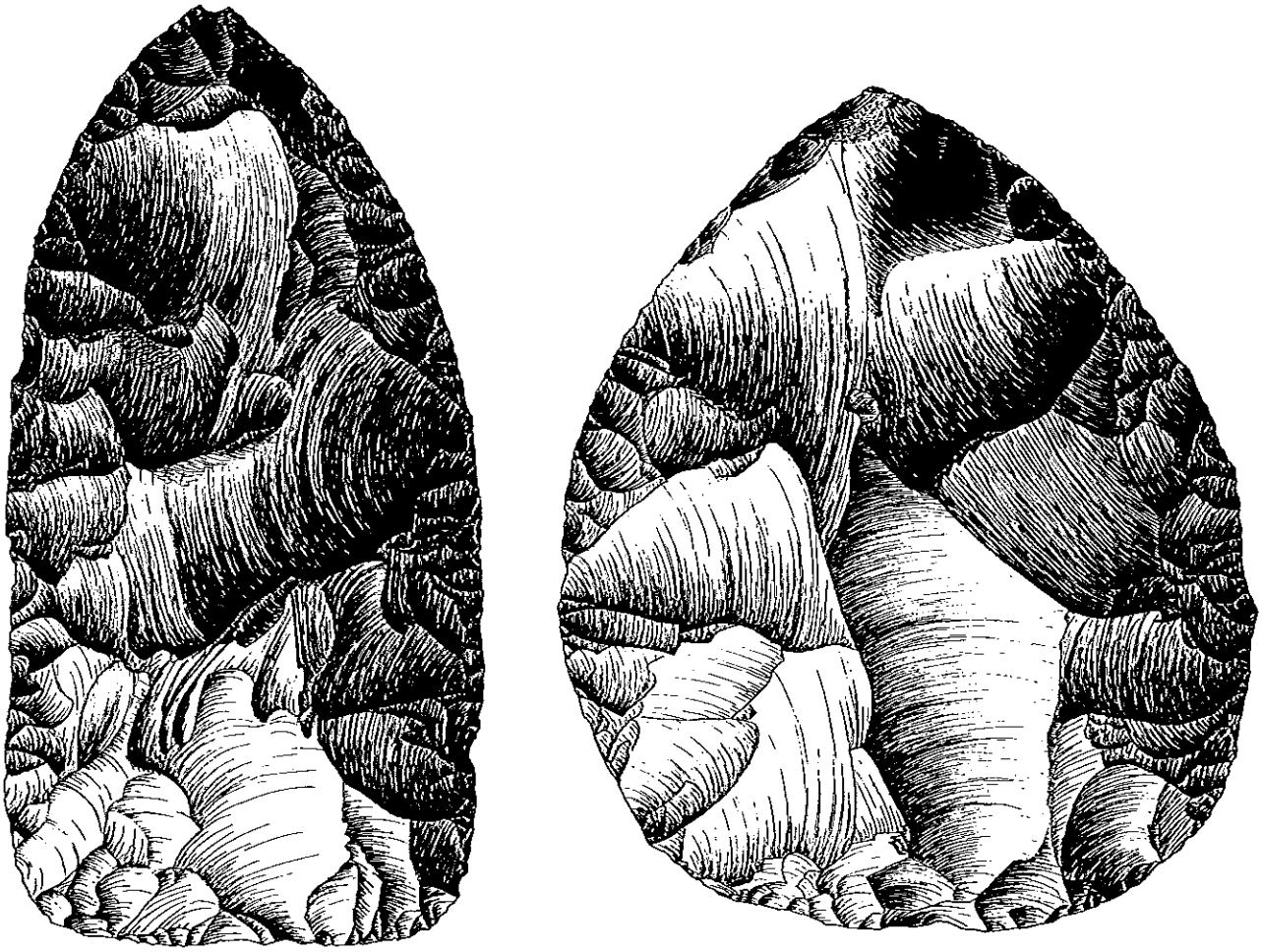
La Tierra



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Southern Texas
Archaeological
Association

The Southern Texas Archaeological Association

The Southern Texas Archaeological Association brings together persons interested in the prehistory of south-central and southern Texas. The organization has several major objectives: To further communication among avocational and professional archaeologists working in the region; To develop a coordinated program of site survey and site documentation; To preserve the archaeological record of the region through a concerted effort to reach all persons interested in the prehistory of the region; To initiate problem-oriented research activities which will help us to better understand the prehistoric inhabitants of this area; To conduct emergency surveys or salvage archaeology where it is necessary because of imminent site destruction; To publish a journal (*La Tierra*), newsletters, and special publications to meet the needs of the membership; and to assist those desiring to learn proper archaeological field and laboratory techniques for southern Texas.

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The editor of *La Tierra* is Thomas R. Hester. Original manuscripts should be sent to Hester either by mail (617 Broadway St., Marble Falls, TX 78654) or if possible, by email to *secocreek17@gmail.com*. Authors with questions about their manuscripts or illustrations should contact the editor. New authors are particularly urged to seek assistance in developing and submitting their papers. *La Tierra* welcomes papers on the archaeology of South Texas and surrounding areas, but we will also consider relevant manuscripts dealing with the archaeology of other parts of Texas.

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Front and back cover art by Richard McReynolds. Bifaces from the Medina Lake cache.

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Contents

Foreword

Thomas R. Hester

Archaeological discoveries sometimes take a long time getting into print, and such is the story of the Medina lake cache. Discovered by accident in 1981, the 59 bifaces constituting the cache, were subsequently purchased by a notable Austinite, loaned to the Texas Historical Commission, and then donated after the owner's death to that organization. Robert Mallouf, longtime State Archeologist, oversaw a detailed review of the cache, and a large number of line drawings were carefully executed by Deborah Roberts. Casts were made of the cache and a series of technical studies begun.

But, as things often go, there was a hiatus in the study of the cache for a few years, until David L. Calame, Sr., noted avocational archaeologist of Devine, Texas, was given permission, in 2002, to complete the study.. During the early part of his research, Richard L. McReynolds drew precise illustrations of several of the bifaces, a few reproduced in this monograph, and three of which grace the front and rear covers. David sought the advice of flintknappers and others listed at the end of the text, to help him better understand the technology of the cache.

By 2005, a manuscript with photographs and line drawings of each specimen in this remarkable cache, had been completed by Calame, with the aid, support and encouragement of his co-author, Bob Mallouf. I remember David handing me the 2.5 inch thick white 3-ring binder containing the manuscript draft. The thought of organizing the huge number of illustrations, along with editing (with the later aid of Tim Perttula) simply terrified me! Fortunately, *La Tierra* stayed fairly current for the next seven years or so, and I kept telling David that I would "work it in" – one of those things you say when you are trying to avoid facing a major task. David remained remarkably patient, and even put the cache on a Facebook Group page – surely to circulate the data, and certainly not to put pressure on me!

After the issue of Volume 39 in 2013, manuscripts slowly trickled in, and I told David that a "whole volume" would be devoted to the Medina lake materials. But a good bit of 2014, and all of 2015, was lost, from an editorial perspective, as a result of our move from Seco Creek, where we had lived for 15 years, to Marble Falls.

But, I finally ran out of excuses and have worked to get Volume 40, with the Medina lake cache into print (and, how hard I have labored, David!). Those authors who have had their papers languish for the last two or three years, have been patient and kind (traits they doubtless learned from David's travails). Those papers will soon also be published.

The scholar of lithic biface caches in Texas will find much to use for interpretative and comparative purposes. As Calame and Mallouf note in the text, there have been some important research that has dealt with the reasons for the existence of caches, their role in trade, and what they reflect about the people, times, and resources reflected in their manufacture. It will still be some time, perhaps many years, before we can speak confidently (that is, with data and careful thought) about the role that these phenomena played in Texas prehistory. This detailed coverage of a cache that contained tremendous number of specimens, with various levels of reduction seen among them, the sources of the raw materials that were used, and the truly massive size of a few of the bifaces, will surely provide a benchmark in the study of biface caches.

The Medina Lake Cache, Bandera County, Texas

David L. Calame, Sr. and Robert J. Mallouf
Illustrations by Deborah Roberts and
Richard McReynolds

ABSTRACT

A cache of 59 artifacts, mostly very large bifaces, was discovered on a bluff overlooking Medina Lake in southeastern Bandera County, Texas. In this paper, the cache is reported and fully documented. Like many other south and central Texas lithic caches, the Medina Lake cache is likely Middle to Late Archaic in age.

INTRODUCTION

In the summer of 1981, Leslie A. Anderson and his wife, Sophie, were preparing a flower bed on a new lot they had purchased in the Faurie subdivision, overlooking Medina Lake in Bandera County, Texas. As the Andersons were preparing the flowerbed, they discovered this cache of bifaces at a depth of ca. 36 cm below the surface. Mr. Anderson stated in a notarized letter dated August 17, 1981, that the cache was found stacked in two separate piles, one on top of the other, with the bottom pieces being ca. 51-61 cm (20-24 inches) deep. The cache was buried on a high bluff overlooking, what was in prehistoric times, the Medina River canyon. The cache location is on the east side of the Medina River (Figure 1). Although the method the Andersons were using to prepare their flower garden is not mentioned in their testimonial, recent damage to some of the cache specimens suggests that a pick and other digging equipment was being used, this recent damage to individual specimens is noted in the description of artifacts below, and the damage is consistent with such tools..

In an April 13, 2005 personal communication, former State Archeologist Robert J. Mallouf stated: "If I remember correctly, the story I was told was that the property owner was digging in his flower bed with a pick when he found the cache. Apparently the large flat cores had been used to construct a storage cist and the bifaces had been placed inside the cist. I believe that one of the flat cores, which in essence formed a lid for the cist, retains a strike from his pick. Or that core broke from the impact of the pick."

HISTORY AND OWNERSHIP OF THE CACHE

After its discovery, Mr. Anderson stated that he took the cache to the Witte Museum in San Antonio, Texas, and that Paul M. Smith, of Uvalde, Texas, apparently associated with the museum, and a member of the Southern Texas Archaeological Association, examined the cache. In a letter, Mr. Anderson stated that Mr. Smith indicated to him that the "entire cache had been made by the same man" in prehistoric times.

This letter from Anderson was addressed to Cleburne Price, Jr., Assistant to the Athletic Director and Director of the Texas Relays, The University of Texas at Austin, who apparently took possession and ownership of the Medina Lake cache in July 1981, and later brought the cache to the attention of the then-State Archeologist Robert J. Mallouf at the Texas Historical Commission. Mr. Anderson also provided to Cleburne Price a plat of the property where the cache was found, showing the flower bed find location, and this was also given to the Texas Historical Commission.

An apparent discrepancy in the number of artifacts in this cache can be found in this letter from Anderson, where he stated that the cache consisted of 48 specimens. It is assumed that some specimens were broken into pieces during discovery, and that Robert J. Mallouf assigned these broken pieces separate specimen numbers. This would explain why there are now more specimen numbers than had been originally reported by Mr. Anderson in 1981. Whatever the case, when Calame borrowed the cache from the Texas Historical Commission in March 2002, with the approval and authority of the current State Archeologist, Pat A.

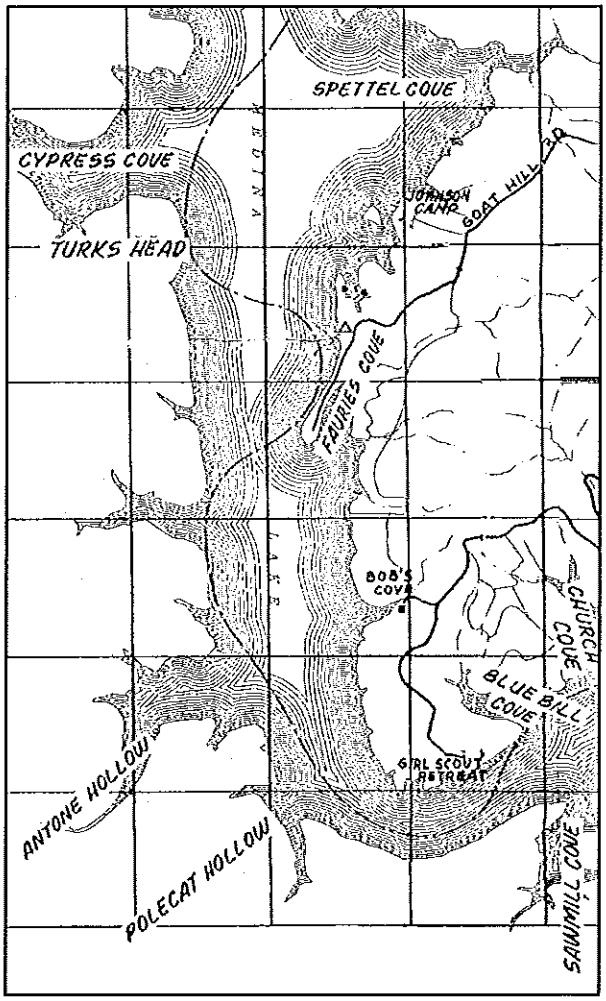

Figure 1. Medina Lake, Texas. The cache was found im the Fauries Cove area (note small triangle)

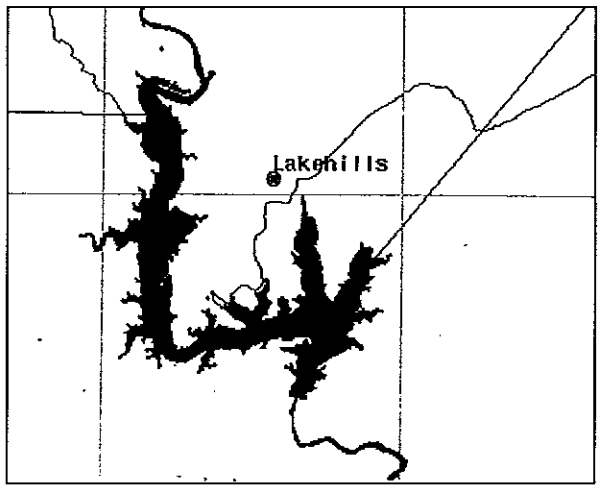

Figure 2. Medina Lake, Bandera County, Texas. The upper part of the lake is in northeastern Medina County, while the lower portion is in southeastern Bandera County.

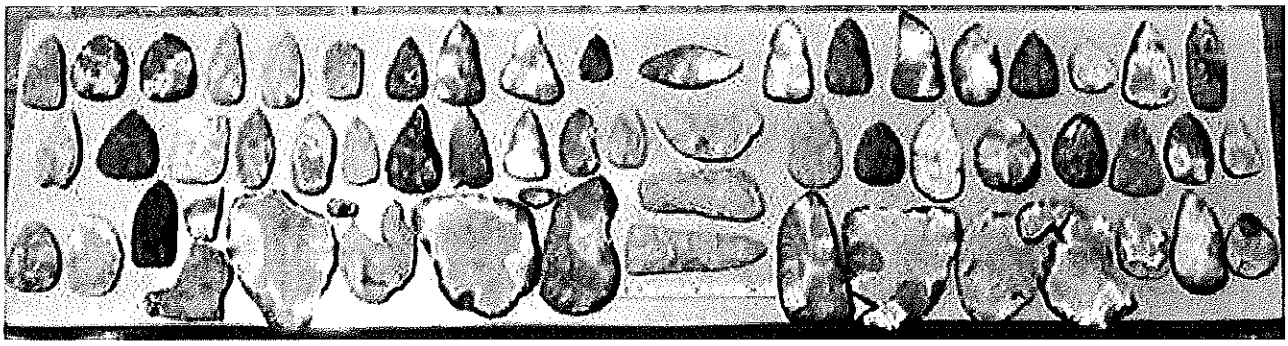

Figure 3. The Medina Lake Cave. An overall view of the cache, in 2002, when it was received by Mr. Calame for analysis.

Mercado-Allinger, for the purpose of continuing the documentation of the cache started by Mallouf, there were then 59 specimens curated in the cache collection.

When Price loaned the Medina Lake cache to the Texas Historical Commission on December 10, 1981, it was for the purpose of documentation and study. Texas archaeology is greatly in debt to the late Mr. Price for his desire to have the cache properly studied. By July 14, 1982, Mallouf reported steady progress in the analysis of the cache in a letter to Price. The cache was returned to Price as documented by a Letter of Transmittal dated September 15, 1986. Only two days later, on September 17, 1986, Mr. Price telephoned Mallouf, stating that he (Price) had decided to donate the entire cache of artifacts to the Texas Historical Commission.. However, before this could be accomplished, Mr. Price passed away (November 21, 1986). Luckily, Price had discussed donating the cache to the Texas Historical Commission previously with the Executor of his will, Ralph Yargo. Mr. Yargo saw to it that Price's wishes were realized. A letter of gratitude was drawn and sent (January 1992) to Leon Black, a close friend of Price, thanking him on behalf of the State of Texas and the Texas Historical Commission, for their contribution to Texas archaeology, along with a letter of appraisal for tax purposes. In January of 1989, State Archeologist Robert J. Mallouf had the cache sent off for casting of all the artifacts.

Much work was already done on this cache before Calame was loaned the specimens in 2002. This included the completion of many illustrations (by Deborah Roberts) and data compiled on flake scar measurements, attesting to Mallouf's insistence on extreme accuracy and detail in the documentation process.

DEFINITION OF A CACHE

The late Curtis Tunnell (1978) defined a cache as an accumulation of materials placed in storage or hiding for future recovery and utilization. Lithics, tools, and perishable foodstuffs were often cached by prehistoric groups. Many different cultural and environmental variables are at play in this common human behavior, including availability of resources, settlement strategies, trade, quality of resources, and resource usage. As in the case of the Medina Lake cache, the storage of stone resources for future use was obviously a very important activity for prehistoric peoples in Texas.

Most caches have been discovered during farming or construction operations (Pearce 1919; Flaigg and Reed 1996; Miller 2007; Lintz and Saner 2002) and in the case of the Medina Lake cache, the results of home yard improvements. Therefore, little if any data on contexts have been recorded. Most biface caches also have contained no time diagnostic artifacts that would allow archaeologists to establish chronological control .

Miller (2007) suggests that most biface caches date to the Middle or Late Archaic periods and possibly also to the Late Prehistoric period. As put forth by Miller (2007), caches of large bifaces may have had three different functions: (1) some appear to have been stored for future needs associated with settlement strategies; (2) they may be related to the trade of raw materials between prehistoric groups; and (3) they appear to have functioned as status symbols where large bifaces have been included as mortuary items, as at the Haiduk site (Mitchell et al. 1984), the Loma Sandia cemetery (41LK28; Taylor and Highley 1995), the Bering Sinkhole (Bement 1991) and the Silo site (Lovata 1997).

TYPES OF CACHES IN TEXAS

Lithic caches in Texas fall into four general categories: unworked raw material caches, flake caches, tool caches, and biface caches. These are general categories, however, since some caches contain more than one of these types of artifacts. Indeed, some caches found in Texas also include bone artifacts, such as a knapper's kit found at the Buckeye Knoll site (41VT98) in Victoria County, consisting of finished points, raw materials, and antler billets (see Ricklis et al. 2012). There are also time-diagnostic lithic caches from Clovis times (Collins 1999; Waters and Jennings 2015) those of specific tool types (Brown 1985), of projectile points (Mallouf 1988), and of flakes or blades (Tunnell 1978).

THE MEDINA LAKE CACHE

The Medina Lake cache falls into the category of biface caches, even though some of the specimens in this cache (n=10) are barely modified, huge, thin, high quality Edwards chert nodules. Within the category of biface caches, caches can be further distinguished by the stages of reduction represented by the bifaces. Some caches are comprised of early stage biface blanks, while others can be nearly finished biface performs. The Medina Lake cache falls in the first

sub-category that of having early stage blanks, with the notable exception of specimen #9, a very large, beautifully-flaked, sub-triangular biface in the later stages of reduction.

It may be worth noting that the Hoerster cache (41MS67) from Mason County, Texas, reported by Lintz and Saner (2002), also contained one very large, late stage bi-pointed biface exhibiting exceptional flaking, among the other 17 early stage bifaces. Lintz and Saner (2002) report this cache as containing Stage 4 bifaces (finished preforms which are ready for further thinning). It is worth noting as well, that the Medina Lake cache also has one bi-pointed specimen, although this specimen is much smaller than that of the Hoerster Cache specimen, and also at an earlier stage of reduction.

Width to thickness ratios amongst caches referenced in this article are very similar, including the Medina Lake cache. However, the Medina Lake cache differs from these other caches in that the specimens, for the most part, represent the original thickness of the raw materials gathered by the prehistoric knapper or knappers. Evidence of this is represented by the large amounts of cortex found on both faces of most specimens. Some specimens in this cache were already so thin that trimming of the edges was all that was needed (specimen #8, #34, #48, and #49).

Among the Medina Lake cache bifaces, there are enough irregularly-shaped specimens that it becomes clear, as one studies them, that their shapes are mostly the result of the original shape of the gathered nodule, and not the result of their intentional shaping by the prehistoric knapper or knappers, since most specimens are early stage blanks. Since this cache consists of so many large, slightly trimmed nodules, it is likely that this group of bifaces was cached at or very near the original lithic raw material procurement site. The combined total weight of the Medina Lake cache is nearly 46.25 pounds, quite a load to carry around the Texas hill country!

The location of the cache site is probably significant in that it is located atop an easily identifiable landmark, a high bluff overlooking the Medina River canyon. One can imagine how difficult it might be to always remember exactly where a cache had been stored, and a landmark, such as this high bluff, would certainly make retrieval much easier. The location of this cache, near its lithic source, should this hypothesis prove to be the case, is most probably the result of what Miller (1993) calls a "transport-costs decision." In other words, more materials were gathered than could be transported by available labor at the time. Consequently, this cache was buried with the expectation that it would be retrieved later. The lithic source of this cache has yet to be located. Should the source prove to be in the Medina River canyon, now under the waters of Medina Lake, then the location of the cache on the east side of the canyon may indicate the direction this cache was eventually intended to travel.

The caching of these artifacts in a pit lined by larger specimens of the cache is very unusual among lithic caches reported in Texas. Such behavior seems to lack sensible logic, since chert nodules are already found on and in the ground and would not seem to require a cist for protection. What may account for this is the use of a template of caching behavior from the storage of other more perishable materials carried over to the caching of non-perishable materials.

Specimen #9, the most finished piece in this cache, may be evidence of the form in which the this cache was intended to be traded. Thus, the cache may represent a "work in progress" in terms of the final shape of the trade bifaces. It is almost certain that this cache was not left for future use as part of a settlement strategy, since fine raw materials are readily available throughout the whole immediate area. Another possibility for this caching instance is that these prehistoric peoples came across a previously unknown, very limited source of very thin, large, high quality nodules and after preliminary shaping (more complete with some, like specimen #9), the materials were buried to keep them from being discovered, and utilized, by others.

PRESENTATION OF THE DATA

Because of the large number of specimens in this cache, authors Calame and Mallouf described each separately. Photographs of both sides of each biface were provided, along with line drawings, mostly by Deborah Roberts and a few by Richard McReynolds.

To offer a full documentation of this cache, it was felt that all the illustrations should be utilized. To that end, each specimen (1-59) is described separately below. On the page with the description, both sides of the specimen are shown in reduced photographic form. Each is next to a scale in centimers. Then, the following two pages provide the line drawings in actual size. In a few cases, the specimens were so large that they had to be reduced, but each is accompanied by a scale.

If the reader finds that a close reading of some of the scales in the photographs do not provide accurate measurement data, please consult Table 1 in which all such information is provided.

The reader might also note that on all photographs, the captions noted that "side A" of the biface pictured is on the left, and "side B" is on the right. In many cases, the authors refer to special characteristics on either side A or side B of A specimen. In other cases, there is to reference to side A or side B. We have preserved this arrangement for all biface photographs so that, a "side A" or "side B" can be scrutinized and cited more specifically in a future scholarly work.

DOCUMENTATION OF THE CACHE SPECIMENS

Ultraviolet analysis was accomplished with a UVGL-55 Mineralight Lamp Multiband UV – 254/365 in a darkened room at night and values taken from a Munsell Color Chart (Munsell 2000) were noted. Use of UV light in the analysis of chert sources has been pioneered in Texas by M. B. Collins (1990; Hofman et al. 1991; see also Hilsman 1992).

Detailed metrics and descriptive notes are found in Table 1. The ultraviolet light colors and Munsell readings for each specimen are presented in Table 2.

In an effort to organize the data provided in table 2, we compiled Table 3 to define any clustering of colors that might be recognized in the chert samples. First (left column) we set up 16 categories utilizing Munsell colors identified individually for the 59 artifacts listed in Table 2. Using these eighteen colors, we used data from short wave and long wave ultraviolet readings, plotting these to see what, if any, clusters of chert colors exhibited by cache specimens would result.

The senior author's experiment in this aspect of studying the bifaces demonstrated five chert color clusters. A sixth "cluster" is shown in the table, but represents the cortex-covered fragment designated as Specimen 59 (see Tables 1 and 2). Table 3 illustrates what was found.

Briefly noted here, the clusters (light red to pinkish white—eight specimans) fall into the right columns of short wave and long wave measurements. Of the eight, six were recognized by short wave (10.17%) and two by long wave (3.20%). The four categories or clusters shown below in Table 3 can also be interpreted in this way. It is obvious that most of the cache specimens are in the third group of yellow variations.

Table 1. Quantitative Analysis of the Medina Lake Cache.

Spec	Weight	Length	Width Prox.	Width Med.	Width Dist.	Width Max.	Thickness Prox.	Thickness Med.	Thickness Dist.	Thickness Max.	W/T Ratio	Cortex	Overall Shape	Base	Lateral Edges	Cross Section	Symmetrical
LM 1	255	131 mm	105 mm	101 mm	81 mm	106 mm	14.5 mm	14.5 mm	12.5 mm	15.5 mm	6.84	Y1	Ovate	convex	convex	convex	Y
LM 2	325	153 mm	113 mm	120 mm	65 mm	125 mm	16 mm	14 mm	12 mm	16 mm	7.81	Y2	Ovate	convex	convex	convex	Y
LM 3	220	155 mm	81.5 mm	82.5 mm	62 mm	83 mm	16 mm	12 mm	12 mm	15 mm	5.53	Y2	sub-triangular	concave	convex	convex	Y
LM 4	895	232 mm	148 mm	142 mm	108 mm	148 mm	22 mm	20.5 mm	19.5 mm	22 mm	6.73	Y2	Sud-triangular	convex	convex	convex	N
LM 5	145	126 mm	74.5 mm	69.5 mm	58 mm	75 mm	10.5 mm	12.5 mm	13.5 mm	13.5 mm	5.56	N2	sub-triangular	convex	convex	plano-convex	Y
LM 6	180	139 mm	89 mm	76 mm	50 mm	89.5 mm	13.5 mm	14.5 mm	10.5 mm	14.5 mm	6.17	Y2	sub-triangular	convex	convex	convex	Y
LM 7	235	162 mm				83 mm				16 mm	5.18	Y2	sub-triangular	convex	convex	convex	Y
LM 8	380	248 mm	76 mm	87 mm	97 mm	97 mm	12 mm	11 mm	12 mm	12 mm	8.08	Y2	rectangular	convex	convex	convex	N
LM 9	410	272mm				95mm				15mm	6.33	N2	sub-triangular	straight	convex	convex	Y
LM 10	310	174mm				107mm				17mm	6.29	Y2	sub-triangular	convex	convex/irregular	convex	N
LM 11	250	190mm				75mm				14mm	5.35	Y1	lancelot	convex	straight	convex	Y
LM 12	255	165mm				130mm				14mm	9.26	Y2	sub-triangular	convex	straight	convex	N
LM 13	140	133mm				73mm				15mm	4.86	Y1	sub-triangular	convex	straight to convex	convex	Y
LM 14	165	133mm				74mm				14mm	5.28	Y2	sub-triangular	convex	convex	convex	N
LM 15	195	137mm				92mm				13mm	7.07	Y2	sub-triangular	convex	convex	convex	Y
LM 16	275	175mm				95mm				15mm	6.33	Y1	sub-triangular	convex	convex	convex	Y
LM 17	230	153mm				104mm				15mm	6.93	Y2	sub-triangular	convex	convex	convex	Y
LM 18	140	118mm				74mm				15mm	4.93	Y2	sub-triangular	convex	convex	convex	Y
LM 19	250	163mm				83mm				14mm	5.92	Y1	sub-triangular	convex	convex	convex	Y
LM 20	160	118mm				83mm				14mm	5.92	N2	sub-triangular	convex	convex	convex	Y
LM 21	265	175mm				98mm				14mm	7	Y2	sub-triangular	convex	convex	convex	Y
LM 22	295	138mm				108mm				17mm	6.35	Y2	ovate	convex	convex	convex	Y
LM 23	305	123mm				97mm				15mm	6.46	Y1	ovate	convex	convex	convex	Y
LM 24	290	180mm				104mm				18mm	5.77	Y2	sub-triangular	convex	convex	convex	N
LM 25	205	133mm				95mm				14mm	6.78	N2	sub-triangular	convex	convex	convex	Y
LM 26	275	165mm				94mm				14mm	6.71	Y2	sub-triangular	convex	convex	convex	N
LM 27	185	167mm				75mm				13mm	5.76	N2	sub-triangular	convex	convex	convex	Y
LM 28	250	165mm				83mm				16mm	5.18	Y1	lancelot	convex	straight	convex	Y
LM 29	150	127mm				80mm				15mm	5.33	N2	sub-triangular	convex	convex	convex	Y
LM 30	305	168mm				102mm				16mm	6.37	N2	sub-triangular	convex	convex	convex	Y

Table 1. Quantitative Analysis of the Medina Lake Cache, continued.

LM 31	285	185mm				104mm				14mm	7.42	Y2	ovate	convex	straight/convex	convex	Y
LM 32	240	155mm				94mm				16mm	5.87	Y1	sub-triangular	convex	convex	convex	Y
LM 33	295	139mm				115mm				19mm	6.05	Y1	sub-triangular	straight	straight/convex	convex	Y
LM 34	185	160mm				110mm				9 mm	12.33	Y2	ovate	convex	convex	convex	N
LM 35	265	167mm				99mm				17mm	5.82	Y2	sub-triangular	convex	convex	convex	Y
LM 36	195	154mm				83mm				13mm	6.38	N2	sub-triangular	convex	convex	convex	Y
LM 37	260	206mm				86mm				14mm	6.14	Y2	bi-pointed	convex	convex	convex	Y
LM 38	355	204mm				104mm				15mm	6.93	Y2	ovate	convex	convex	convex	Y
LM 39	255	165mm				85mm				15mm	5.66	Y1	sub-triangular	convex	convex	convex	Y
LM 40	245	136mm				104mm				16mm	6.5	Y2	ovate	convex	convex	convex	Y
LM 41	220	128mm				103mm				14mm	7.35	Y2	ovate	convex	convex	convex	Y
LM 42	360	210mm				86mm				18mm	4.77	Y2	cresent	convex	varies	convex	N
LM 43	275	143mm				113mm				16mm	7.06	Y2	ovate	convex	convex	convex	Y
LM 44	205	150mm				75mm				15mm	5	Y2	lancelot	convex	convex	convex	Y
LM 45	80	92mm				65mm				12mm	5.41	Y1	sub-triangular	convex	convex	convex	Y
LM 46	870	260 mm				132 mm				22 mm	6	Y2	trimmed nodule	Straight	straight/convex	Convex	N
LM 47	1080	270mm				150mm				20mm	7.5	Y2	trimmed nodule	convex	irregular	convex	N
LM 48	250	132mm				112mm				11mm	10.18	Y2	sub-triangular	convex	convex	convex	Y
LM 49	185	116mm				105mm				11mm	9.54	Y2	sub-triangular	convex	convex	convex	Y
LM 50	195	81mm				116mm				13mm	8.92	Y2	sub-triangular	convex	convex	convex	Y
LM 51	40	n/a				n/a				n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LM 52	110	n/a				n/a				n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LM 53	30	n/a				n/a				n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LM 54	630	200mm				150mm				19mm	7.89	Y2	trimmed nodule	convex	convex	convex	Y
LM 55	1685	287mm				208mm				23mm	9.04	Y2	trimmed nodule	convex	convex	convex	N
LM 56	1270	270mm				165mm				23mm	7.17	Y2	trimmed nodule	convex	convex	convex	N
LM57	1655	276mm				240mm				22mm	10.9	Y2	trimmed nodule	convex	convex	convex	N
LM 58	1770	275mm				233mm				20mm	11.65	Y2	trimmed nodule	convex	irregular	irregular	N
LM 59	445	n/a				n/a				n/a	n/a	Y2	nodule fragment	irregualr	irregular	irregular	N

Table 2. Short and Long Walve Ultraviolet Color Signatures of the Medina Lake Cache.

Colors and color codes are from the Munsell Color Chart (2000)

Specimen No.	Short Wave Ultraviolet		Long Wave Ultraviolet	
LM 1	2.5Y 8/4	pale yellow	2.5Y 7/6	yellow
LM 2	2.5YR 8/6	light red	5Y 8/6	yellow
LM 3	5Y 7/4	pale yellow	10YR 8/6	yellow
LM 4	2.5YR 8/6	light red	10YR 8/6	yellow
LM 5	10YR 8/8	yellow	2.5YR 8/4	pink
LM 6	2.5YR 7/6	light red	10YR 7/6	yellow
LM 7	n/a	pale yellow	n/a	pale yellow
LM 8	n/a	pale yellow	n/a	pale yellow
LM 9	2.5YR 8/2	pinkish white	10YR 8/2	very pale brown
LM 10	n/a	brown	n/a	brown
LM 11	n/a	pale yellow	n/a	pale yellow
LM 12	2.5Y 7/6	yellow	2.5Y 7/8	yellow
LM 13	2.5Y 8/1	white/pale yellow	7.5YR 8/1	white
LM 14	n/a	pale yellow	n/a	pale yellow
LM 15	2.5Y 8/6	yellow	10YR 8/6	yellow
LM 16	2.5Y 7/8	yellow	2.5Y 7/6	yellow
LM 17	2.5YR 6/6	light red	10YR 6/6	brownish yellow
LM 18	n/a	pale yellow	n/a	pale yellow
LM 19	n/a	dark brown	n/a	dark brown
LM 20	n/a	purple	n/a	purple
LM 21	n/a	pale yellow	n/a	pale yellow
LM 22	n/a	pale yellow	n/a	pale yellow
LM 23	n/a	yellowish brown	n/a	yellowish brown
LM 24	n/a	yellow	n/a	yellow
LM 25	n/a	dark yellow	n/a	dark yellow
LM 26	n/a	pale yellow	n/a	pale yellow
LM 27	n/a	pale yellow	n/a	pale yellow
LM 28	n/a	light brown	n/a	light brown
LM 29	n/a	pale yellow	n/a	pale yellow
LM 30	2.5Y 7/6	yellow	10YR 6/6	brownish yellow
LM 31	n/a	pale yellow	n/a	pale yellow
LM 32	10YR 7/8	yellow	10YR 6/6	brownish yellow
LM 33	2.5YR 7/8	light red	2.5YR 7/8	light red

Table 2. Short and Long Walve Ultraviolet Color Signatures of the Medina Lake Cache, continued.

Colors and color codes are from the Munsell Color Chart (2000)

Specimen No.	Short Wave Ultraviolet		Long Wave Ultraviolet	
LM 34	2.5Y 8/6	yellow	2.5Y 8/8	yellow
LM 35	2.5Y 8/8	yellow	2.5Y 7/8	yellow
LM 36	10YR 7/8	yellow	10YR 6/6	brownish yellow
LM 37	2.5Y 8/8	yellow	2.5Y 7/8	yellow
LM 38	10YR 8/8	yellow	2.5Y 7/8	yellow
LM 39	10YR 5/6	yellowish brown	7.5YR 5/6	strong brown
LM 40	10YR 6/7	brownish yellow	10YR 7/8	yellow
LM 41	10YR 8/6	yellow	10YR 7/6	yellow
LM 42	2.5Y 7/6	yellow	10YR 7/6	yellow
LM 43	n/a	pale yellow	n/a	pale yellow
LM 44	n/a	pale yellow	n/a	pale yellow
LM 45	n/a	dark yellowish brown	n/a	dark yellowish brown
LM 46	n/a	pale yellow	n/a	pale yellow
LM 47	n/a	pale yellow	n/a	pale yellow
LM 48	n/a	pale yellow	n/a	pale yellow
LM 49	n/a	pale yellow	n/a	pale yellow
LM 50	n/a	pale yellow	n/a	pale yellow
LM 51	n/a	pale yellow	n/a	pale yellow
LM 52	n/a	pale yellow	n/a	pale yellow
LM 53	n/a	dark yellow	n/a	dark yellow
LM 54	n/a	dark yellow	n/a	dark yellow
LM 55	n/a	pale yellow	n/a	pale yellow
LM 56	n/a	pale yellow	n/a	pale yellow
LM57	n/a	pale yellow	n/a	pale yellow
LM 58	n/a	pale yellow	n/a	pale yellow
LM 59	n/a	n/a	n/a	n/a

Table 3. Groups of Chert Isolated by Ultraviolet Analysis

		short wave	long wave	short wave		long wave	
		N	N	N	%	N	%
1	light red	5	1	6	10.17	2	3.39
2	pink	0	1				
3	pinkish white	1	0				
4	white	0	1	0	0.00	1	1.69
5	white-pale y	1	0	45	76.27	47	79.66
6	pale yellow	26	24				
7	yellow	14	16				
8	brownish yell	1	4				
9	dark yellow	3	3				
10	dark yellowish	1	1	6	10.17	7	11.86
11	yellowish brov	2	1				
12	light brown	1	1				
13	very pale brov	0	1				
14	brown	1	1				
15	strong brown	0	1				
16	dark brown	1	1				
17	purple	1	1	1	1.69	1	1.69
18	n/a	1	1	1	1.69	1	1.69
		59	59	59	100.00	59	100.00

Specimen #1 (Figures 4-5). The specimen is ovate in outline and made of a fine, dark brown, Edwards chert, very much consistent with the majority of this cache in material quality and cortex characteristics. A very distinctive orangish-red thick, chalky, cortex remains only on side A. This specimen exhibits a sheen, and is smooth to the touch, yet not glassy. It does not appear to have been heat treated. There is no evidence of a negative bulb of percussion and this biface was likely made of a single whole nodule. Flaking is random large percussion flakes, with pronounced ridges remaining to facilitate the next series of thinning flakes. Some percussion flakes travel ca. 67 percent across the specimen. Biface edges have been trimmed back for the purposes of platform preparation to remove thinning flakes from the opposite face. Percussion flakes have been removed from both lateral edges as well as the base on both faces.

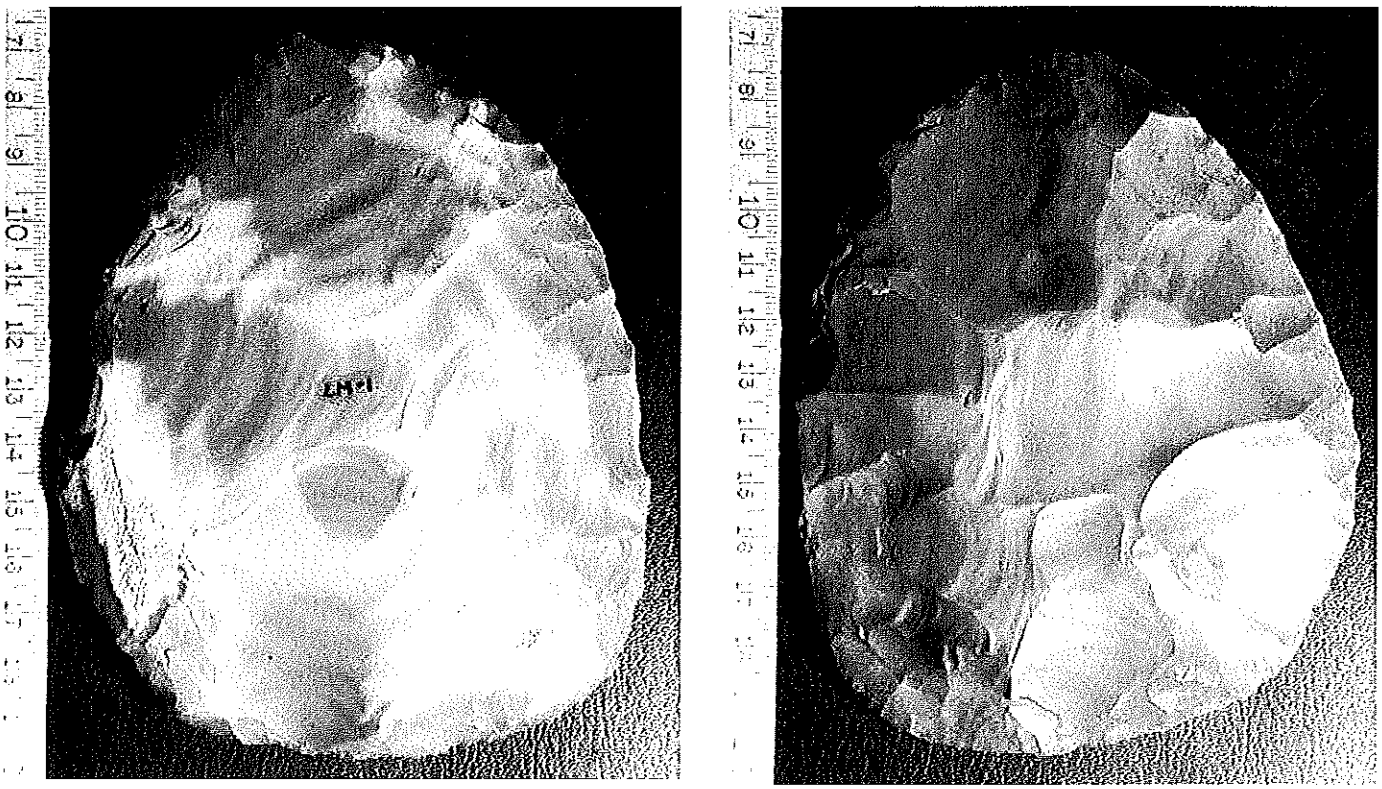

Figure 4. Specimen 1. Left, side A; right, Side B.

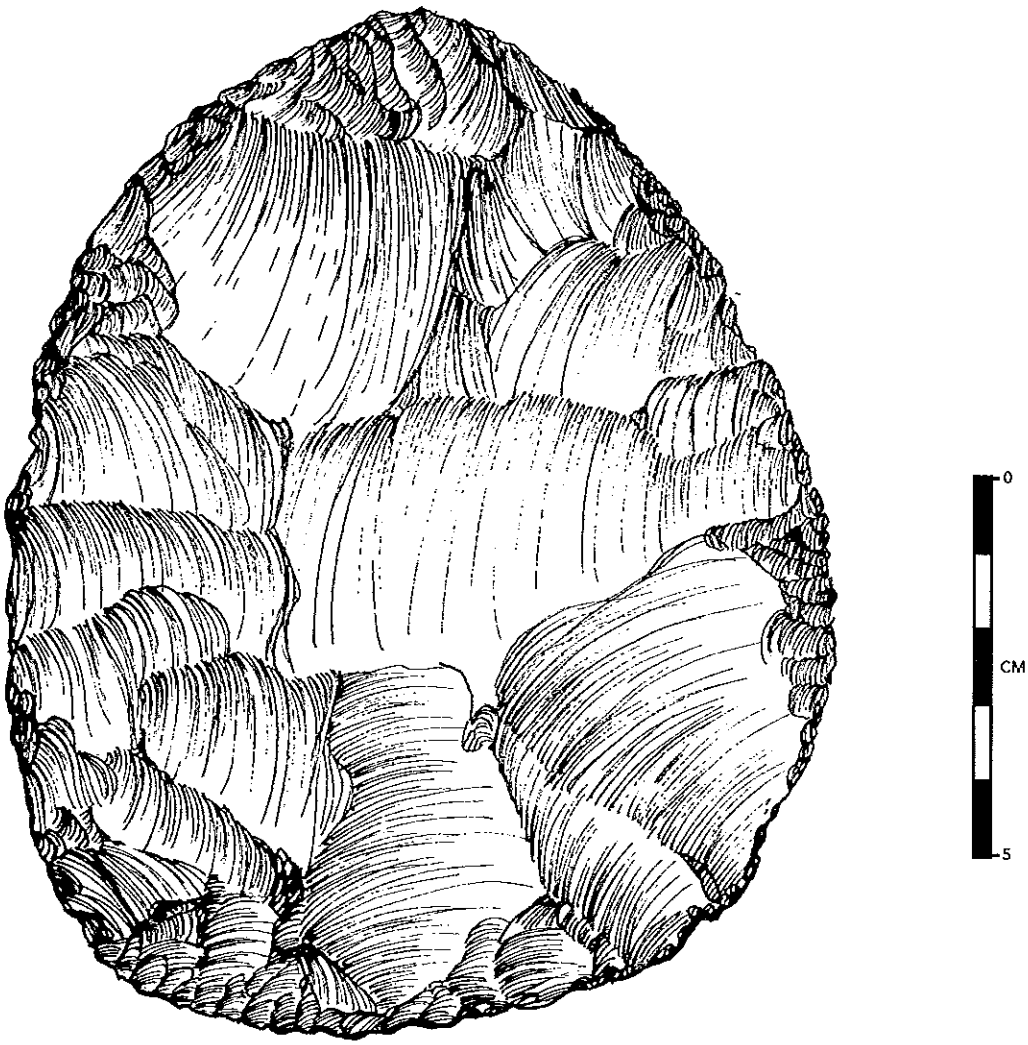

Figure 5. Specimen 1. Both sides, actual size. Left, side A; Right, side B


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Specimen #2 (Figures 6-7) This specimen has a very broad ovate outline. There is an orange-red cortex remaining on both faces and it was probably made from one thin nodule. Material is of a high quality, a dark brown Edwards chert. Material is smooth, but not glassy to the touch. Flaking is random with very pronounced flake scar ridges. The largest percussion flake scar is 88 mm long. Biface edges have been trimmed to facilitate platform preparation. The specimen is very symmetrical. It is also very consistent with the majority of this cache in material quality and cortex characteristics.

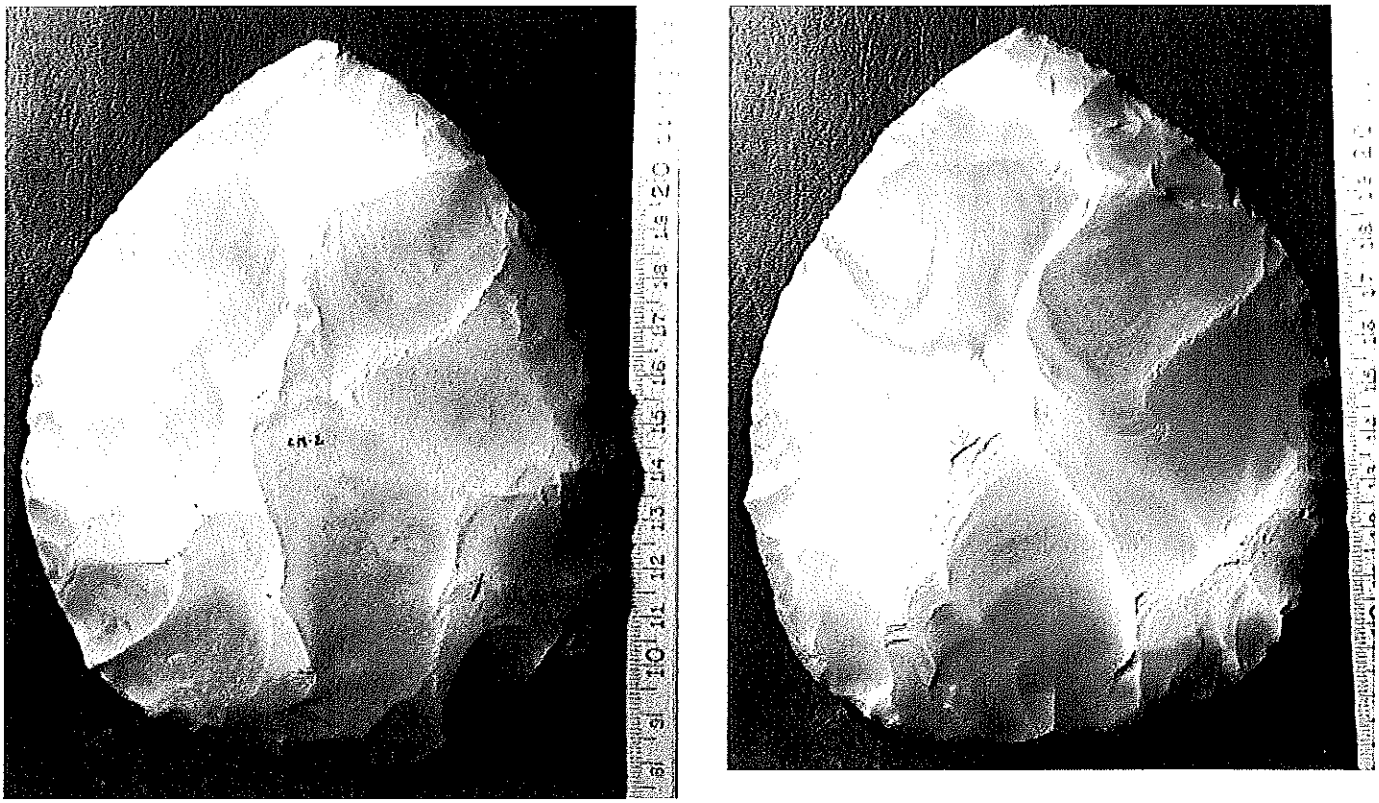


Figure 6. Specimen 2. Left, side A; right, side B.

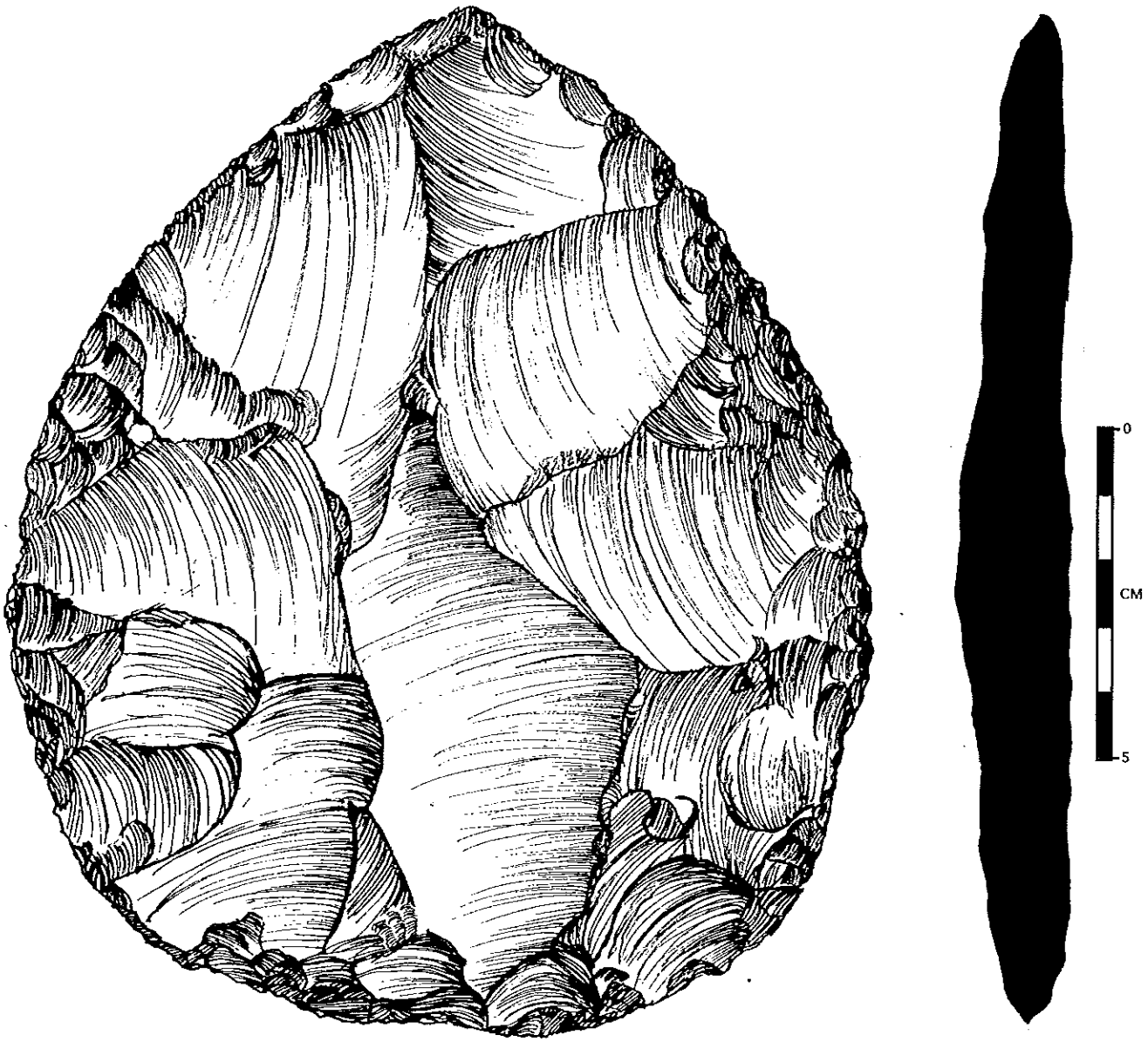
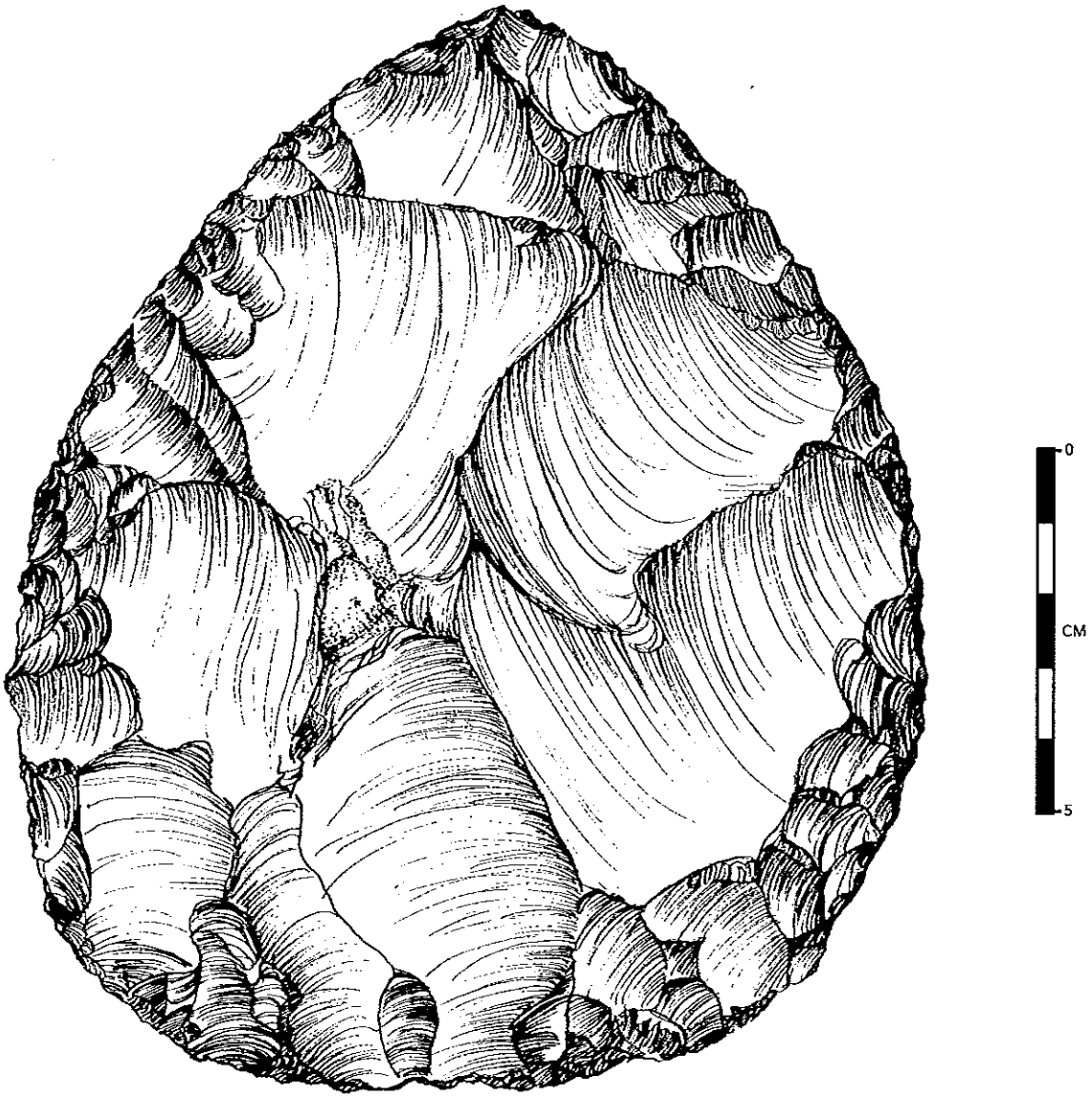


Figure 7. Specimen 2. Both sides, actual size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Specimen #3 (Figures 8-9). This biface is sub-triangular in outline. An orangish-red cortex remains on both faces. This biface was made from one thin nodule. The base is sharply concave, possibly caused by an errant percussion strike. The biface has a slight twist in profile caused by "edge lowering" in preparation for the next series of percussions flakes. The raw material is tan to grayish-brown in color and of fair quality, although with some inclusions. The specimen is very consistent with the majority of the specimens in this cache with respect to material quality and cortex characteristics. Flaking is random and flake scar ridges are very pronounced. The edges are trimmed in some places to facilitate platform preparation for flake scar ridges corresponding to masses needing removal of the opposite face. The longest percussion flake is 60 mm in length. Large percussion flakes have been removed from both lateral edges as well as the base on both faces.

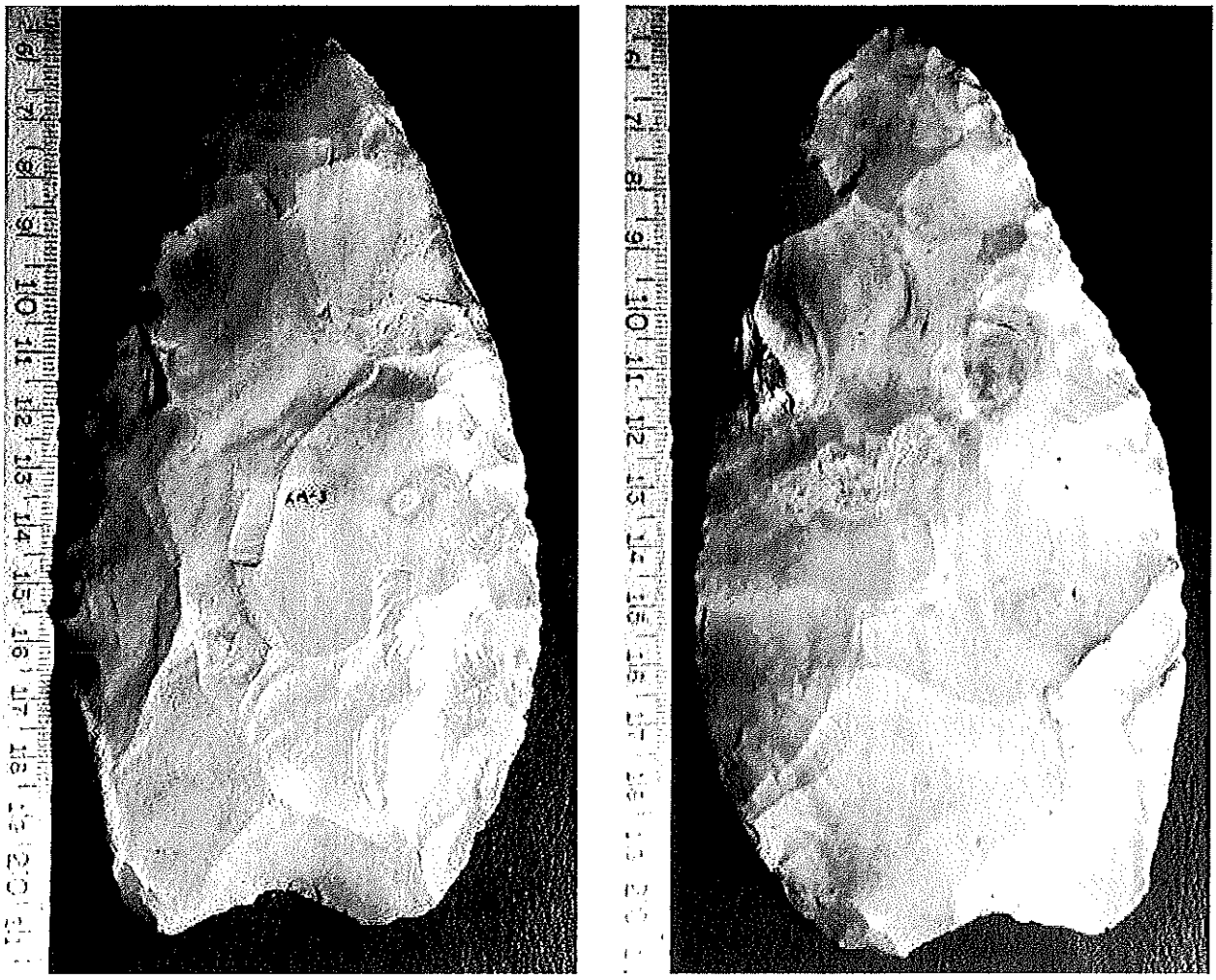


Figure 8. Specimen 3. Both sides, actual size.

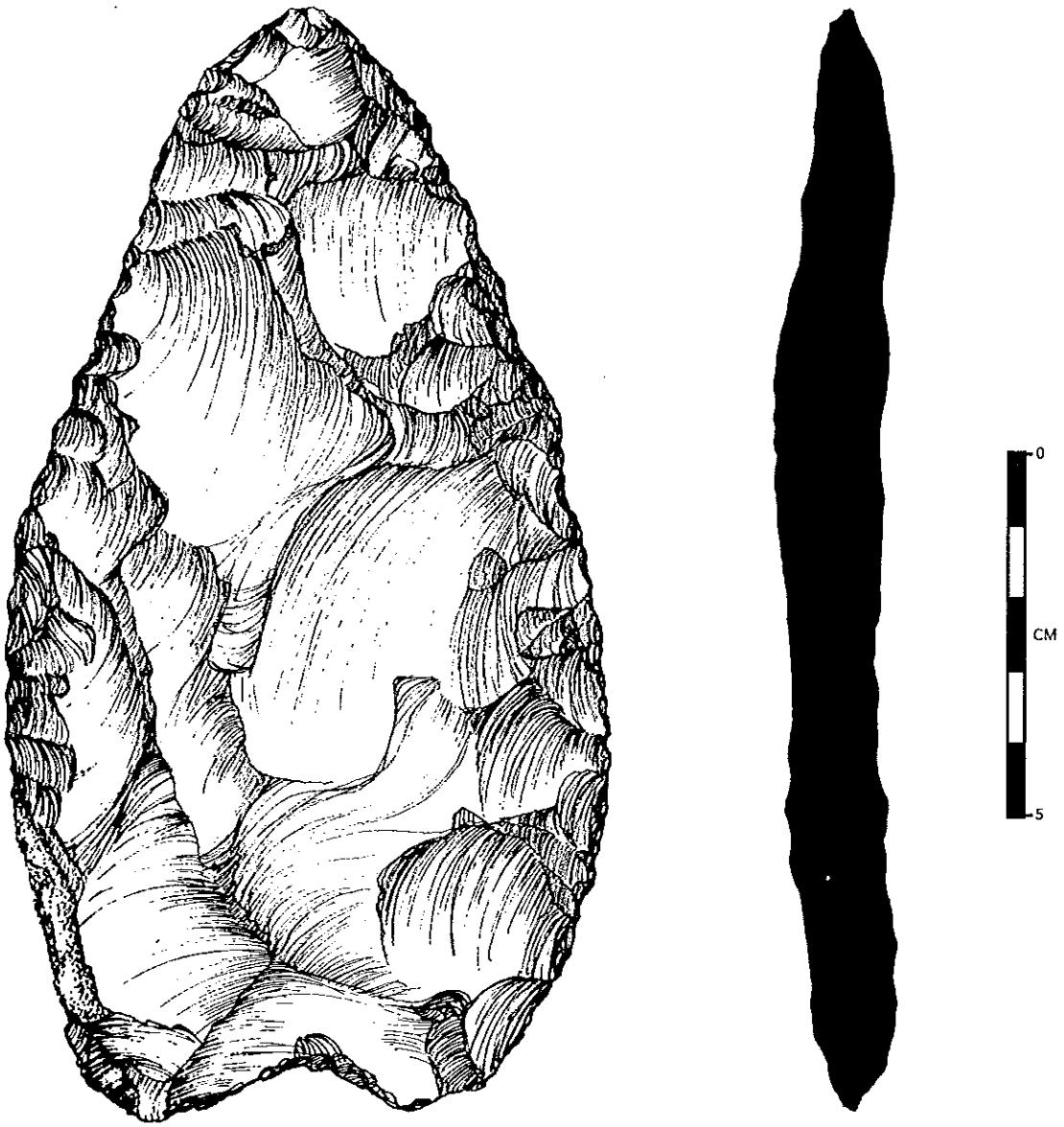
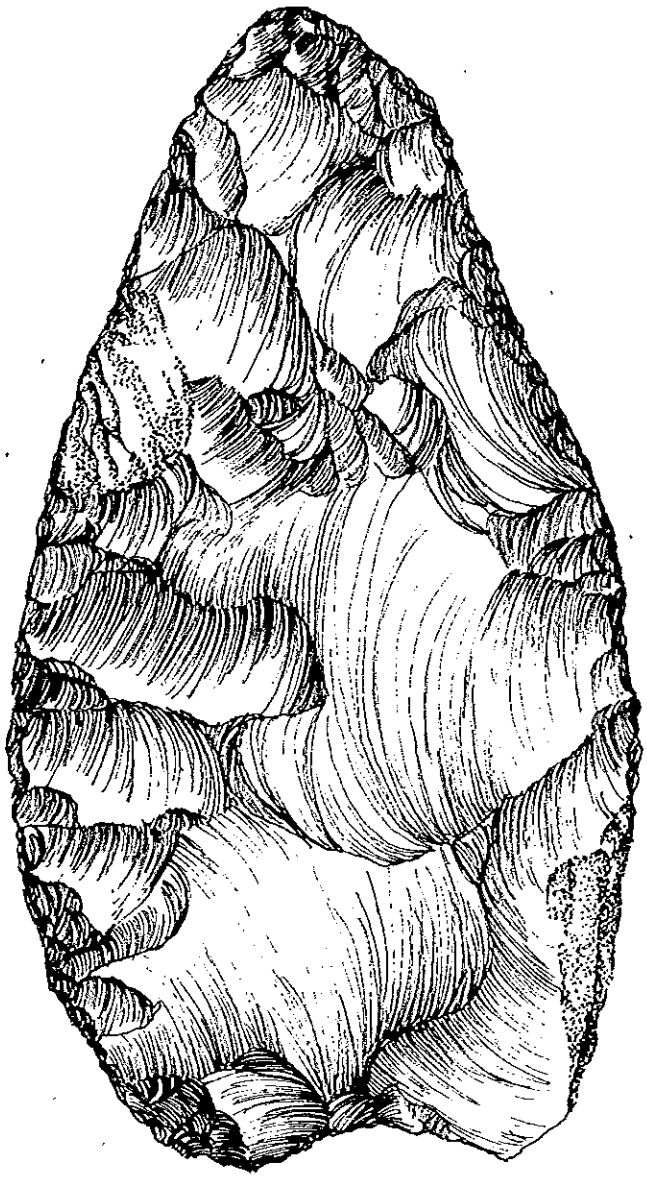


Figure 9. Specimen 3. Both sides, actual size.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Specimen #4 (Figures 10-11) The specimen is sub-triangular in outline with irregularities bulging on one lateral edge approximately one-third of the distance from the base. The raw material is a high quality tan Edwards chert with some faint inclusions that do not interrupt the grade of the material. The raw material is very consistent with the majority of this cache and the cortex is also consistent in all characteristics. An orange-brown cortex remains on both faces and it is obvious that this biface was made from one whole, thin, nodule and is still near the original thickness of the gathered nodule. Side A has most of the cortex removed by very large, overlapping, hard hammer percussion flakes. Some platform remnants are small (7 mm), yet produced very large flakes (80 x 77 mm in length and width) and traveled more than halfway across the biface. Flake scar ridges are very pronounced. In contrast, side B is only trimmed, with no percussion flake scars extending across the face. Some possible grinding is exhibited on cortex remnants on the distal end of side B. Some platforms have been prepared to remove cortex from side B.

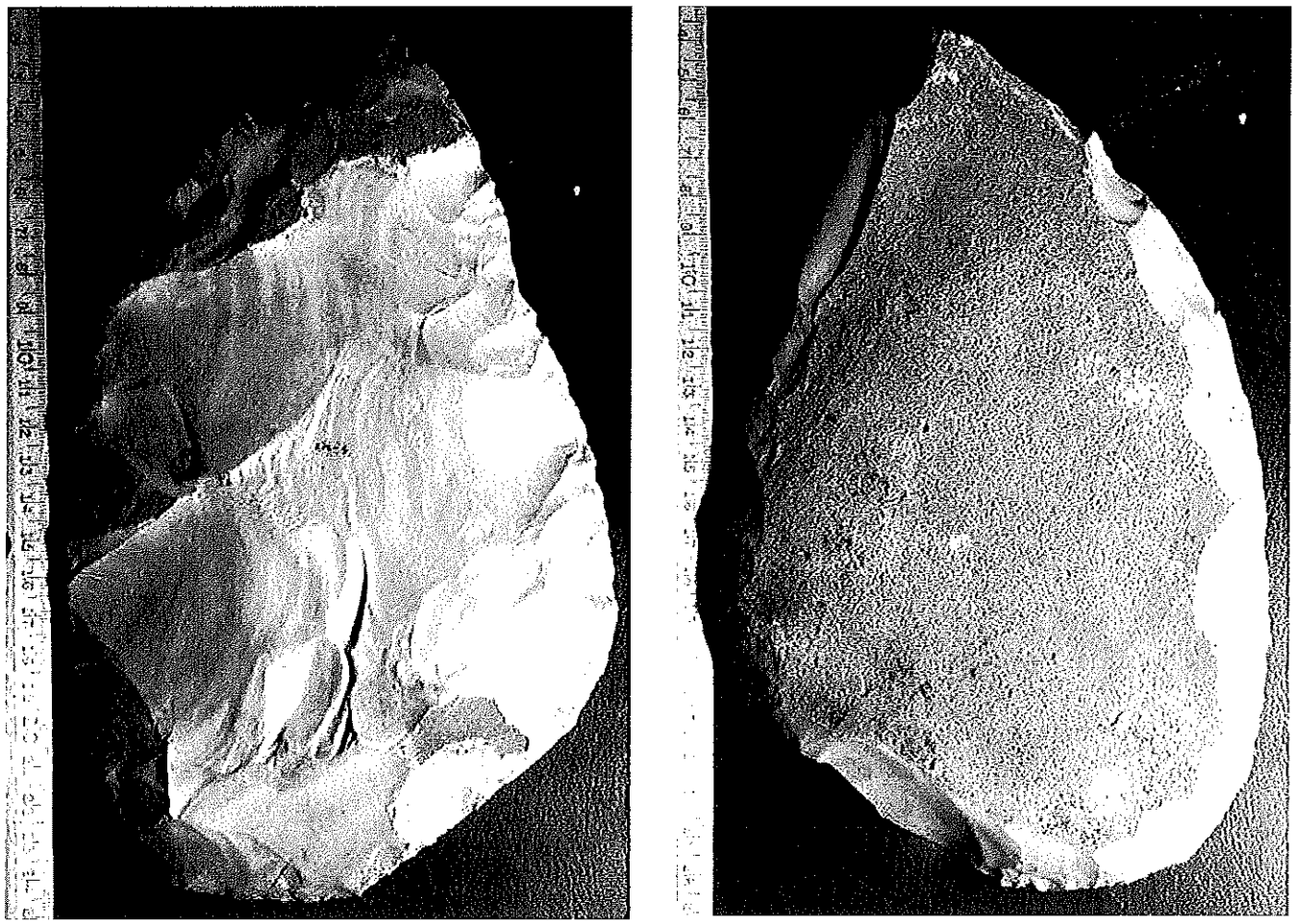


Figure 10. Specimen 4. Left, side A; right, side B.

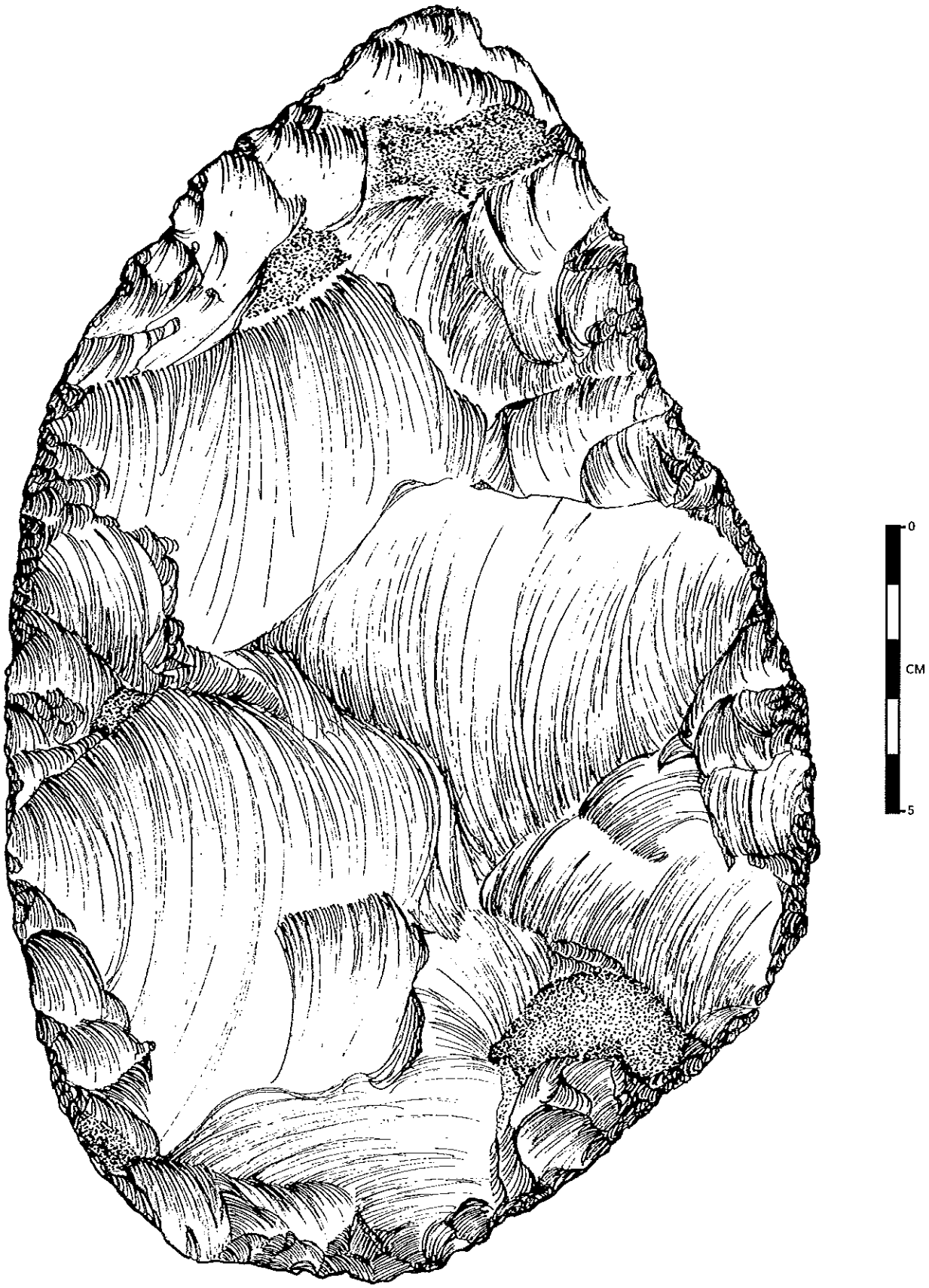
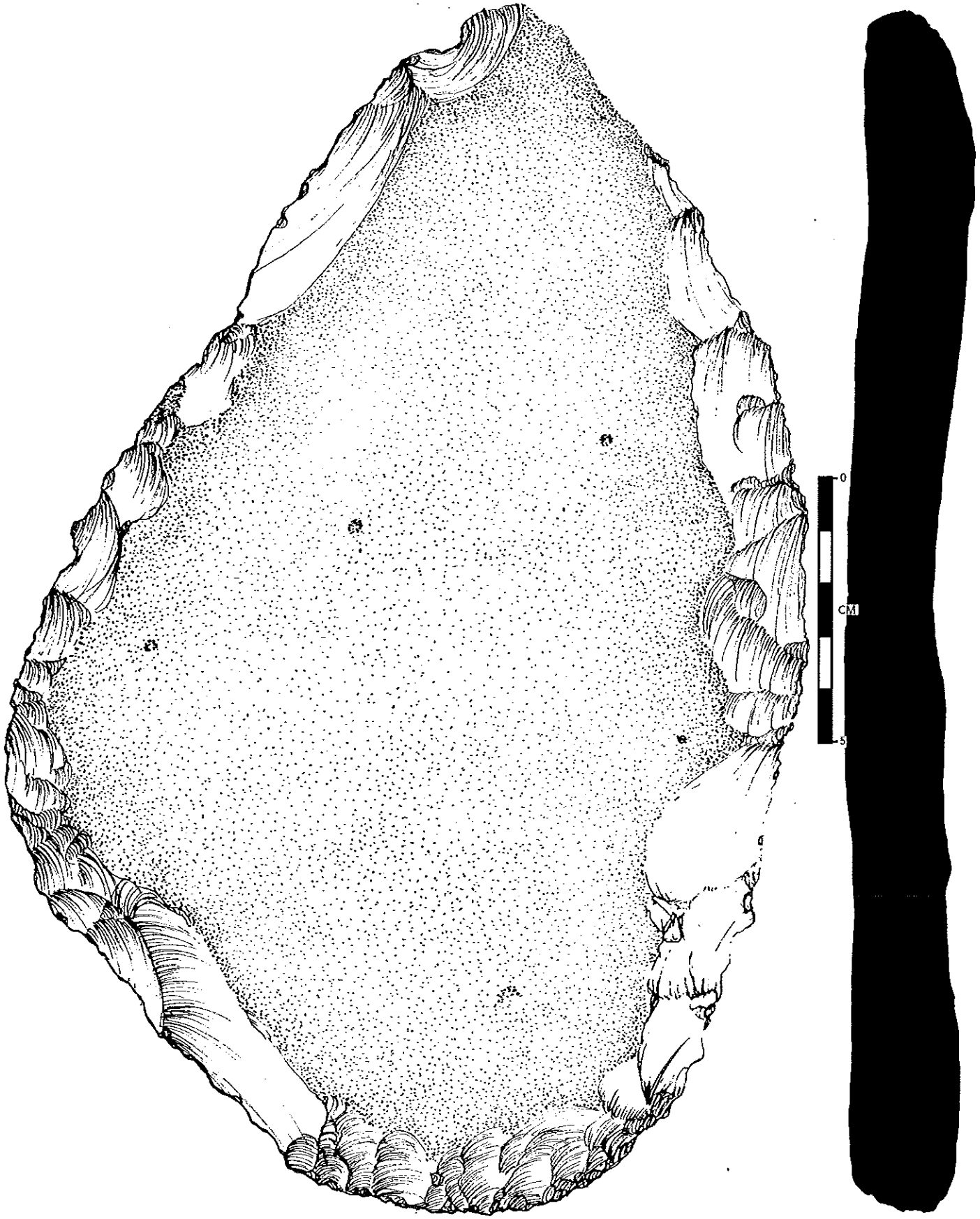


Figure 11. Specimen 4. Both sides, actual size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Specimen #5 (Figures 12-13) This specimen is sub-triangular in outline and is made of a translucent, glassy, gray chert that is consistent with the majority of this cache in material quality. No cortex remains on either face, yet no negative bulb of percussion is evident either, so it cannot be determined if this specimen was made from one whole nodule, or a large flake. However, because of this biface's thickness and bi-convex profile, this specimen was likely made from one smaller, whole nodule. This biface's size is rather small in comparison with the remainder of the cache, and was probably determined by the size of the originally collected nodule. Biface edges do not appear excessively trimmed; however, some platforms have been prepared for future flake removals. Flake scars ridges are not overly pronounced. Flake scars are random and broad with some traveling more than halfway across the biface. Thinning flakes have been removed from both lateral edges and the base on both faces.

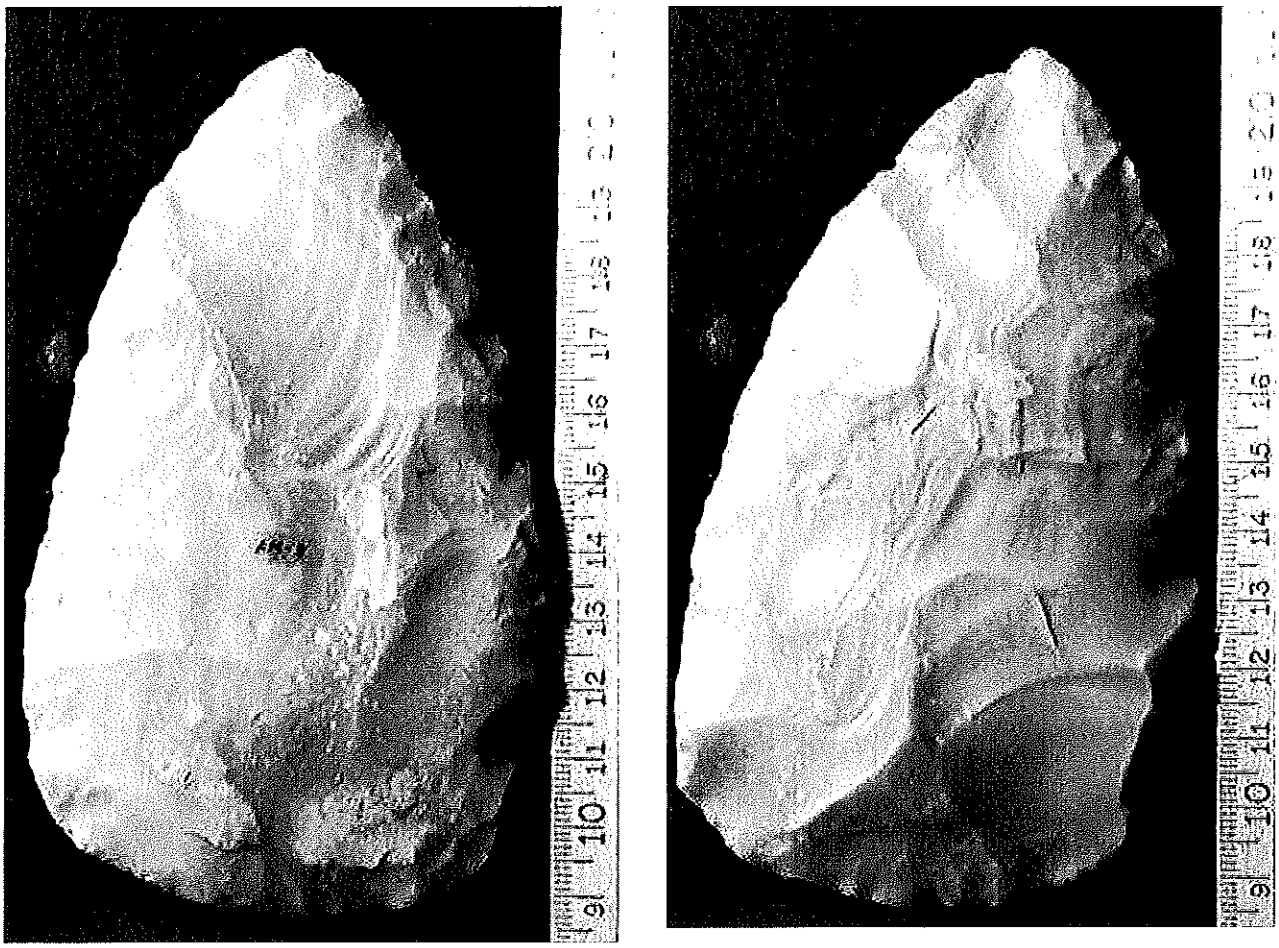


Figure 12. Specimen 5. Left, side A; right, side B

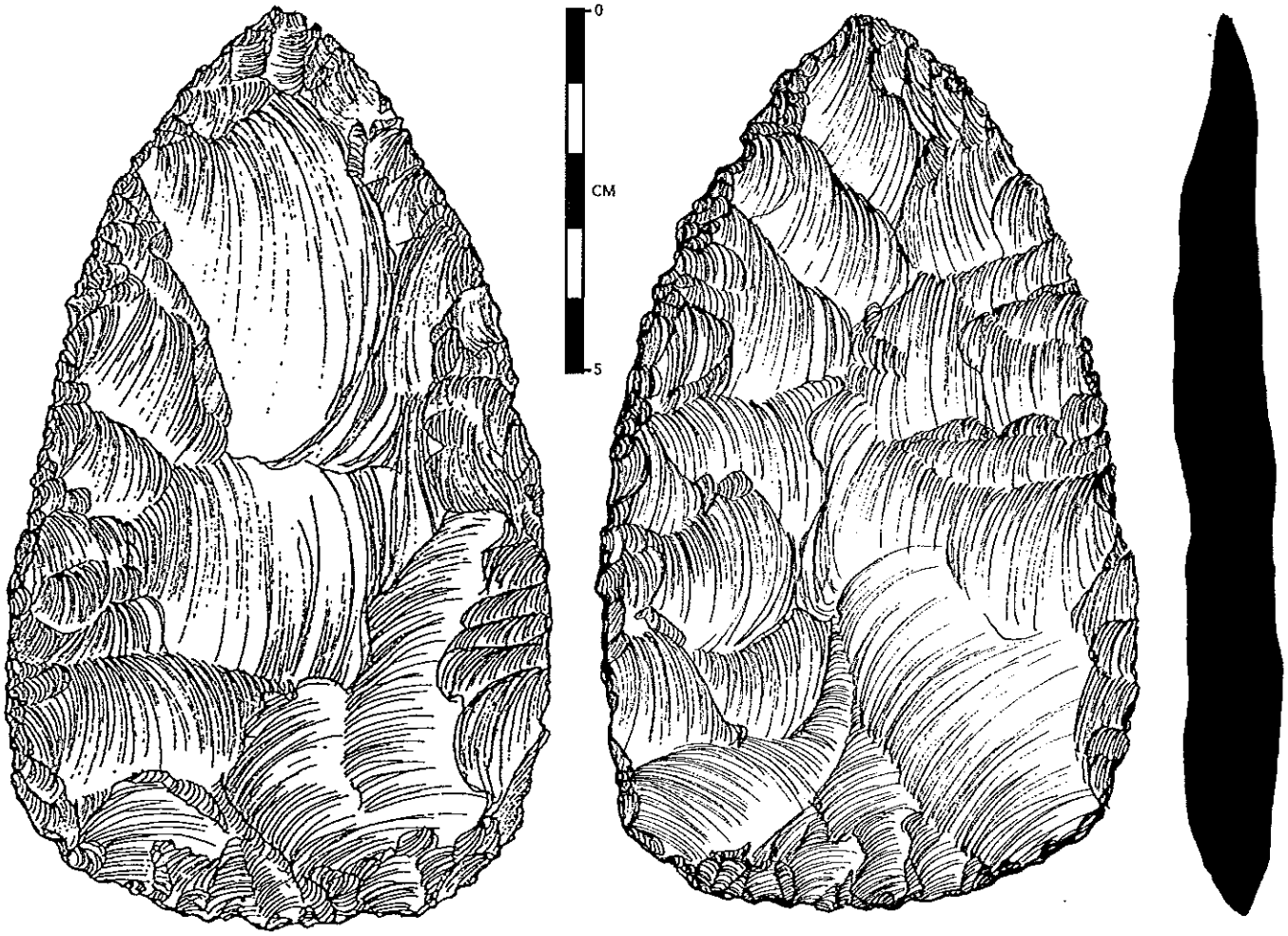


Figure 13. Specimen 5. Both sides, actual size.

Specimen #6 (Figures 14-15). The specimen is sub-triangular in outline with a convex base and slightly convex lateral edges. The distal tip is slightly off center with the body of this biface. It exhibits cortex remnants on both faces and is the thickness of the originally collected nodule. The raw material is very consistent with the majority of this cache in material quality and cortex characteristics; it is a high quality Edwards chert. Flaking is random, yet tightly spaced, and some flake scars travel more than halfway across this biface. Some flake scar ridges are pronounced. Edge trimming is not evident except near several platforms that were never struck off. The size of this biface was determined by the original size of the collected nodule. Large thinning flakes were removed from both lateral edges and the base on both faces.

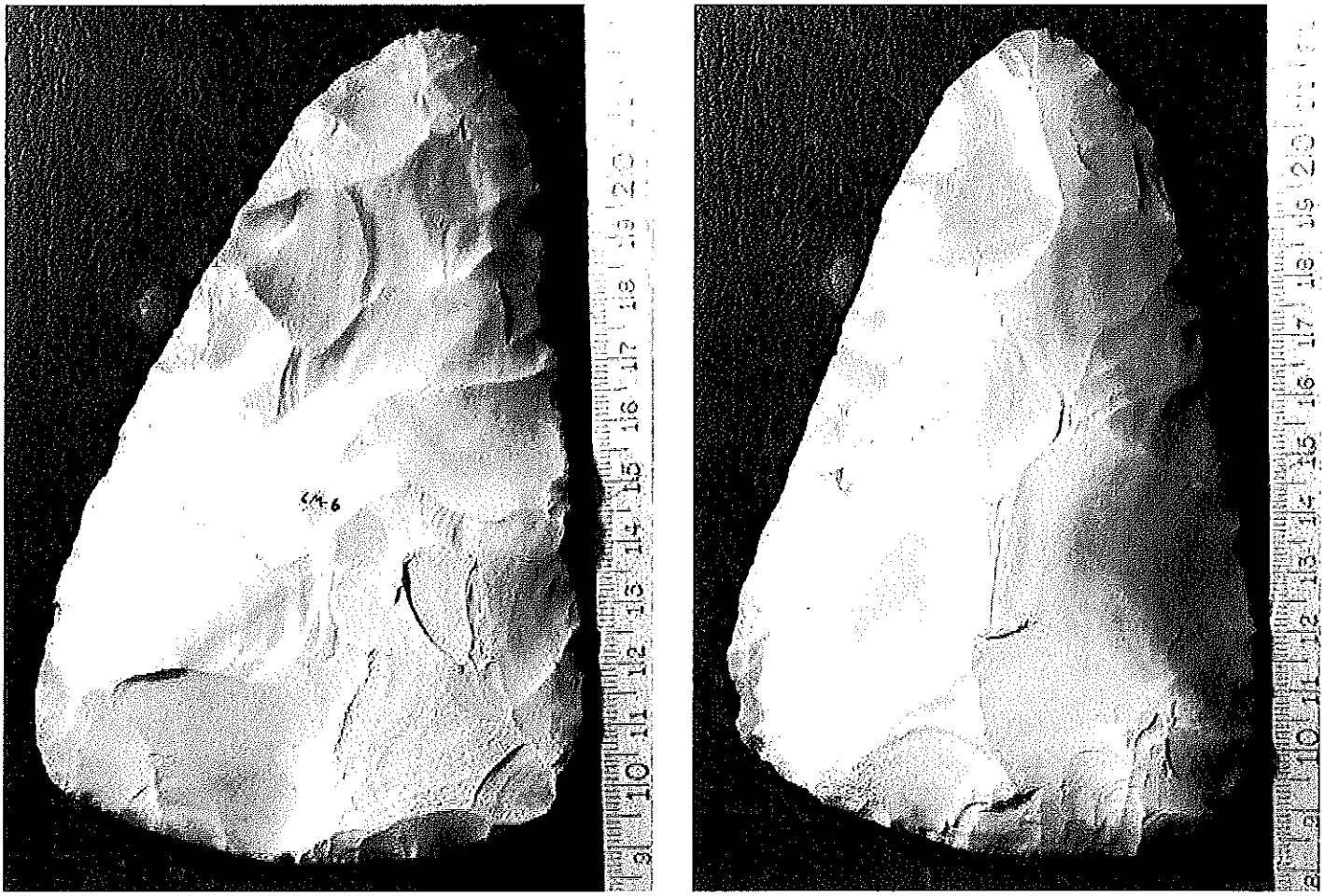


Figure 14. Specimen 6. Left, side A; right, side B.

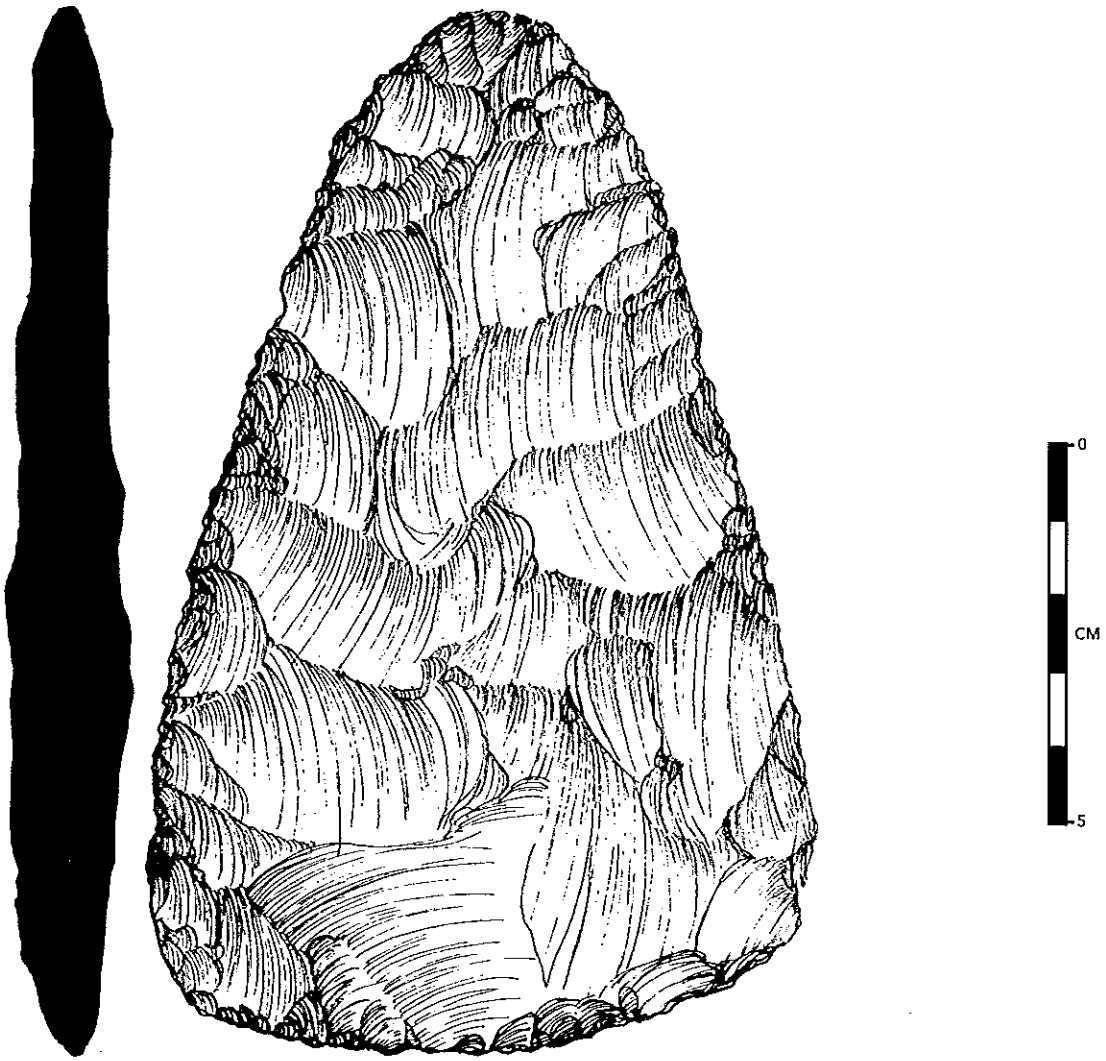
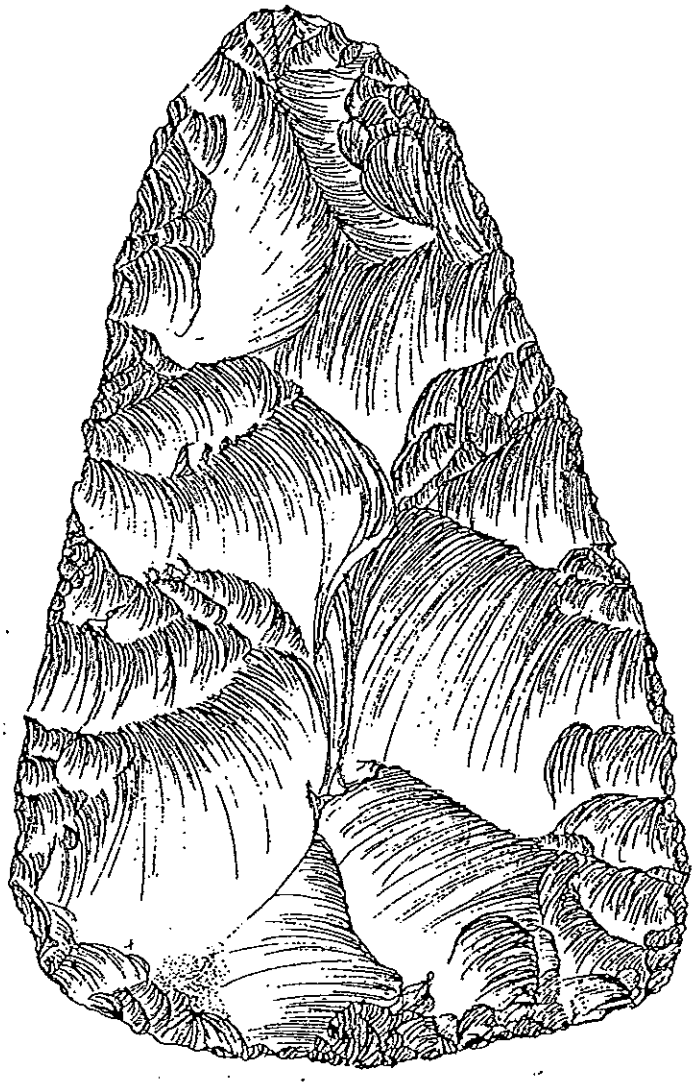


Figure 15. Specimen 6. Both sides, actual size.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Specimen #7 (Figures 16-17) This specimen is sub-triangular in outline. Cortex remains on both faces and this biface is the thickness of the originally collected nodule. The material is a high-grade tan Edwards chert; it is very consistent with the majority of this cache in material quality and cortex characteristics. Edges have been trimmed in some areas and there are several unstruck platforms remaining on the biface. Flaking is random and tightly spaced, and some flake scar ridges are pronounced. Many large percussion flakes scars are overlapping on both faces of this specimen and have been struck from both lateral edges, but only from the base on side A. Platform remnants and negative bulbs are small. Some damage to the distal tip appears to have been made during the discovery of the cache.

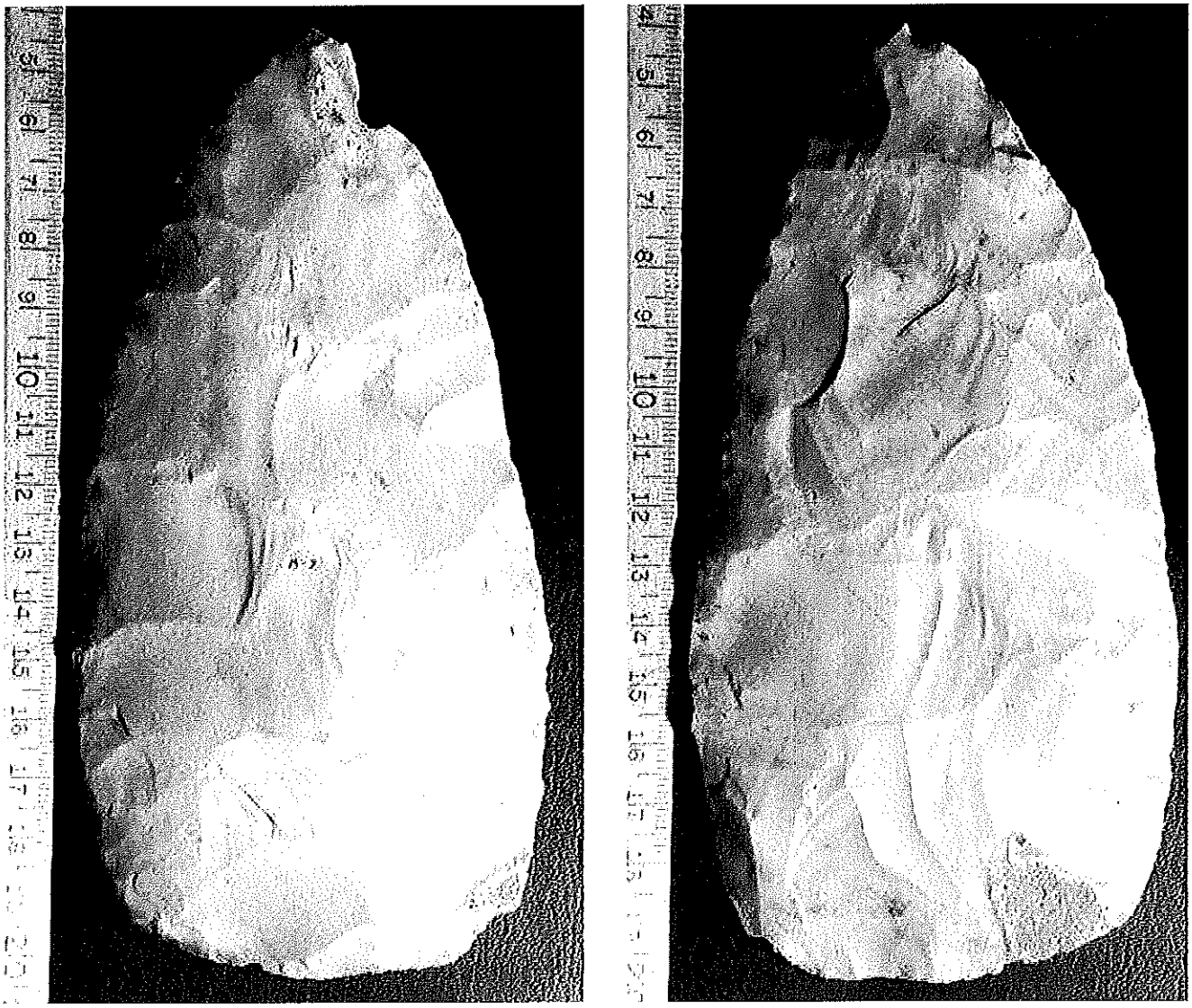


Figure 16. Specimen 7. Left, side A, right, side B.

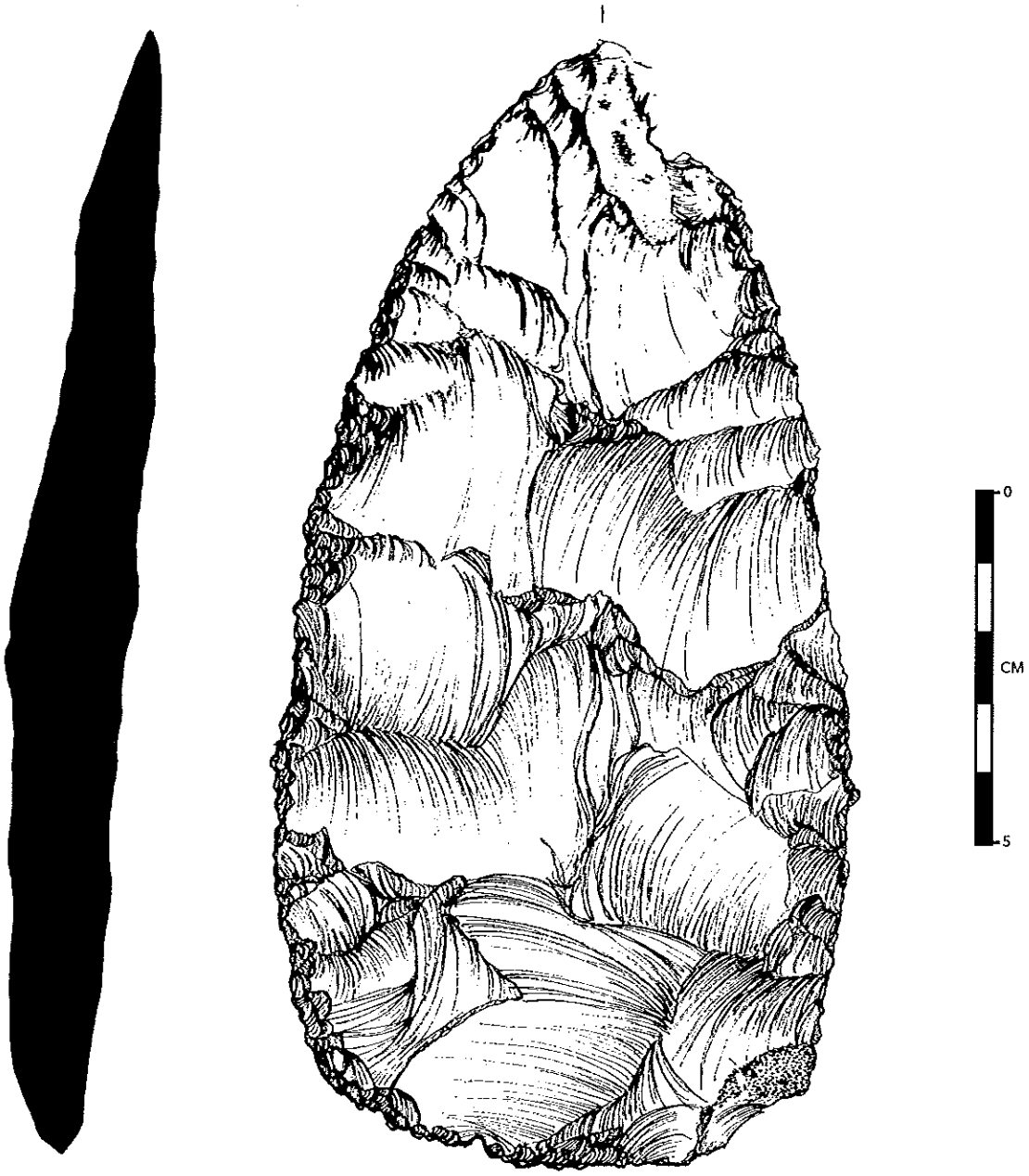
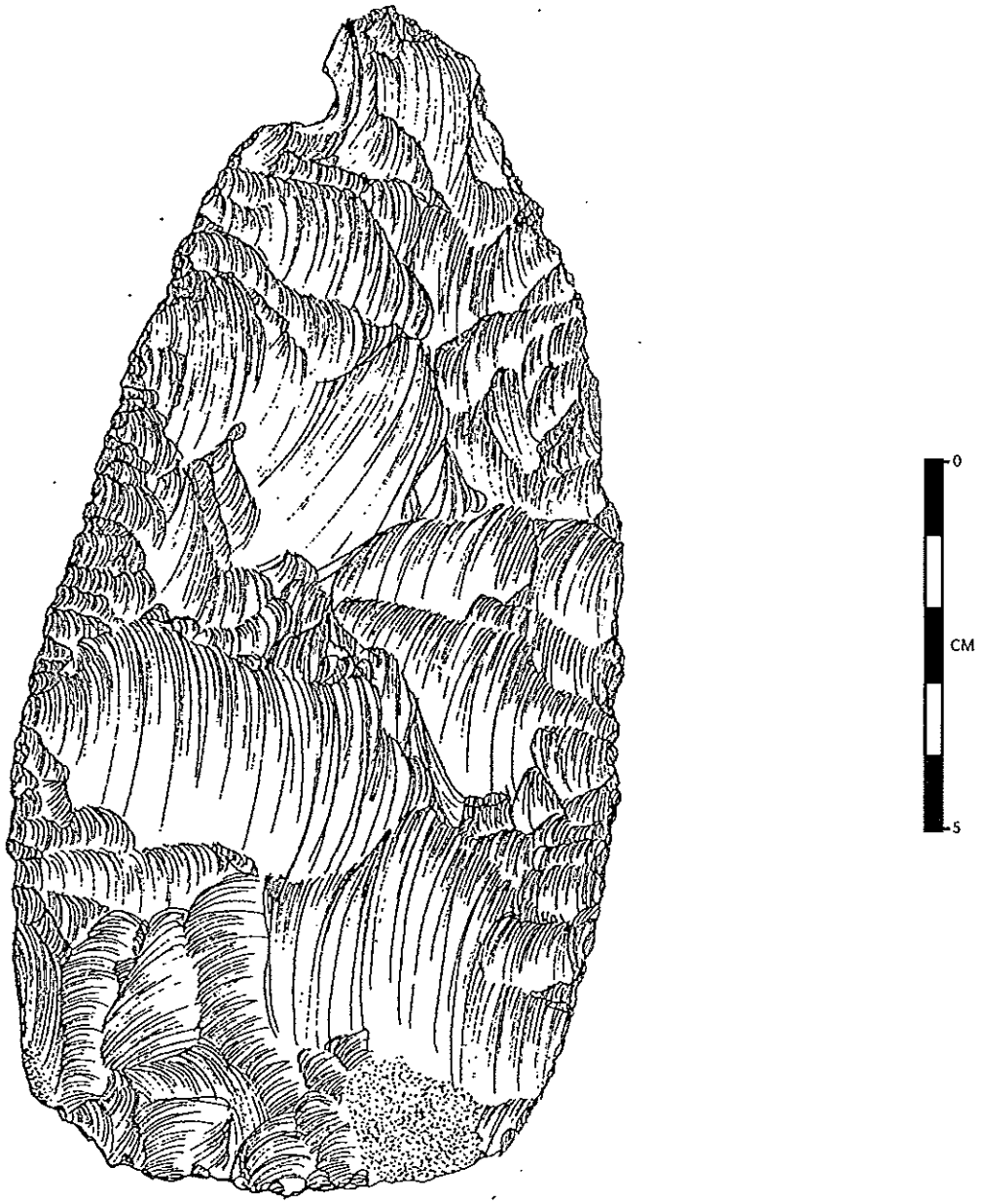


Figure 17. Specimen 7. Both sides, actual size.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Specimen #8 (Figures 18-19) The specimen exhibits a very unusual shape, intriguingly reminiscent of a foot in outline. The shape of the originally collected nodule probably determined the shape of this biface. Cortex remains on both faces, and thus this biface is the thickness of the originally collected nodule, which is very thin. Side A has very little cortex remaining, while side B has very little cortex removed. Flaking is random, narrow, and tightly spaced. Edges have been trimmed, and there are unstruck platforms. The most distinguishing feature of this odd-shaped biface are the many abrasion lines in the cortex on side B. More than 30 gouged abrasion lines run generally parallel to the longitudinal axis of this biface. These abrasion lines have a slight curve to them, as if a knapper were using side B to abrade, not across, but rather along lateral edges during the knapping process. It does appear that portions of some of the abrasion lines have been removed during flaking towards the "heel" of the biface. Some percussion flakes on side A do extend past the midpoint of this biface. Once cortex was removed from both faces, and the specimen shaped and thinned, it may well have looked much like specimen #9. It should be noted that one specimen in the Veltmann Cache (Hester and Calame 2003), also had score lines in its cortex, although not as many, nor as distinct as on Specimen #8.

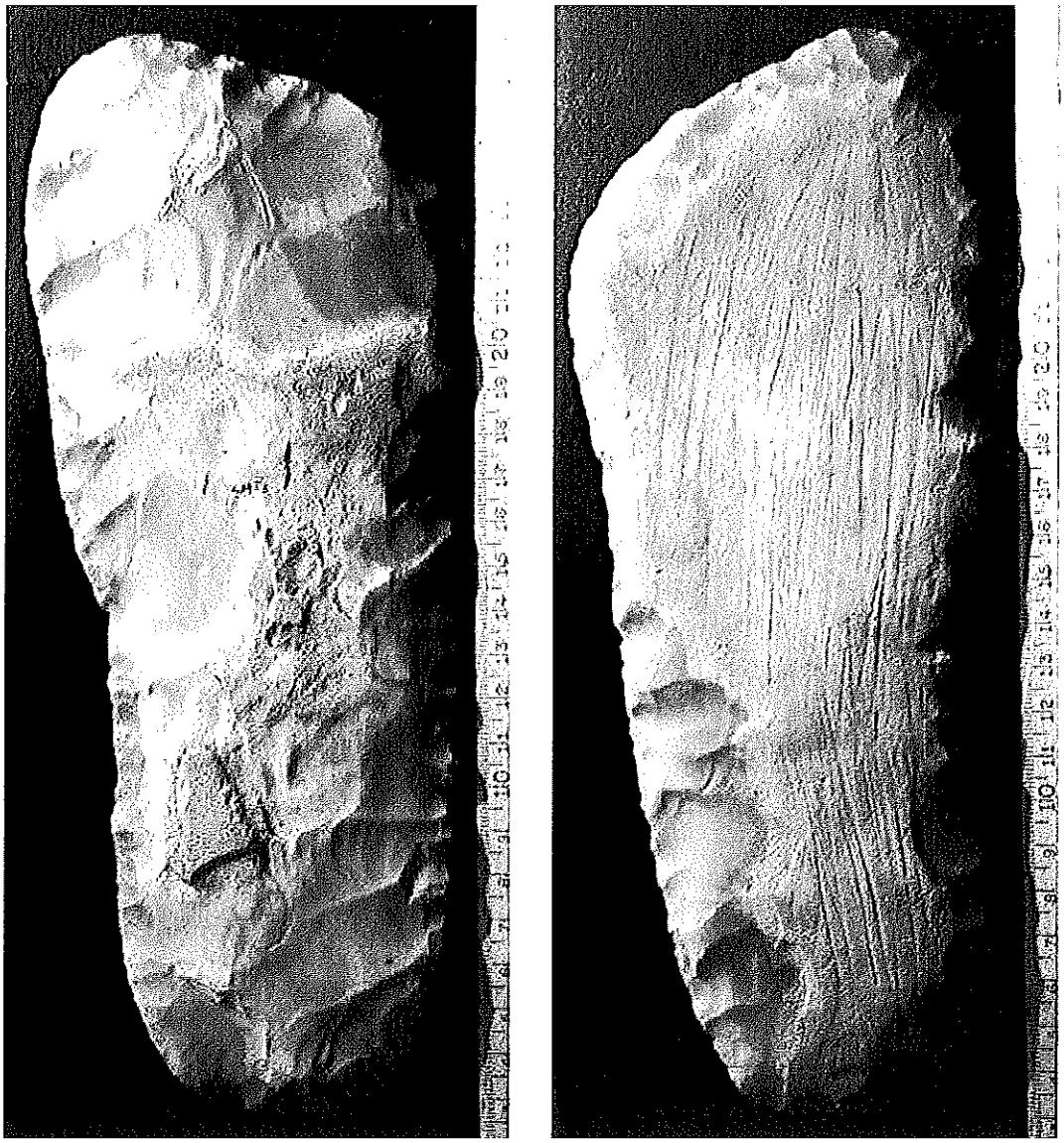


Figure 18. Specimen 8. Left, side A; right, side B

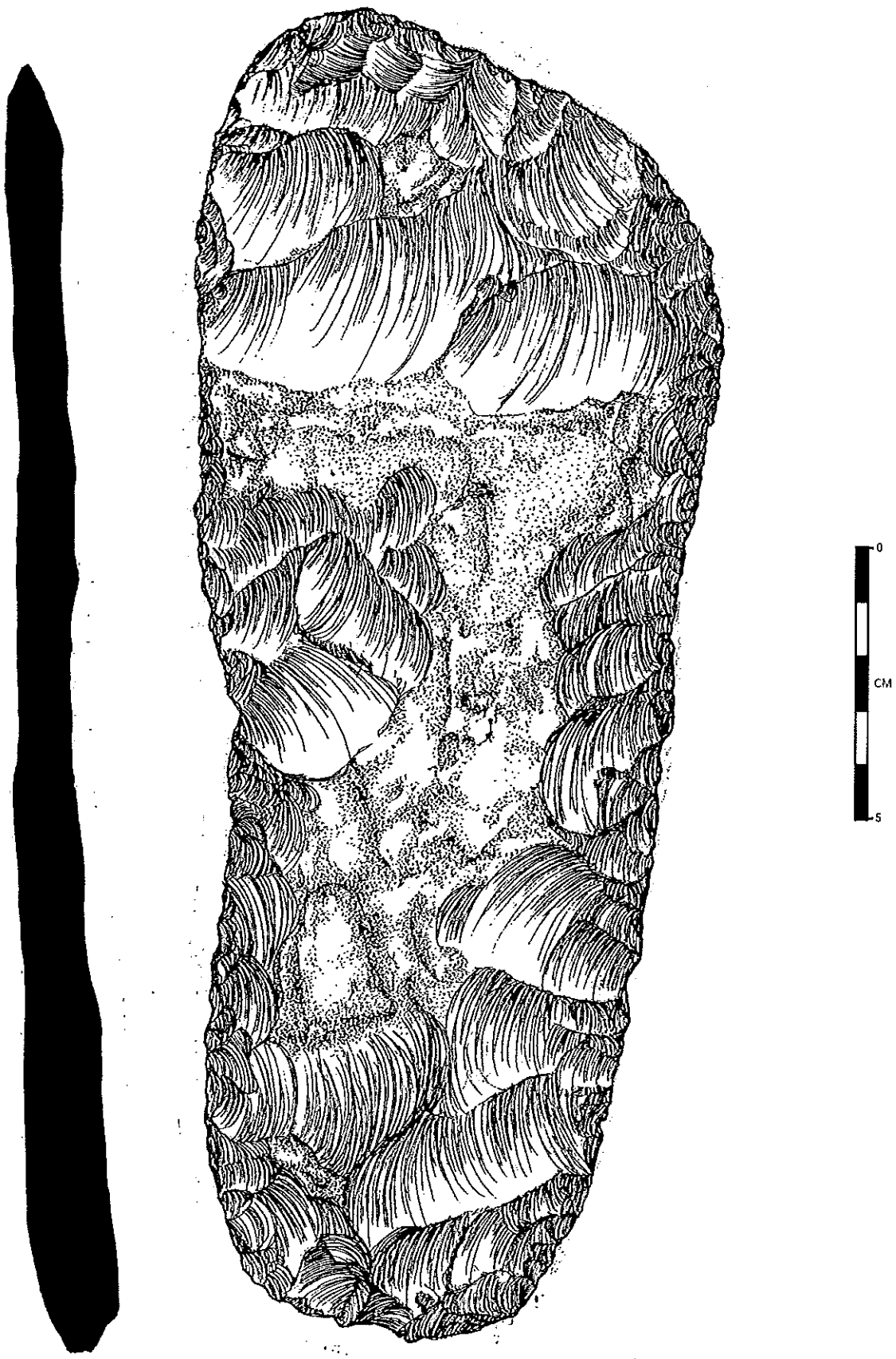
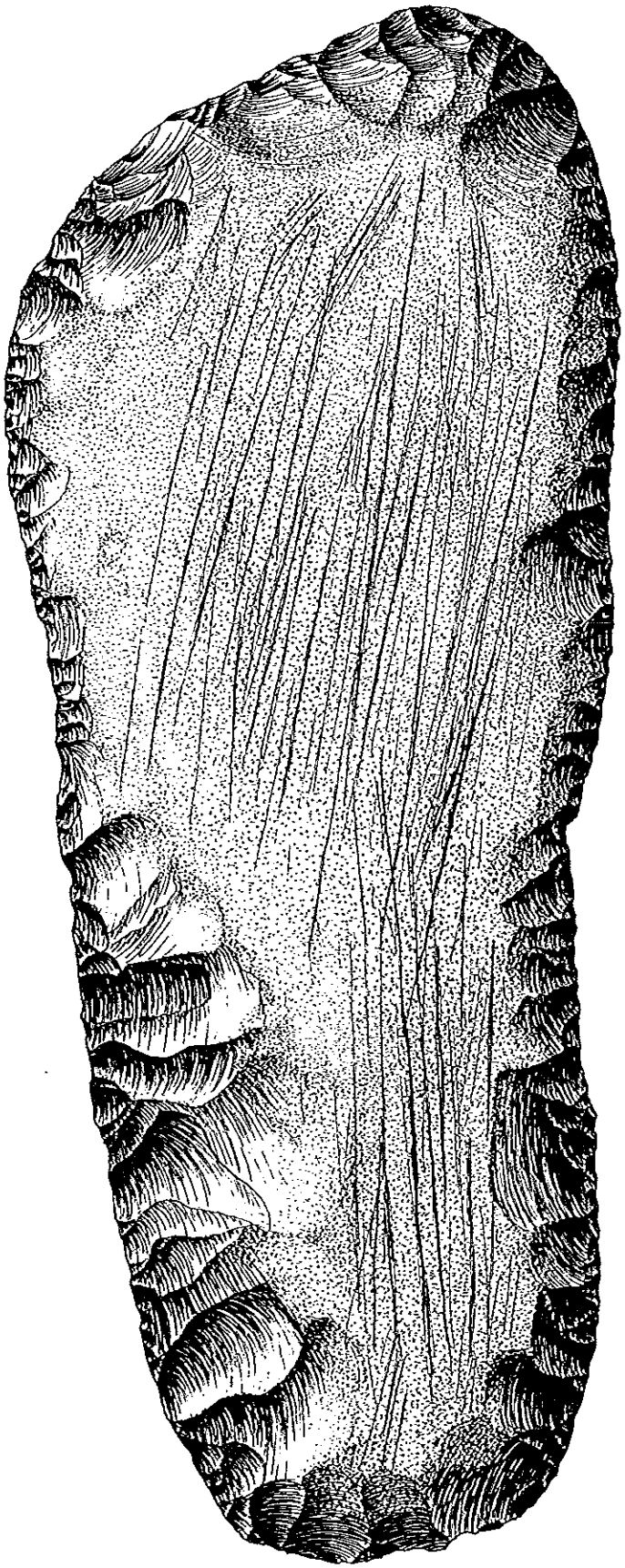


Figure 19. Specimen 8. Both sides, actual size. Slightly reduced; note scale.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Specimen #9 (Figures 20-21) This is the most finished or "complete" of this cache's specimens. The raw material is of high quality, glassy, Edwards chert, gray in color with some darker mottling; it is very consistent with the majority of this cache in material quality. No cortex remains on either face and given the shape and thinness of this specimen, and the similarity in material, it is possible that this specimen is very near the dimensions of the originally collected nodule. This specimen has a shape somewhat similar to a Gahagan biface (Turner et al. 2011), although much larger in size. No typological or chronological relationship is implied. Flake scar are generally long and narrow and tightly spaced on the biface, the product of soft hammer percussion. Flaking is much more organized on this biface than on any other specimen in the cache. Many flake scars travel well beyond the midpoint of this biface, and there is even one overshot flake scar. Large percussion flakes have been removed from both lateral edges as well as from the base on both faces. Some pressure flaking was done, and some platforms remain unstruck. It is the opinion of the experienced flintknapper Richard Dobie that no more than two series of thinning flakes remain to be removed to finish this biface.

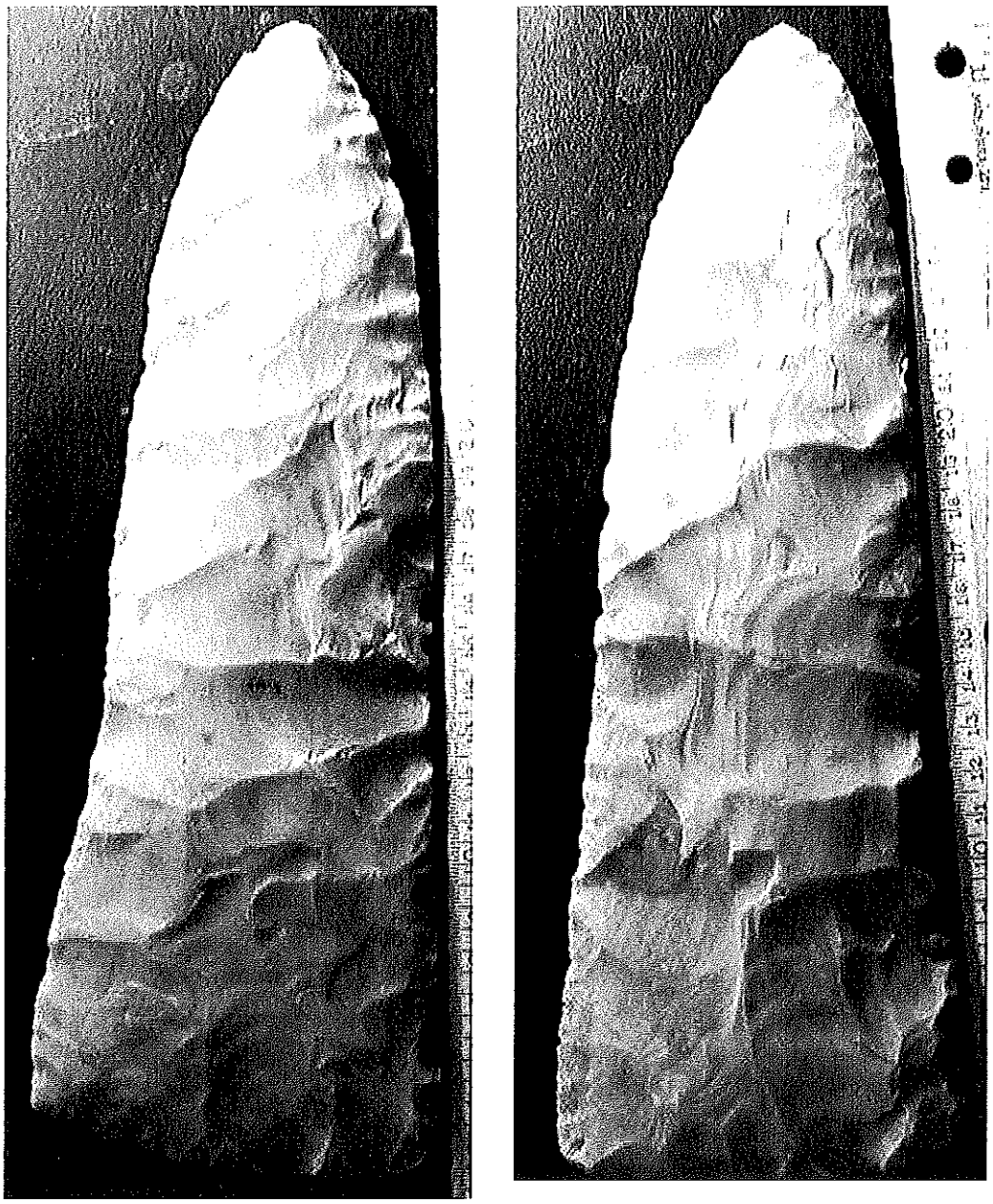


Figure 20. Specimen 9. Left, side A; right, side B.

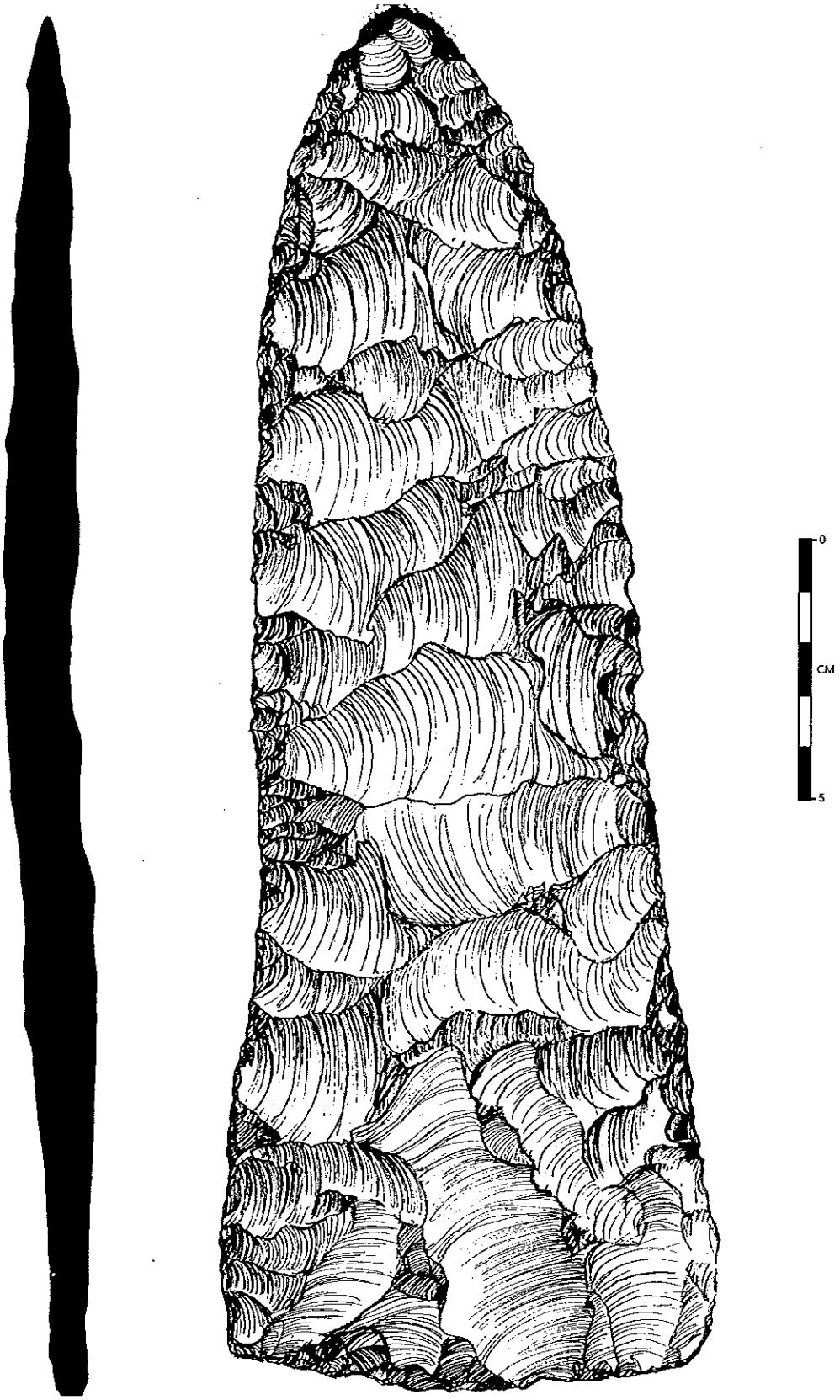
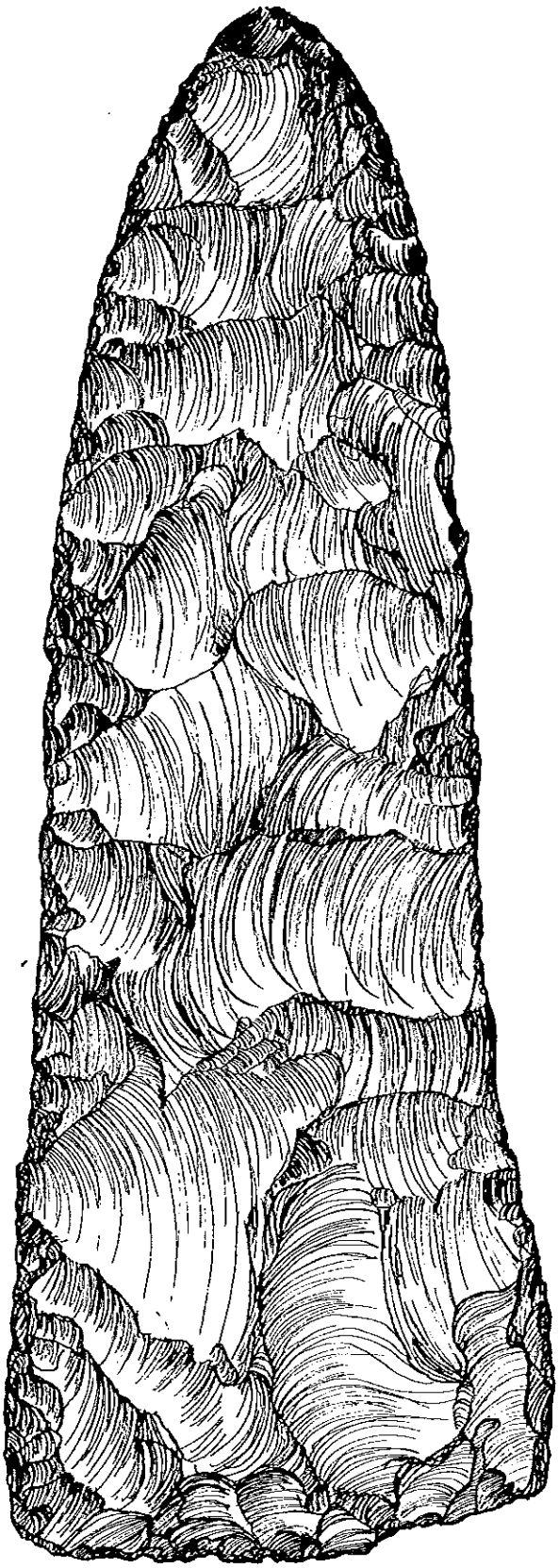


Figure 21. Specimen 9. Both sides, actual size. Slightly reduced; note scale.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Specimen #10 (Figures 22-23). This specimen has an irregular, sub-triangular, shape with a very bulbous base, that narrows rapidly to a point at the distal end. The raw material is a high quality, gray mottled, Edwards chert than is very consistent with the majority of this cache in material quality and cortex characteristics. Small amounts of cortex remain on both faces, and thus this specimen is the thinness of the originally collected nodule. Percussion flakes are broad and randomly spaced. Flake scar ridges are very pronounced. Edge trimming is evident and some unstruck platforms remain. Large percussion flakes were struck from both lateral edges and the base on both faces.

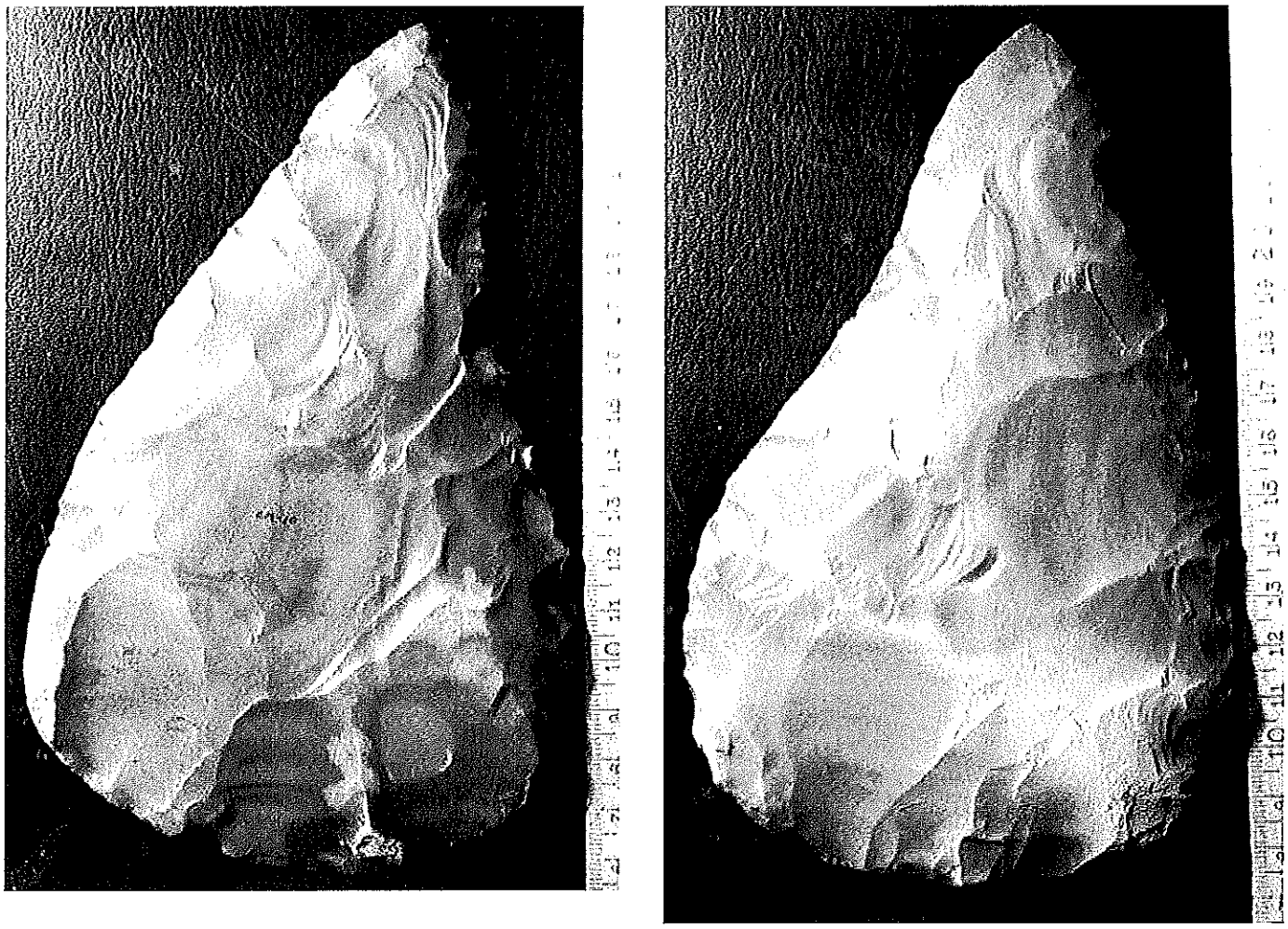


Figure 22. Specimen 10. Left, side A; right, side B.

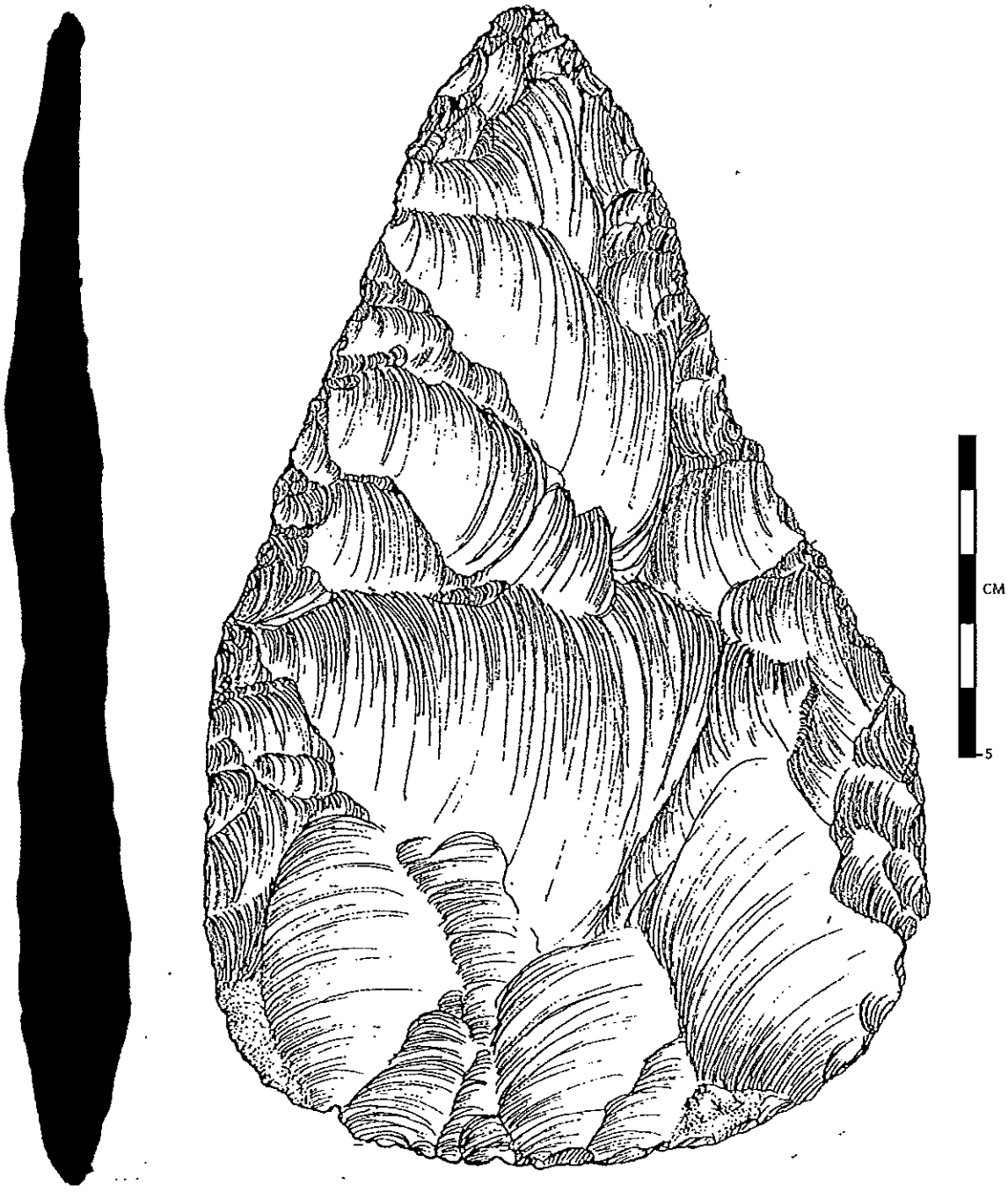
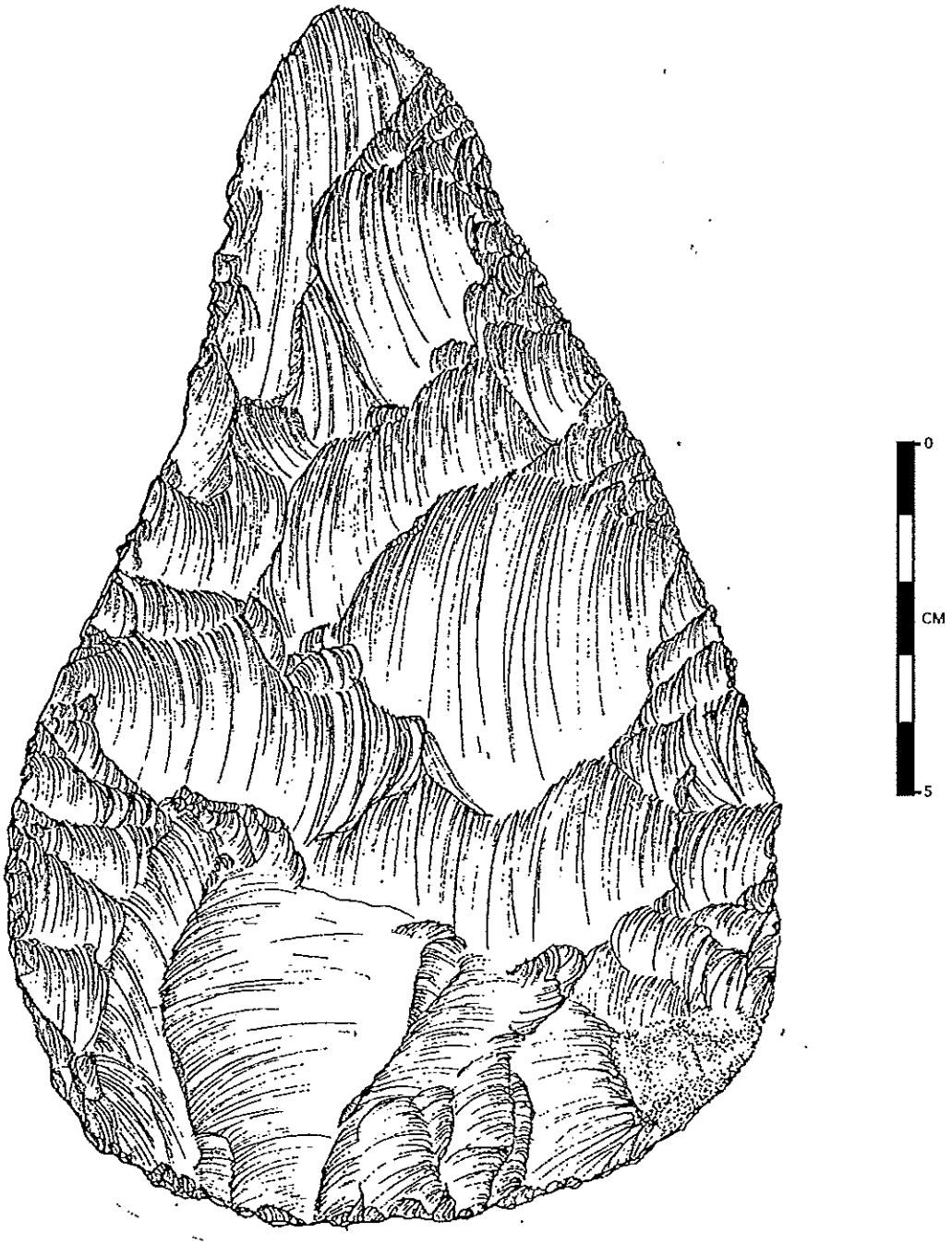


Figure 23. Specimen 10. Both sides, actual size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Specimen #11 (Figures 24-25) The specimen is lanceolate in outline. Its lateral edges are straight with a convex base. Remnants of cortex remain on one face only (side B). Because of the extremely thin nature of the nodules used in producing this cache, this specimen was probably not made on a large flake, and indeed there is no evidence of a negative bulb of percussion. The raw material is high quality, brown to gray, Edwards chert with some interesting specking in the material that has not affected the grade; it is very consistent with the majority of the cache in material quality and cortex characteristics. Flaking is organized and spaced, with broad percussion flaking. Flake scars ridges are pronounced and some flake scars extend more than 75 percent across the biface and are overlapping.

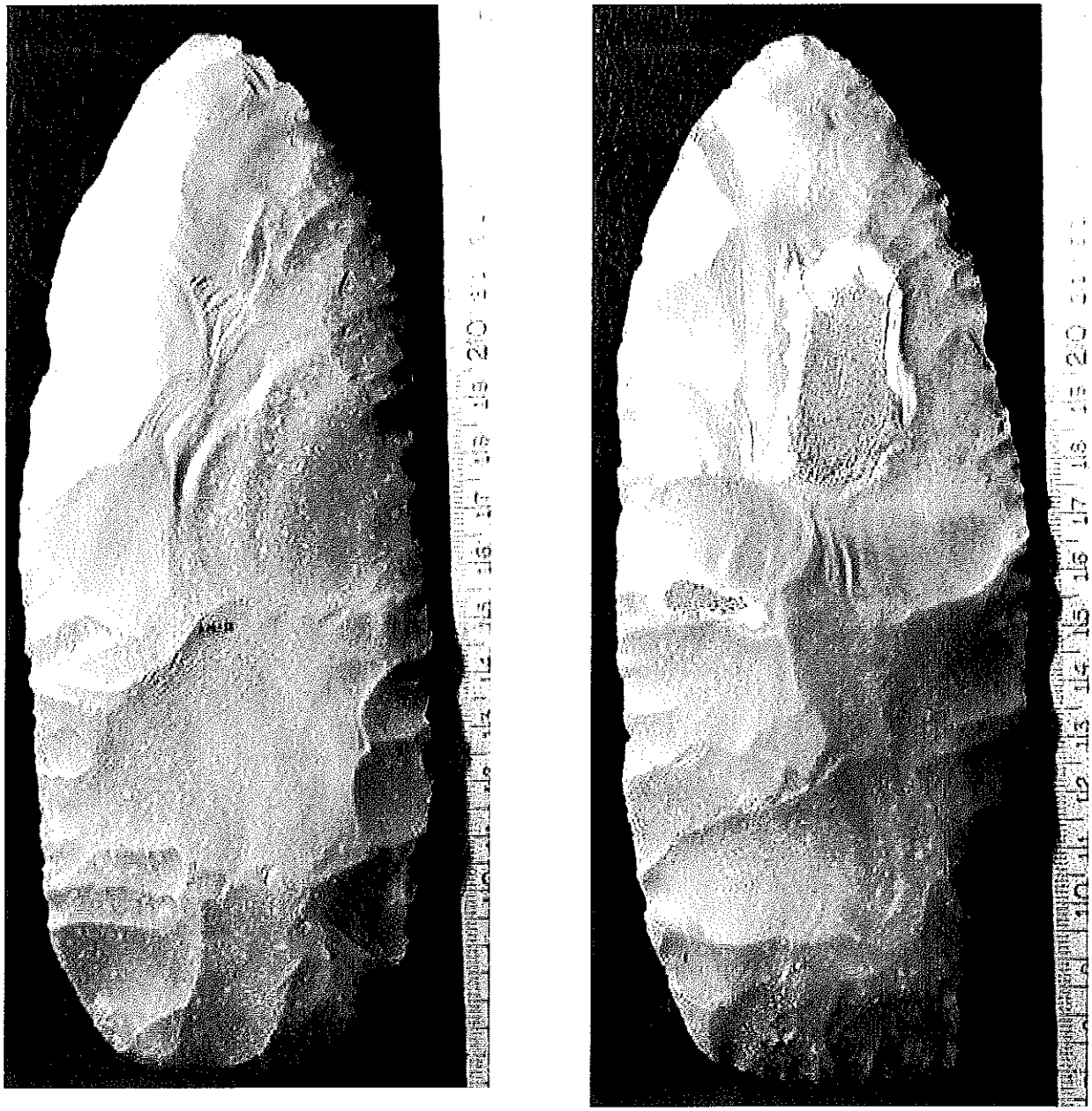


Figure 24. Specimen 11. Left, side A; right, side B.

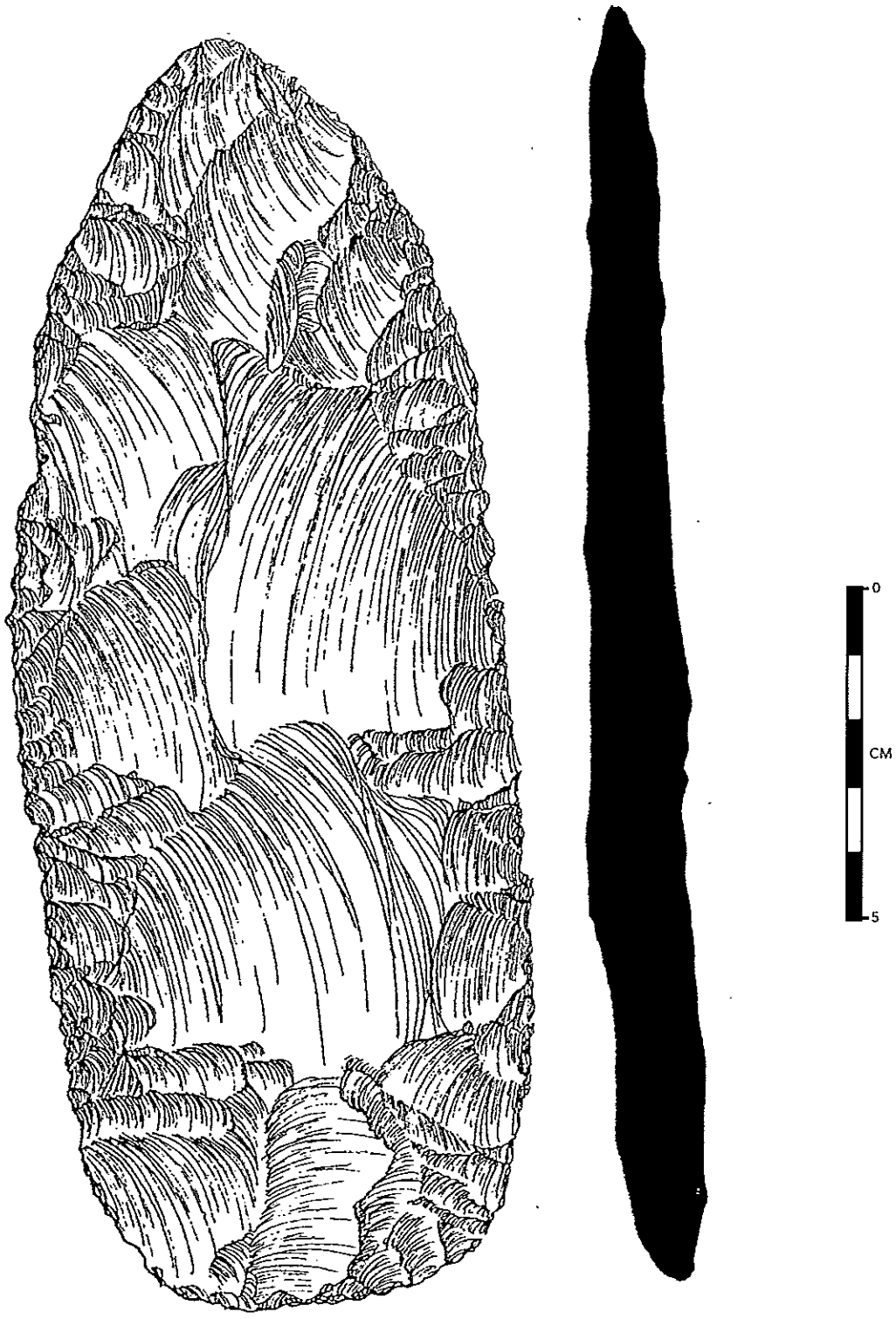
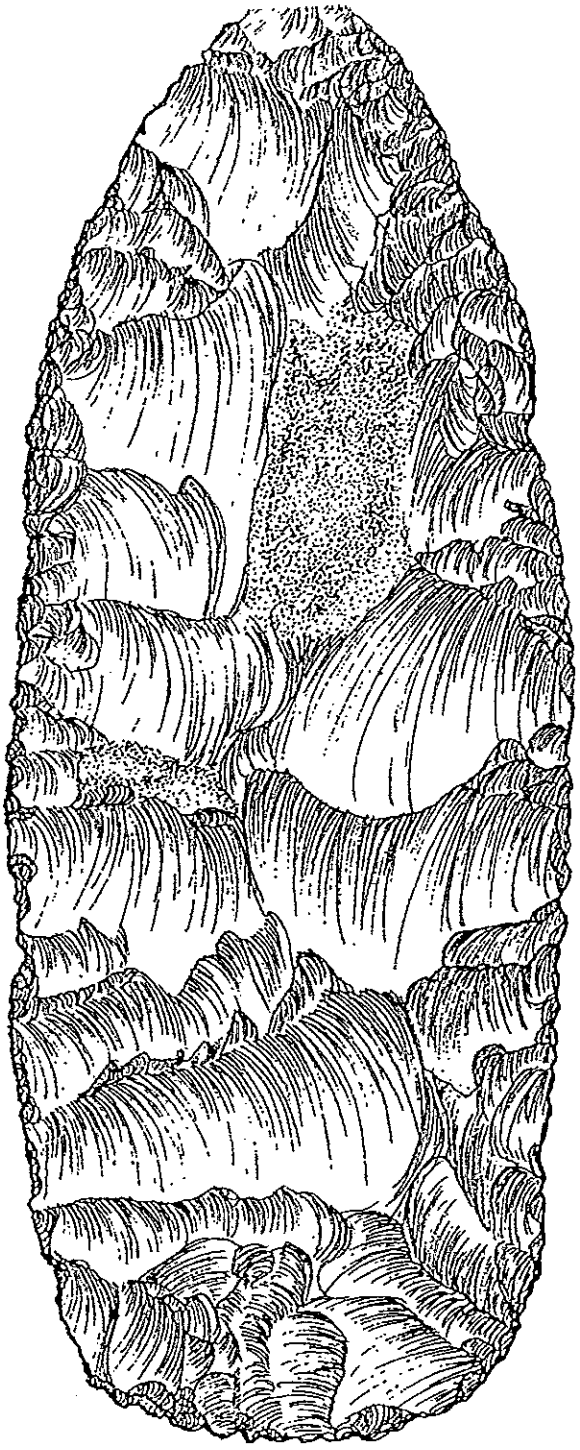


Figure 25. Specimen 11. Both sides, actual size.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Specimen #12 (Figures 26-27) This specimen is sub-triangular in outline and very irregular in shape. Cortex remains on both faces, and the irregular shape was probably due to the shape of the originally collected nodule. The raw material is very high quality Edwards chert, and quite consistent with the majority of the cache in grade and cortex characteristics. Side A has fairly large percussion flakes with the edge lowered in preparation for removal of more flakes on side B. Edges are not abraded and no prepared platforms are evident. Flake scar ridges are very pronounced.

Figure 26. Specimen 12. Both sides, actual size..

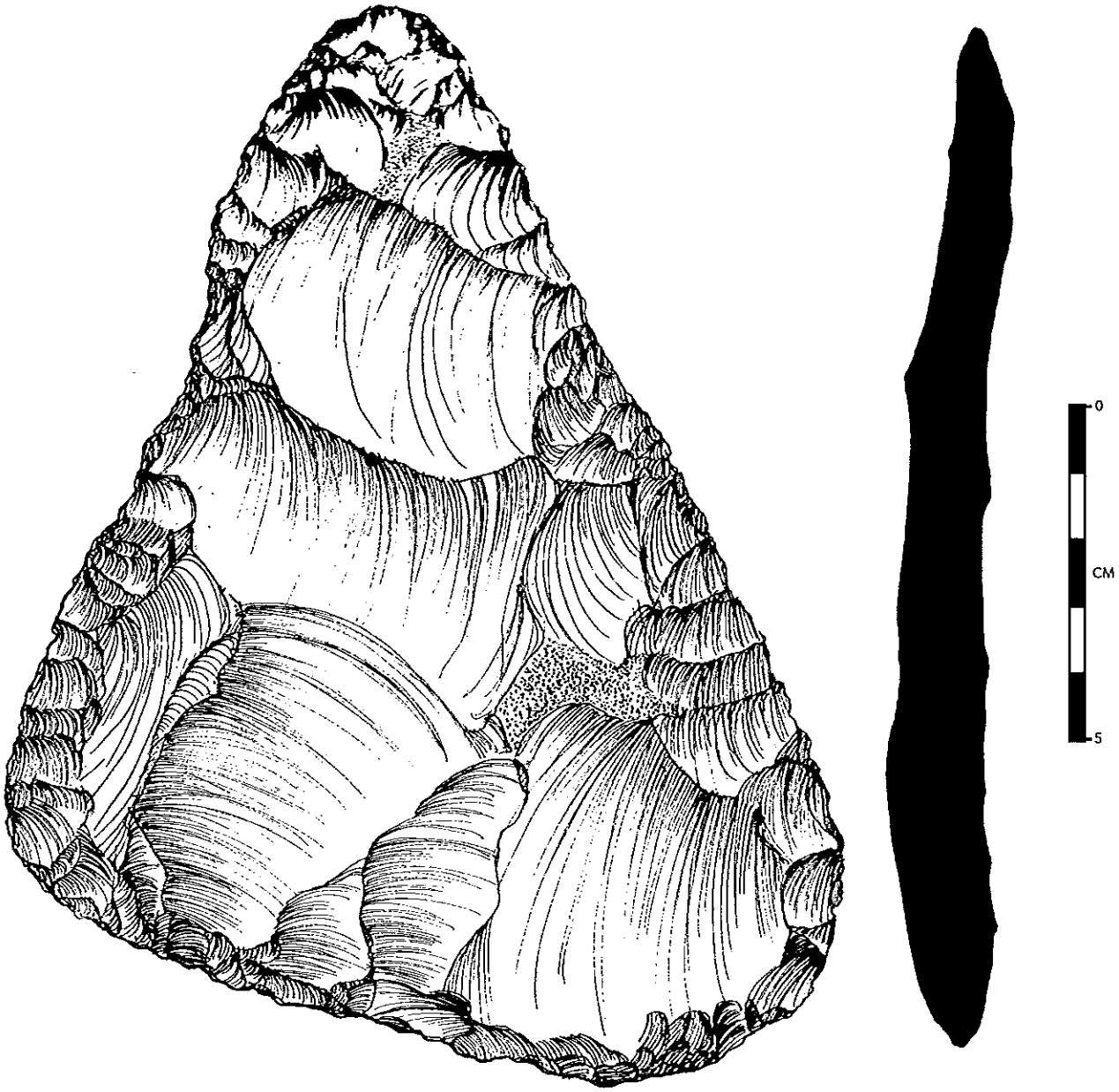
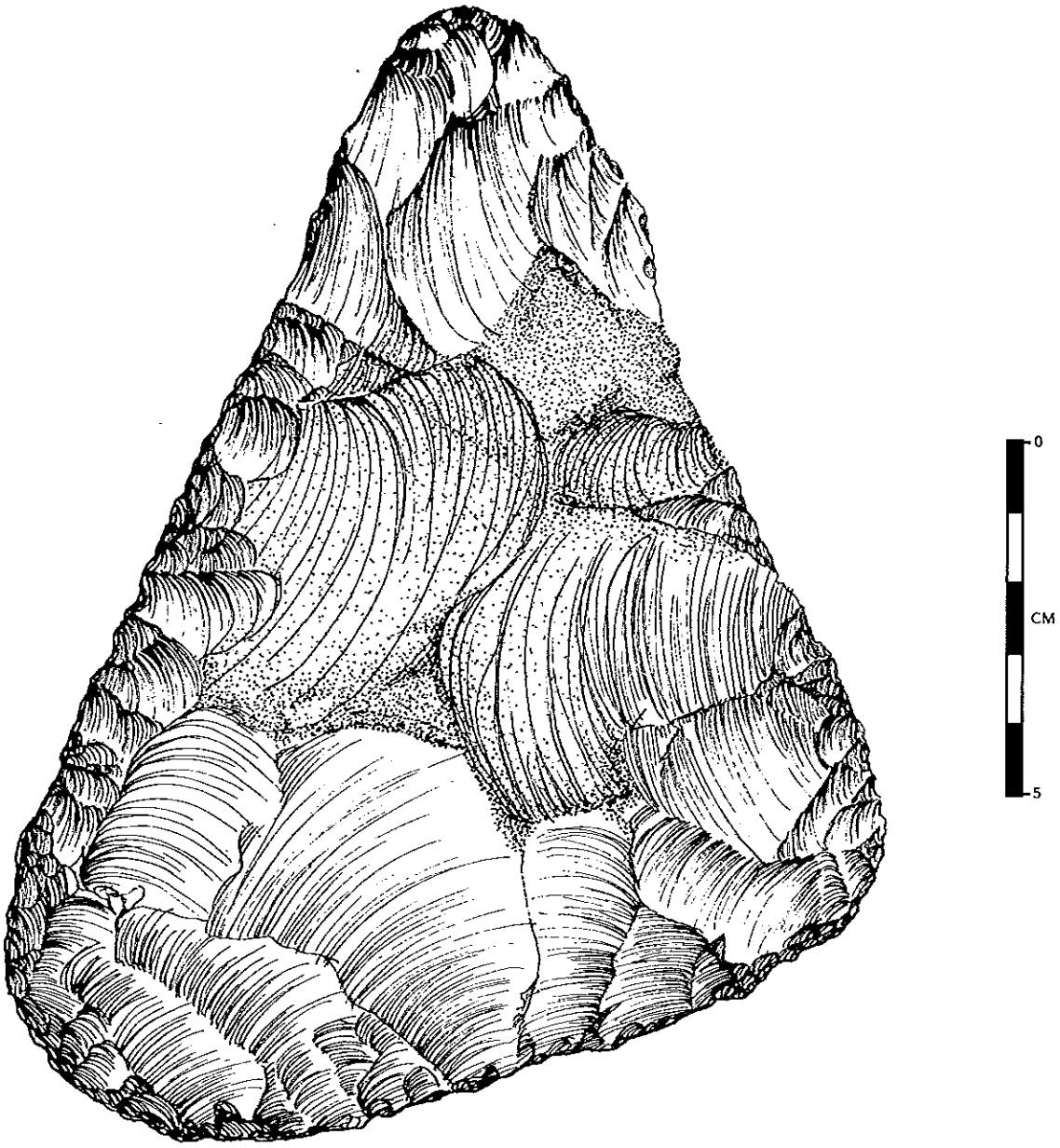


Figure 27. Specimen 12. Both sides, actual size.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Specimen #13 (Figures 28-29) The specimen is sub-triangular in outline with one lateral edge more convex than the other. A slight amount of cortex remains on side A, but does not resemble the cortex found on the majority of this cache. The chert raw material has a slightly purple sheen over tan, and appears to be of a slightly higher quality than the majority of the material in this cache. It has a slight curve in its longitudinal axis and may have been made of a large flake rather than a whole nodule. UV light response values are also somewhat different on this specimen, fluorescing white with only a tinge of yellow in the short wave. Flaking consists of large percussion, with many flake scars traveling well past the biface midpoint and overlapping. Thinning flakes have been struck from both lateral edges as well as the base on both faces.

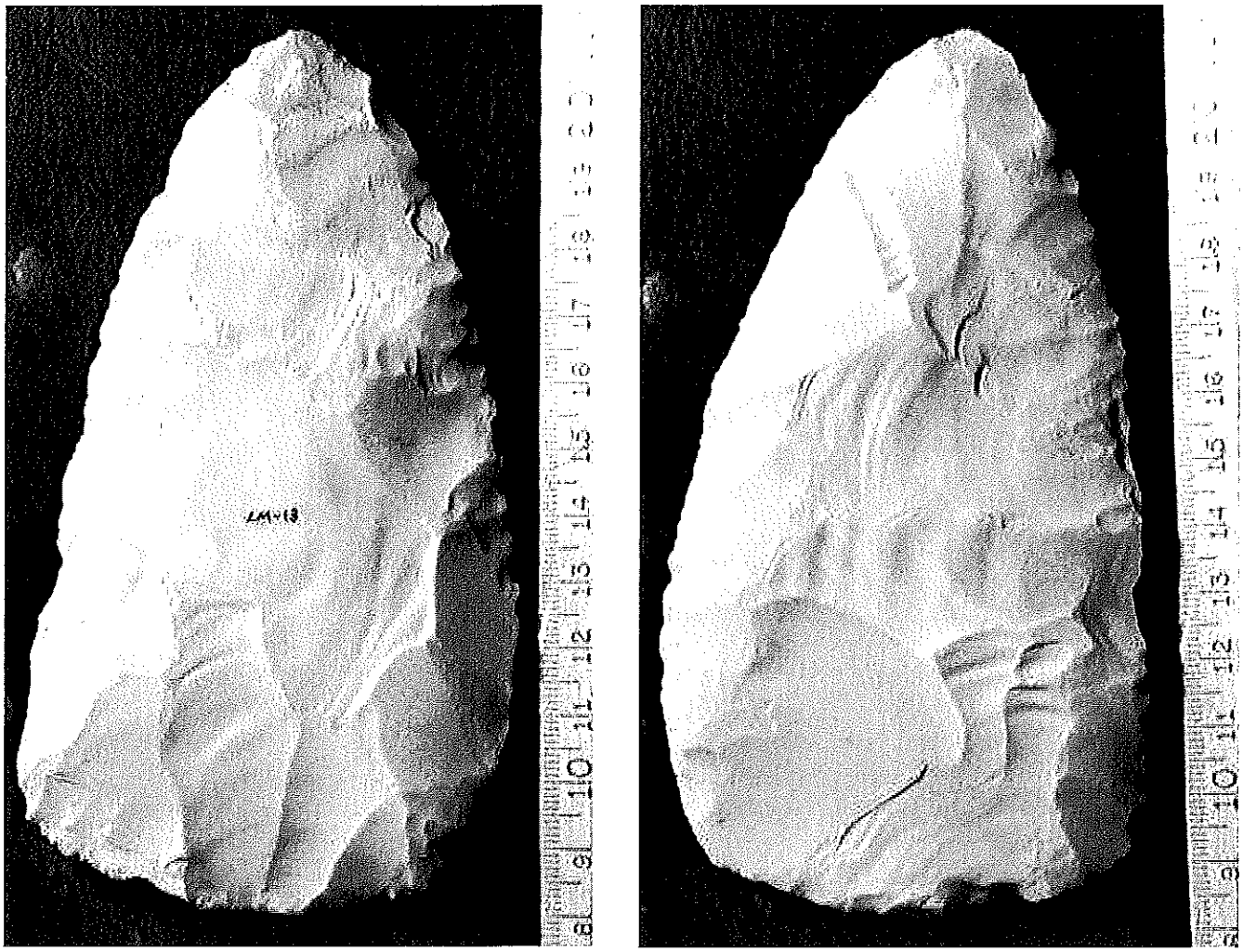


Figure 28. Specimen 13. Left, side A; right, side B.

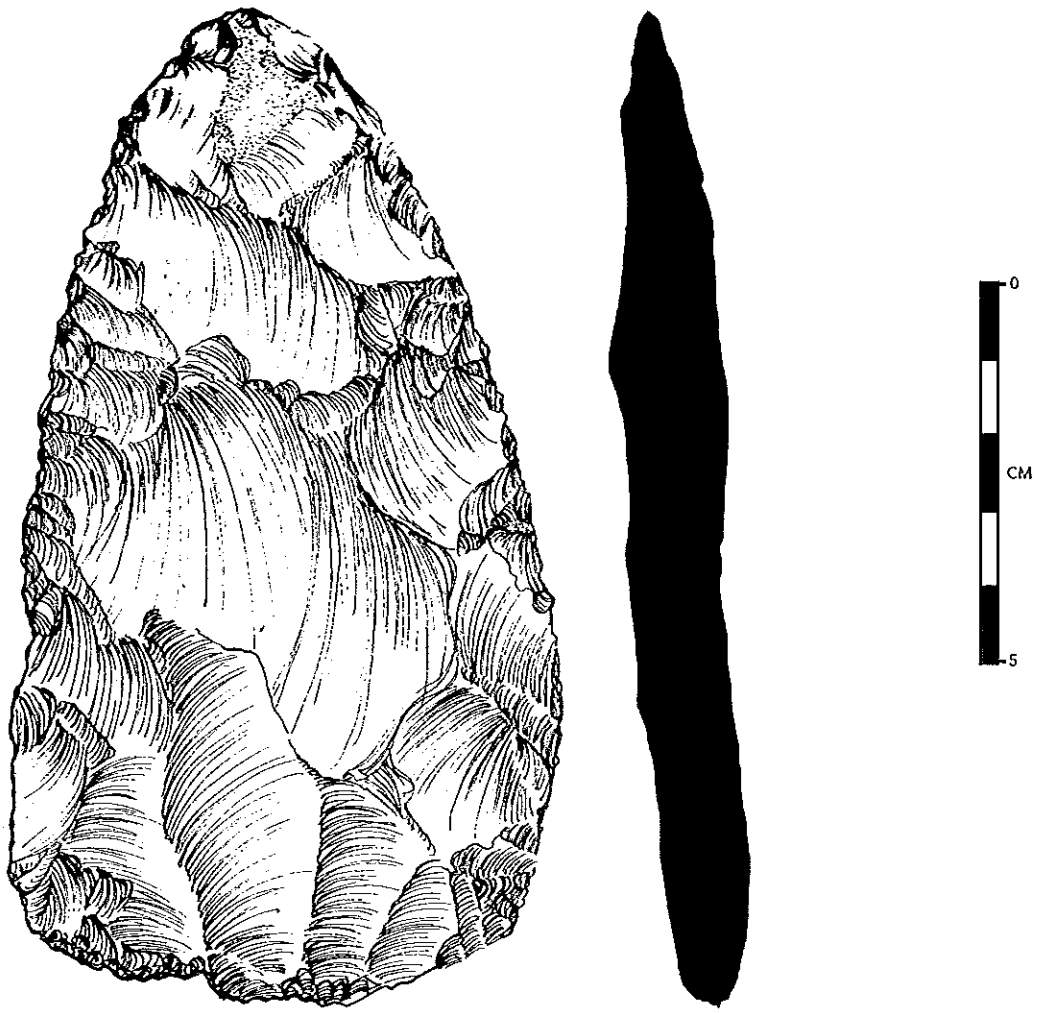
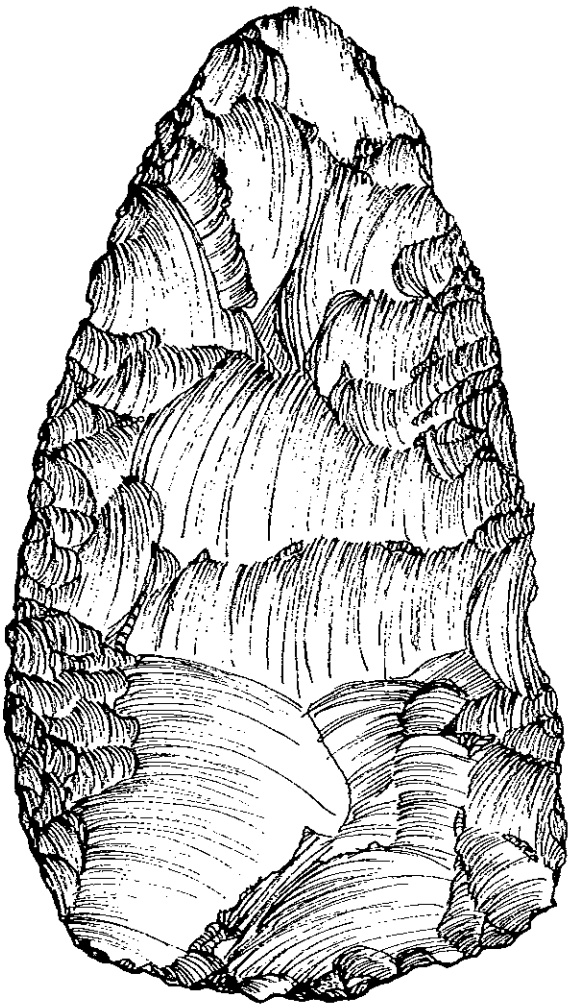


Figure 29. Specimen 13. Both sides, actual sizes.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Specimen #14 (Figures 30-31) This specimen is sub-triangular in outline with one lateral edge convex, while the other is concave. Slight amounts of cortex remain on both faces and the raw material is very consistent with the majority of this cache in terms of quality and cortex characteristics. Edges are trimmed and some unstruck platforms remain. Percussion flaking is random with some flake scars traveling past the biface's midpoint. Thinning flakes have been taken from both lateral edges as well as the base on both faces. This specimen was probably made out of a smaller piece of a broken nodule.

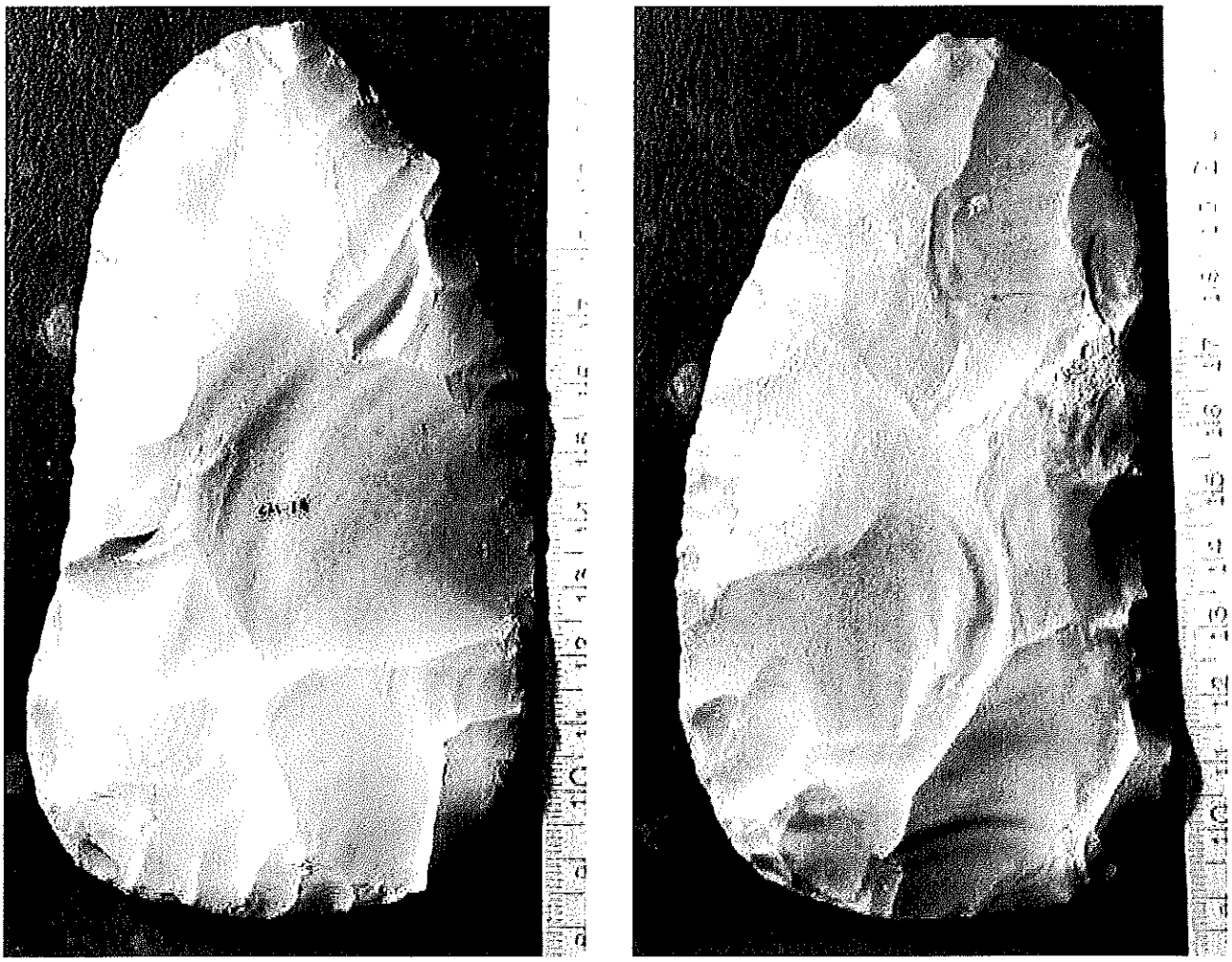


Figure 30. Specimen 14.. Left, side A; right, side B.

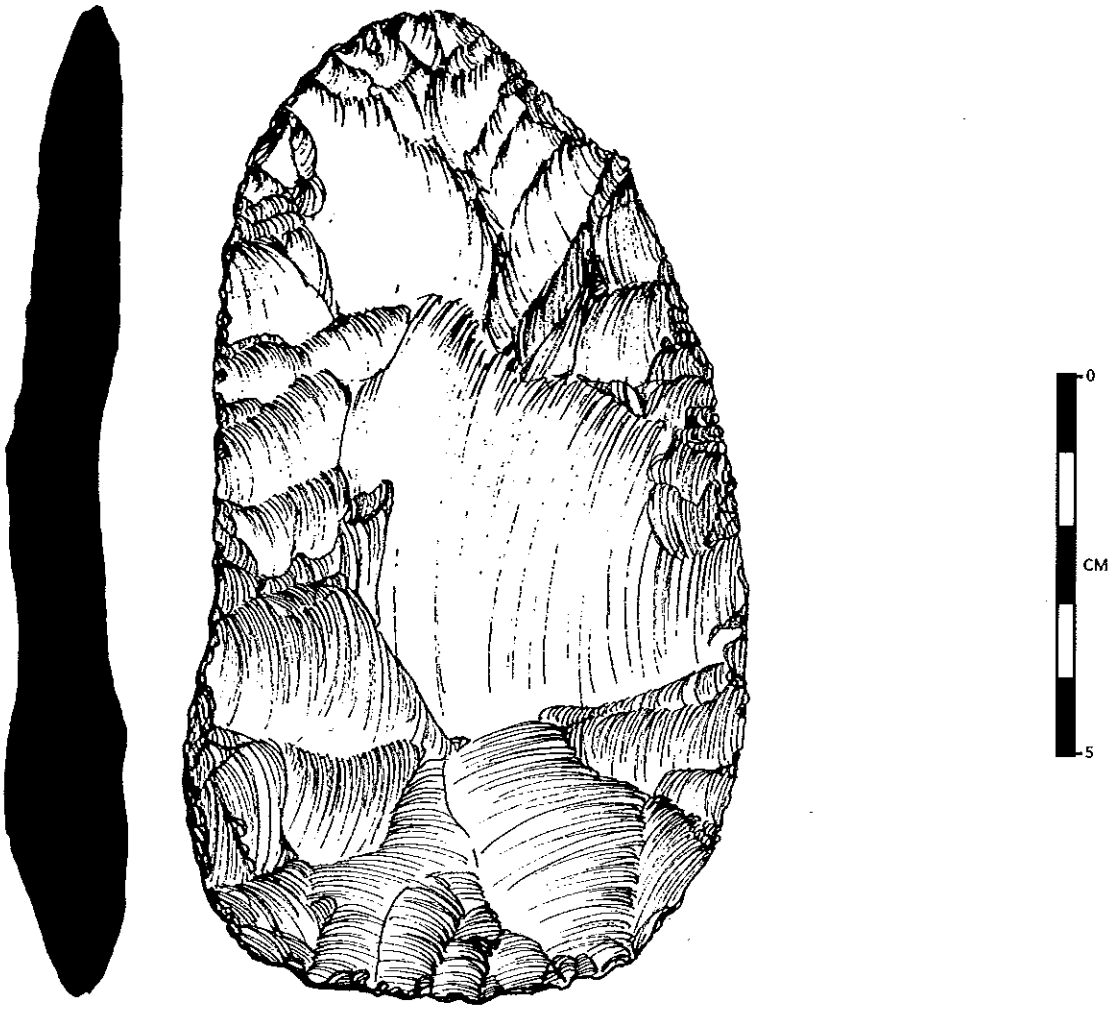
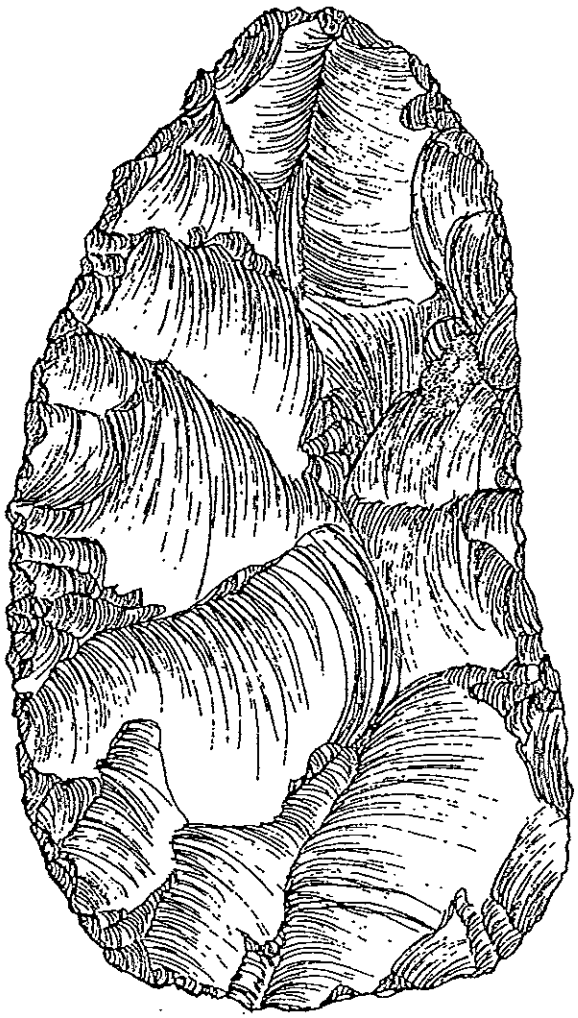


Figure 31. Specimen 14. Both sides, actual size.

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Specimen #15 (Figures 32-33) The specimen is sub-triangular in outline and very symmetrical. Cortex remains on both faces and the biface is the thinness of the originally collected nodule. The biface is consistent with the majority of this cache in material quality and cortex characteristics. Flaking is random and flake scar ridges are pronounced. Edges are not trimmed and no unstruck platforms are apparent. The knapping has an unorganized look about it, and some flake scars travel more than halfway across the biface on both faces. Thinning flakes were struck from both lateral edges as well as from the base on both faces.

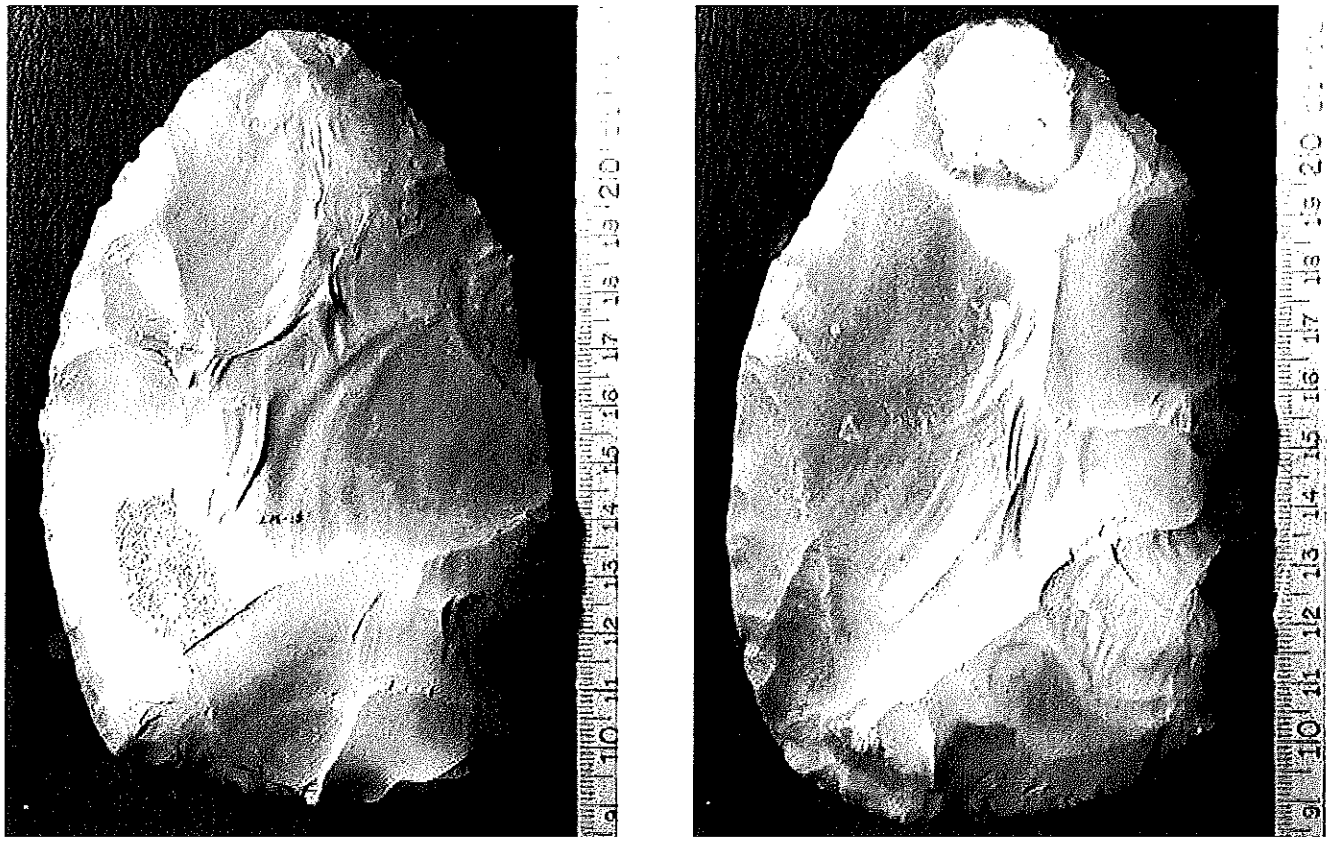


Figure 32. Specimen 15. Left, side A; right, side B.

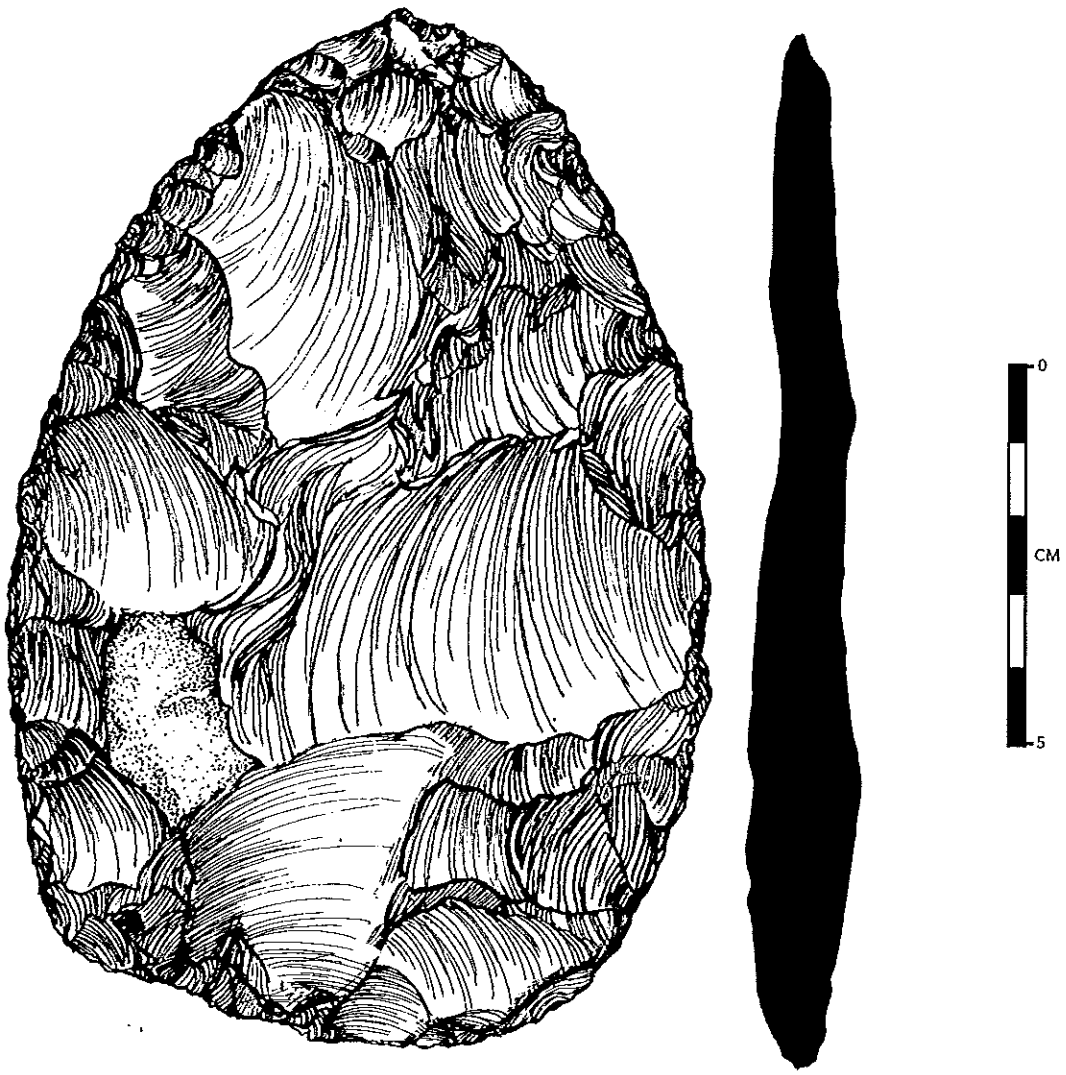
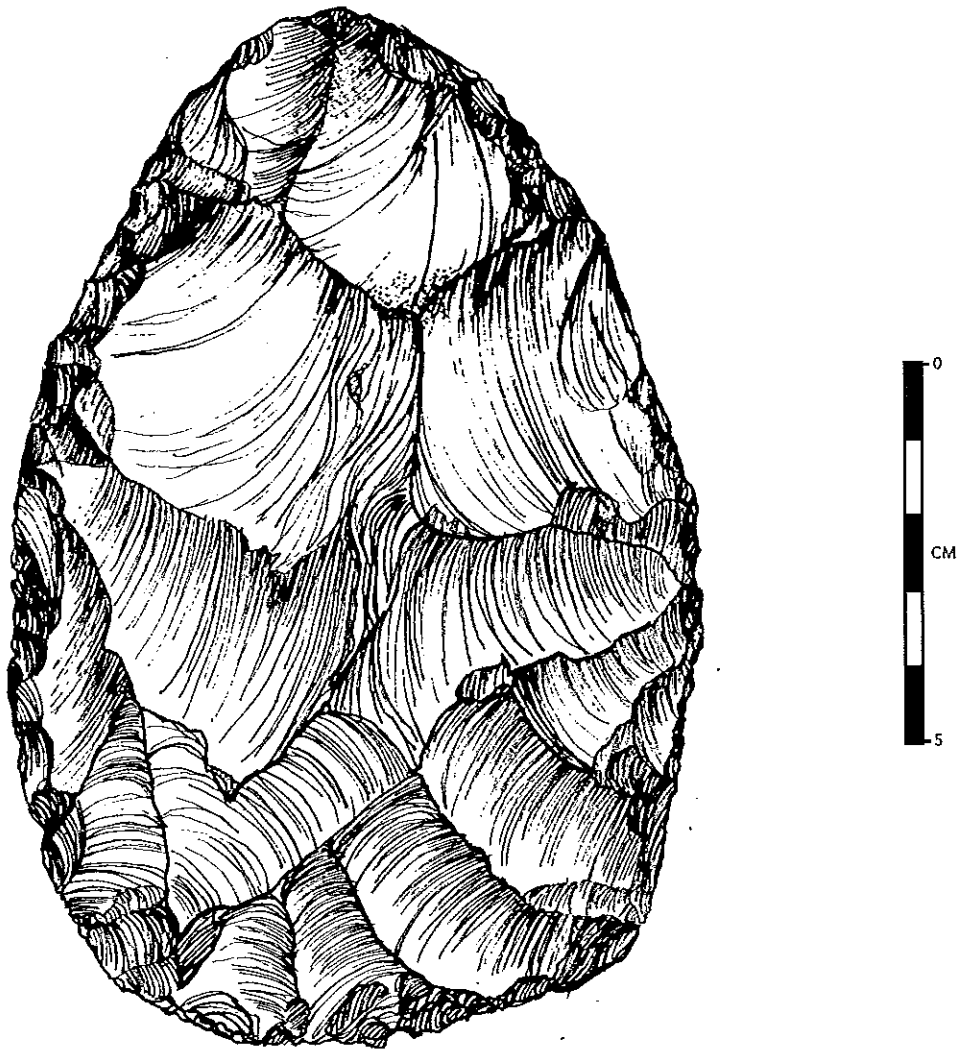


Figure 33. Specimen 15. Both sides, actual size.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Specimen #16 (Figures 34-35) This specimen is sub-triangular in outline and its raw material is very consistent with the majority of this cache in both quality and cortex characteristics. Cortex remains on both faces and it is apparent that this biface is the same thinness as the originally collected nodule. Flake scars are broad and well spaced; flake scars ridges are pronounced. It appears that some platforms were prepared to strike flakes from side A, but were never struck. Many flake scars extend well past the biface midpoint and are overlapping. Large thinning flakes were removed from both lateral edges and from the base on both faces.

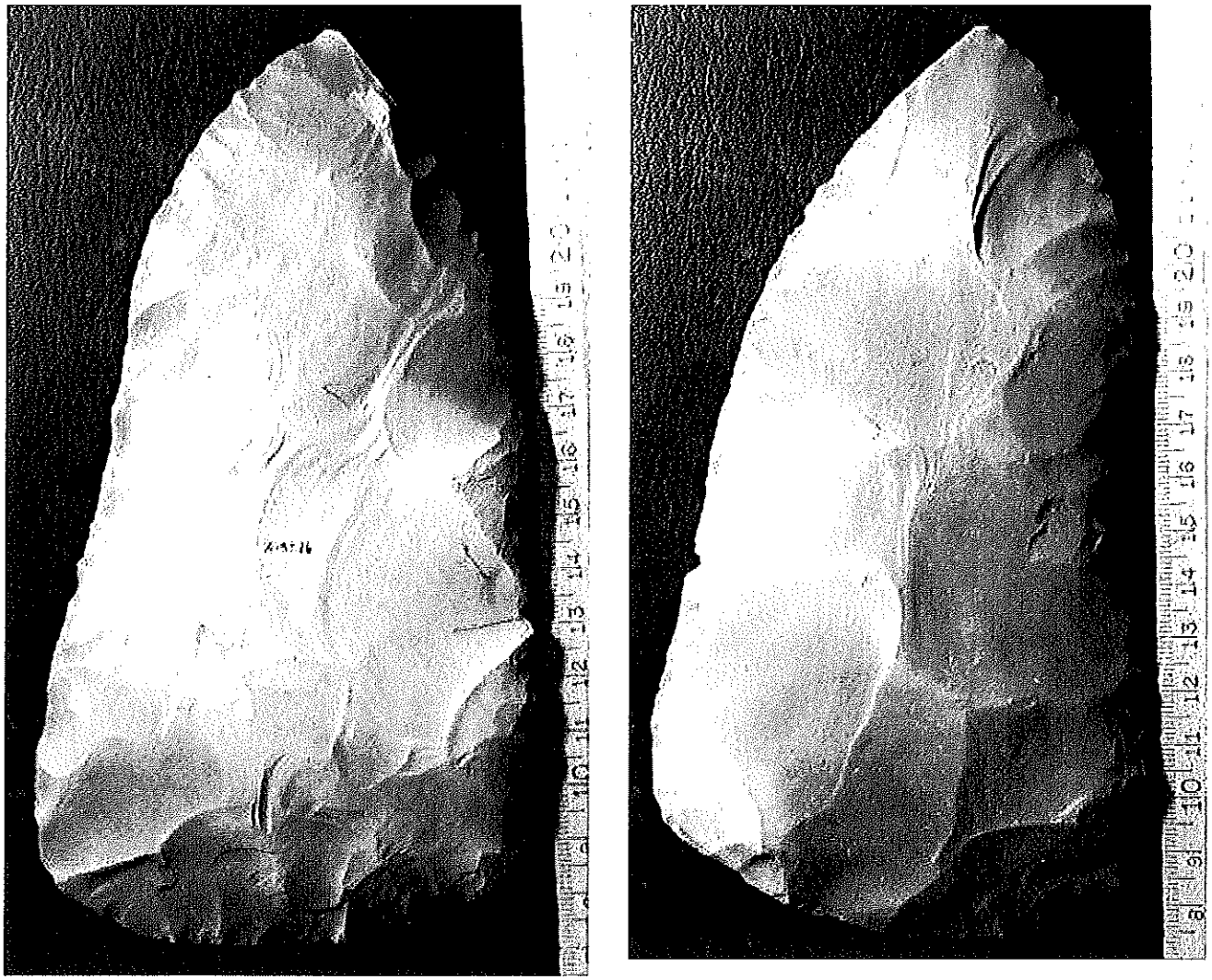


Figure 34. Specimen 16. Left, side A; right, side B

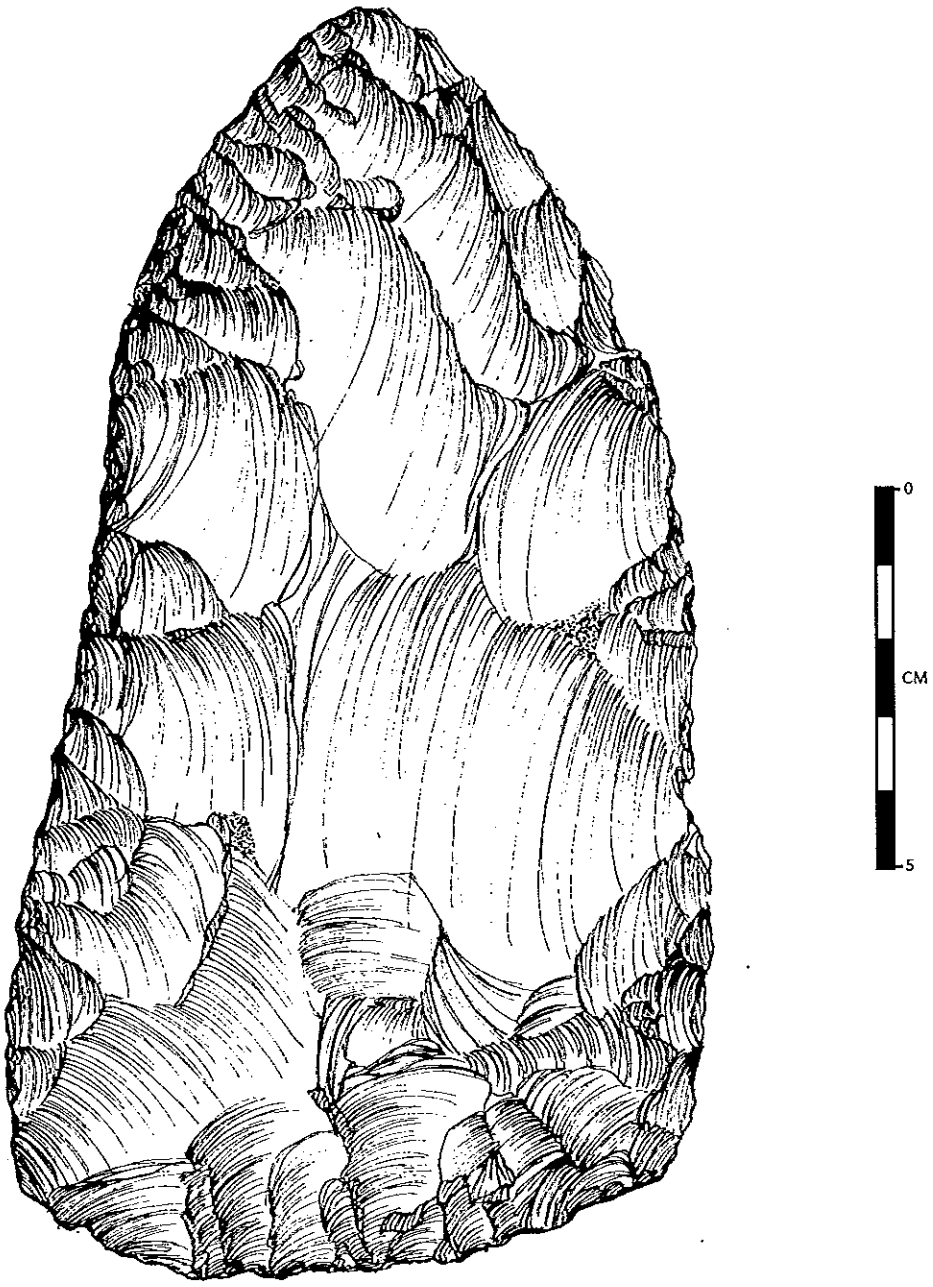
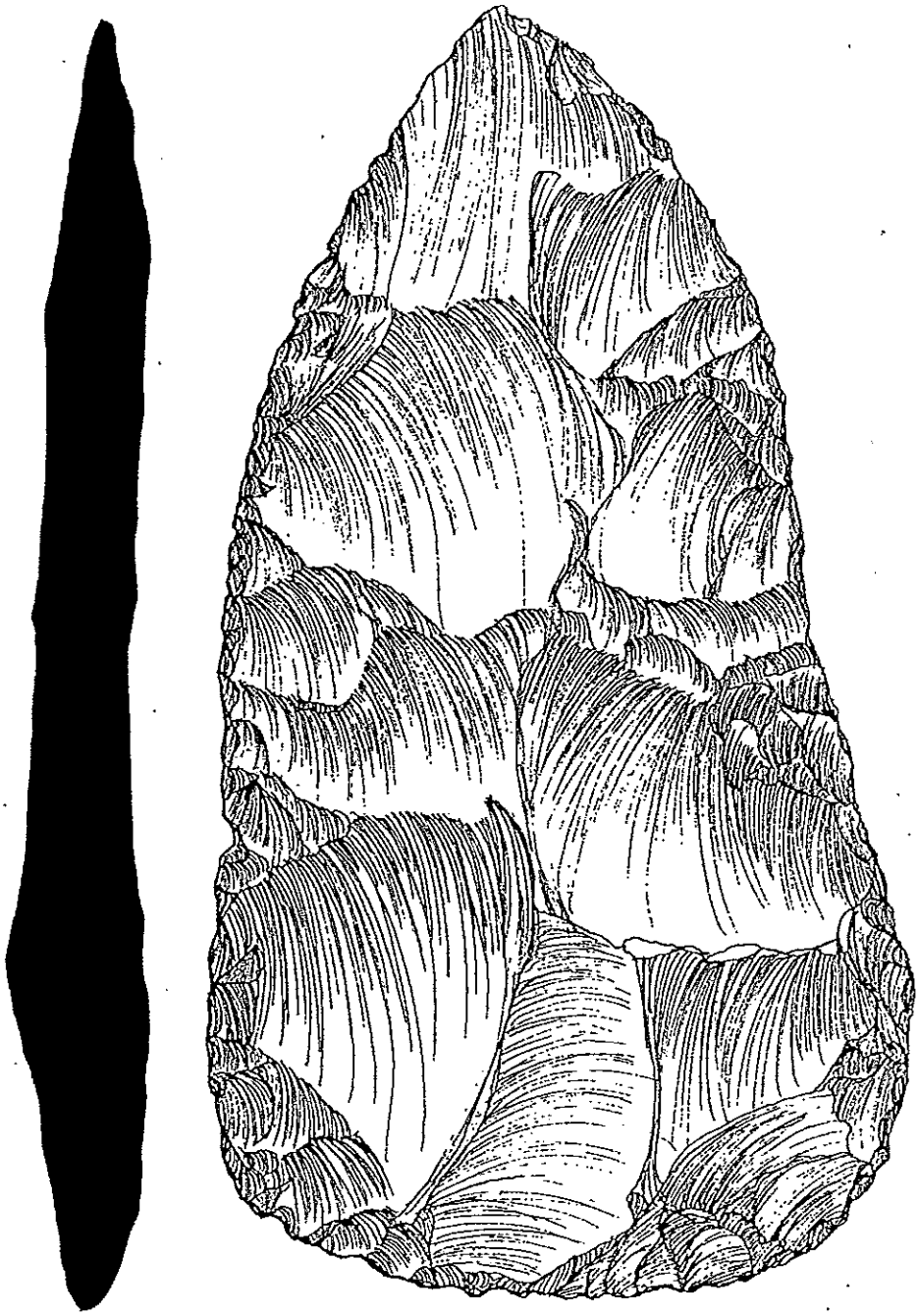


Figure 35. Specimen 16. Both side, actual size.



Specimen #17 (Figures 36-37) The artifact is sub-triangular in outline and the raw material is of a very high quality. Cortex remains on both faces, but it is also not consistent with the majority of this cache, being chalky white in color. The UV light values on this specimen also differ from the majority of the cache. Flaking is very random and unorganized, with large, overlapping percussion flake scars. Thinning flakes have been struck from both lateral edges as well as from the base on both faces. Some edges are trimmed and lowered, but no prepared isolated platforms are evident.

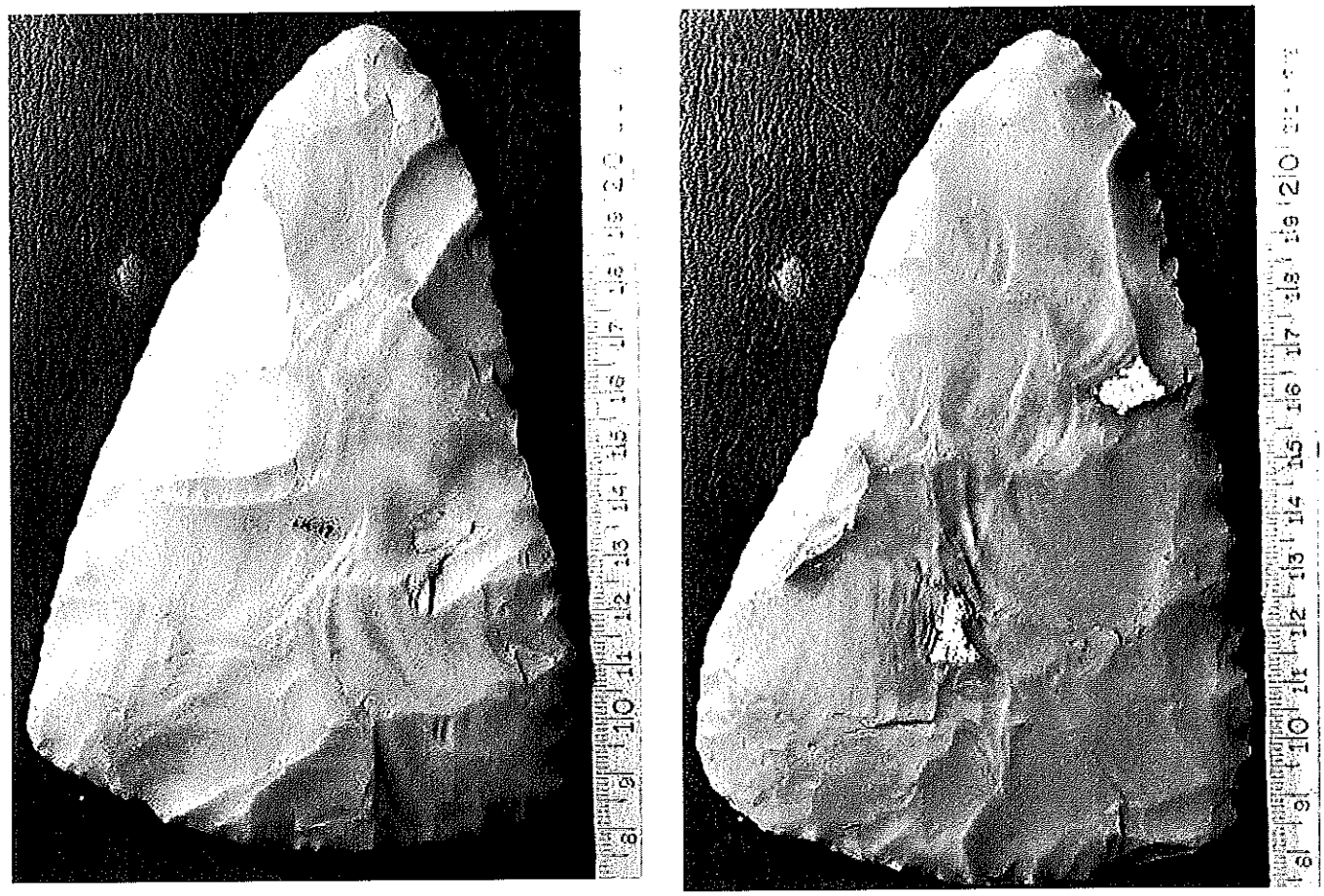


Figure 36. Specimen 17. Left, side A; right, side B.

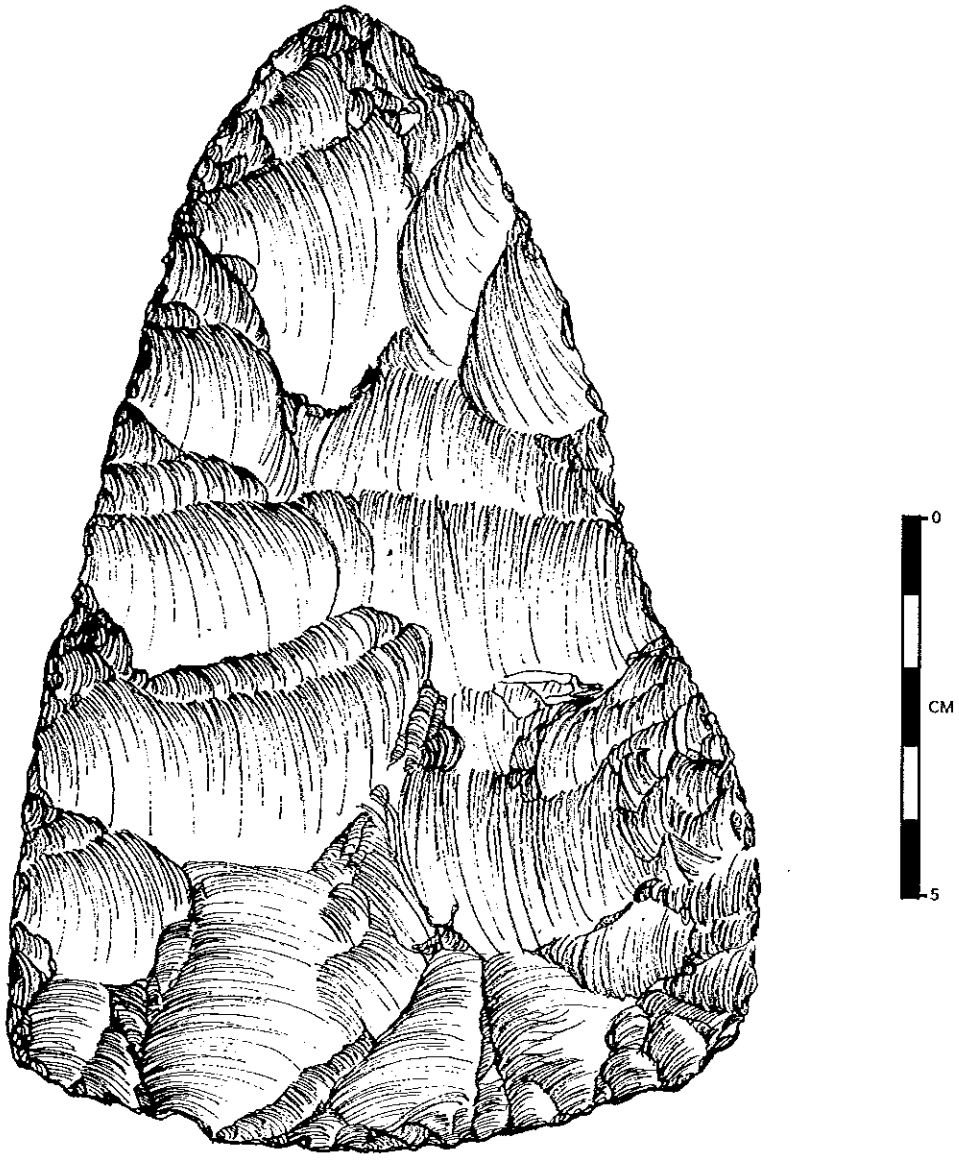
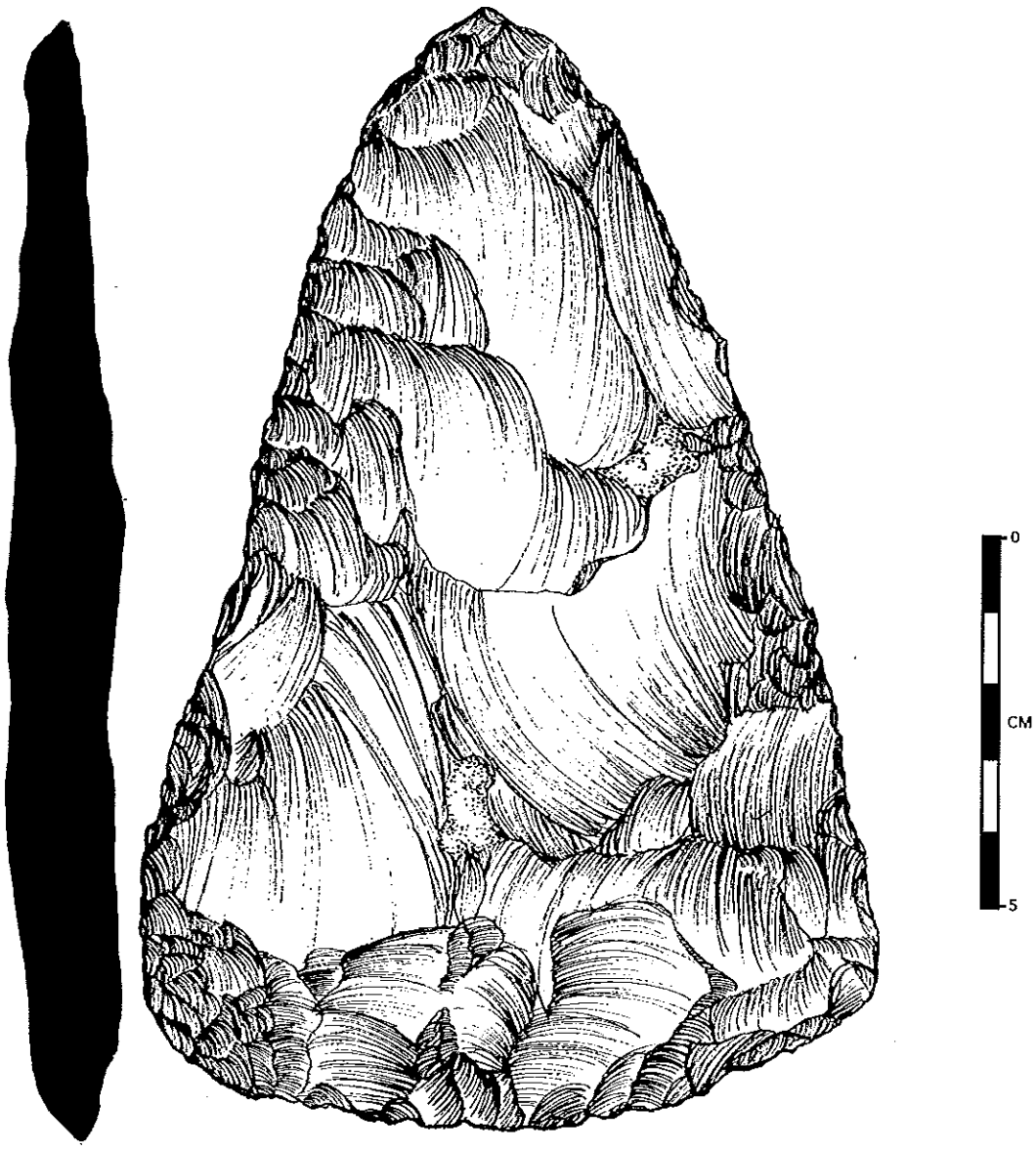


Figure 37. Specimen 17. Both sides, actual size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Specimen #18 (Figures 38-39) – The specimen is sub-triangular in outline and cortex remains on both faces. The raw material is of a higher grade than the majority of the specimens in this cache and the cortex is different as well, being a chalky white color similar to specimen #17. Flaking appears to be random and unorganized. Some edge trimming was done; however, no prepared isolated platforms are evident. A few large percussion flake scars are evident and appear to have been overlapping. Large thinning flakes were removed from the base on side A only.

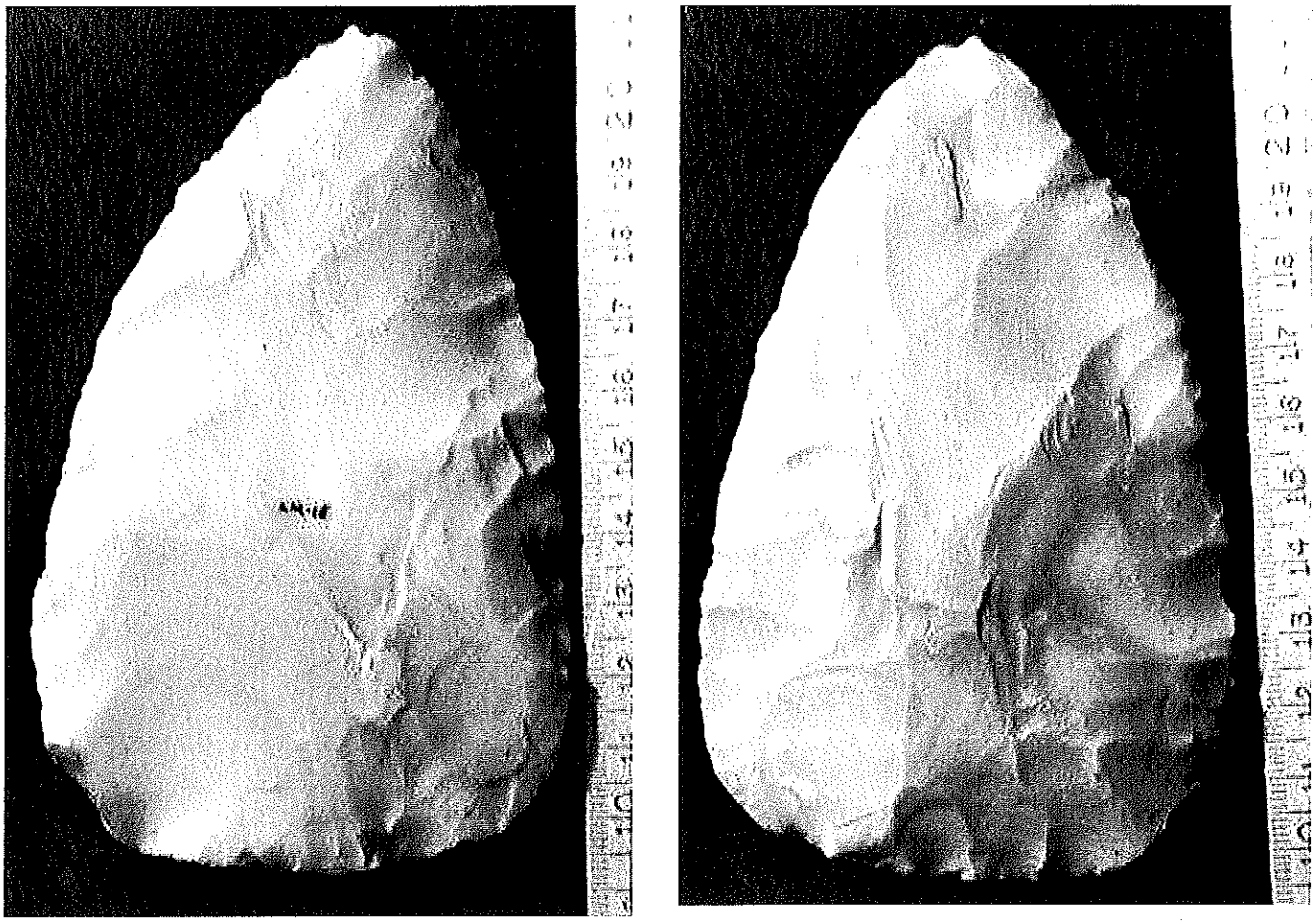


Figure 38. Specimen 18. Left, side A; right, Side B.

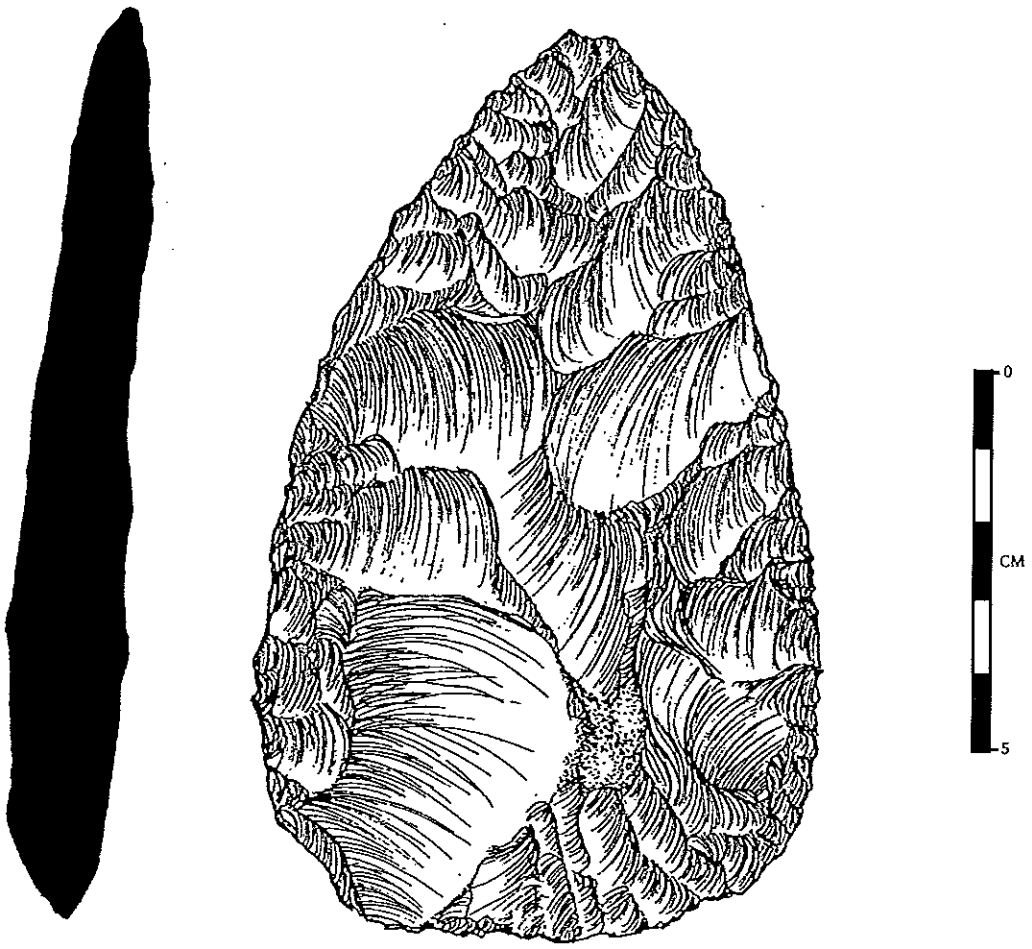
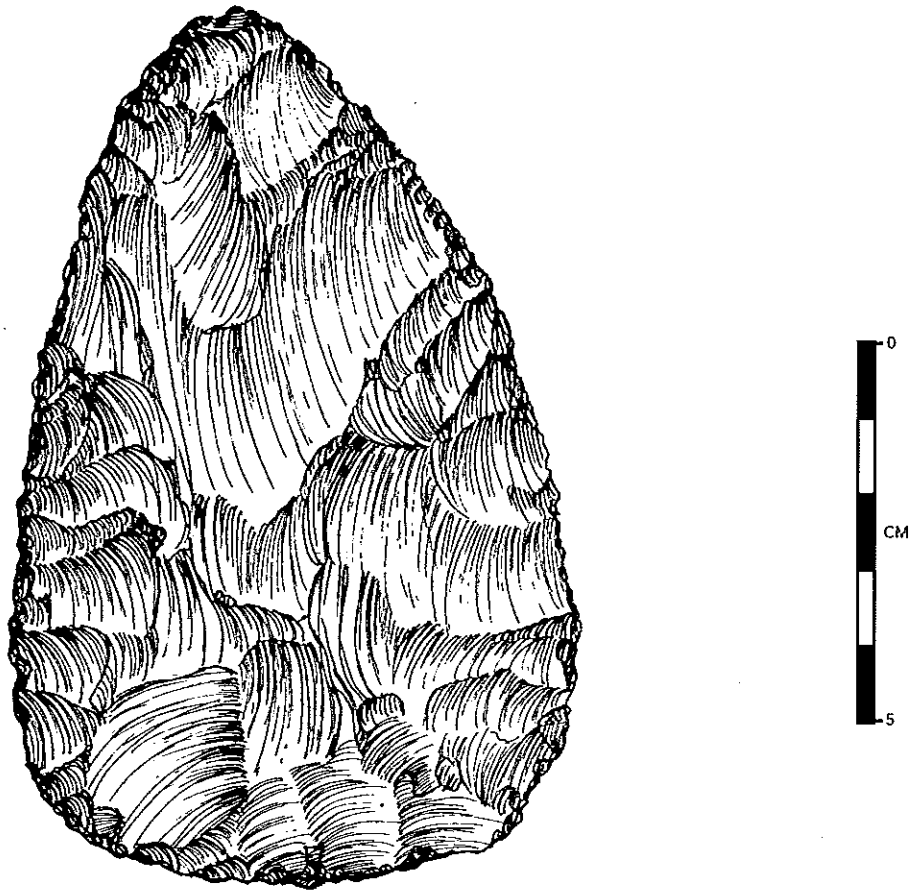


Figure 39. Specimen 18. Both sides, actual size.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Specimen #19 (Figures 40-41) This specimen is sub-triangular in outline. The base and lateral edges are convex. The raw material is a dark brown chert with some material grade change at inclusions; it is very consistent with the majority of this cache in quality and cortex characteristics. The base of the specimen has damage that may have occurred during the discovery of the cache. It appears that this biface was made of one whole nodule, and not from a large spall. Flaking is random and overlapping. Large percussion flakes have been removed from both lateral edges and the base on both faces. Flake scar ridges are pronounced. Edges have been trimmed in some areas, but no isolated prepared platforms are evident.

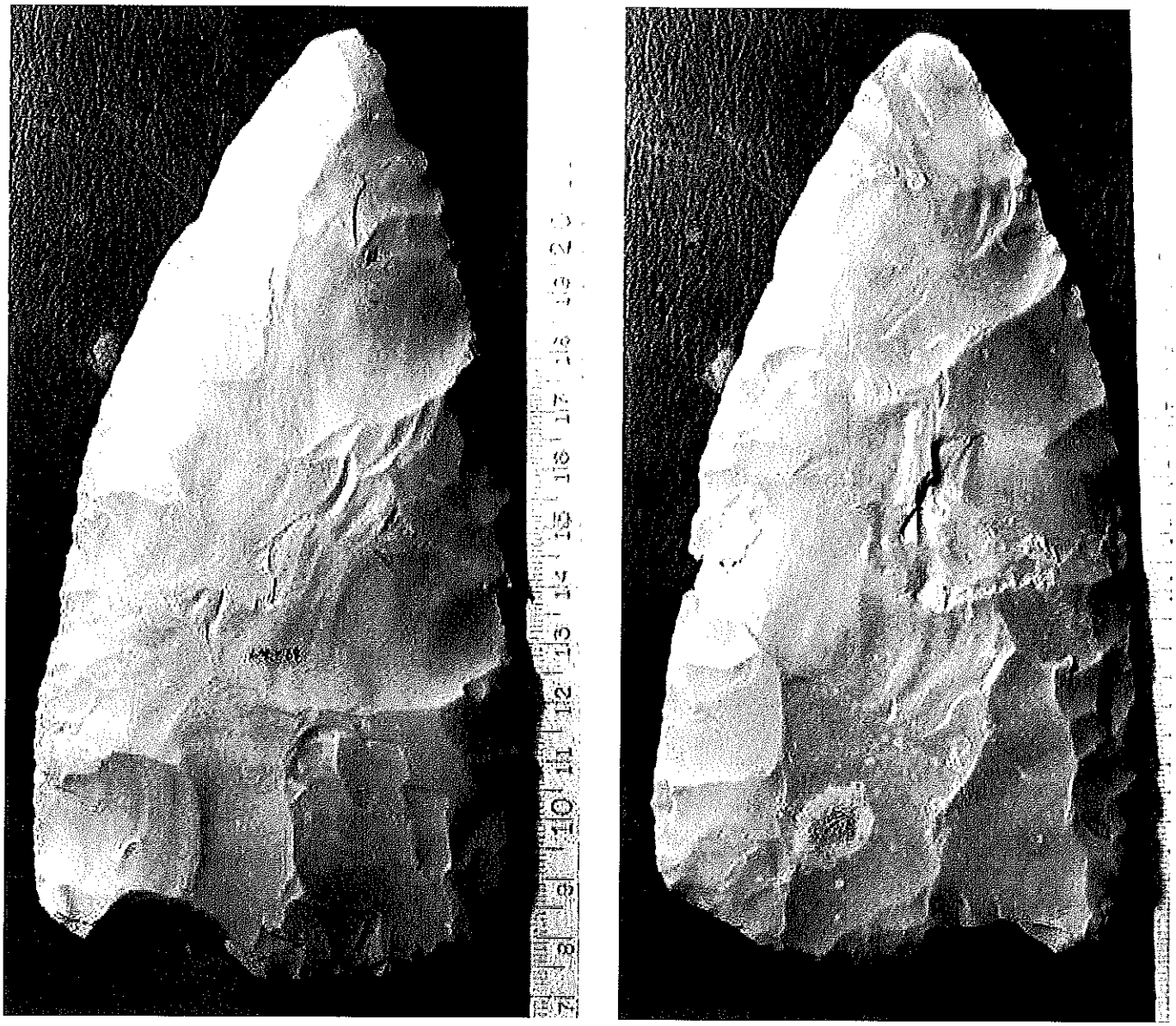


Figure 40. Specimen 19. Left, side A; right, side B.

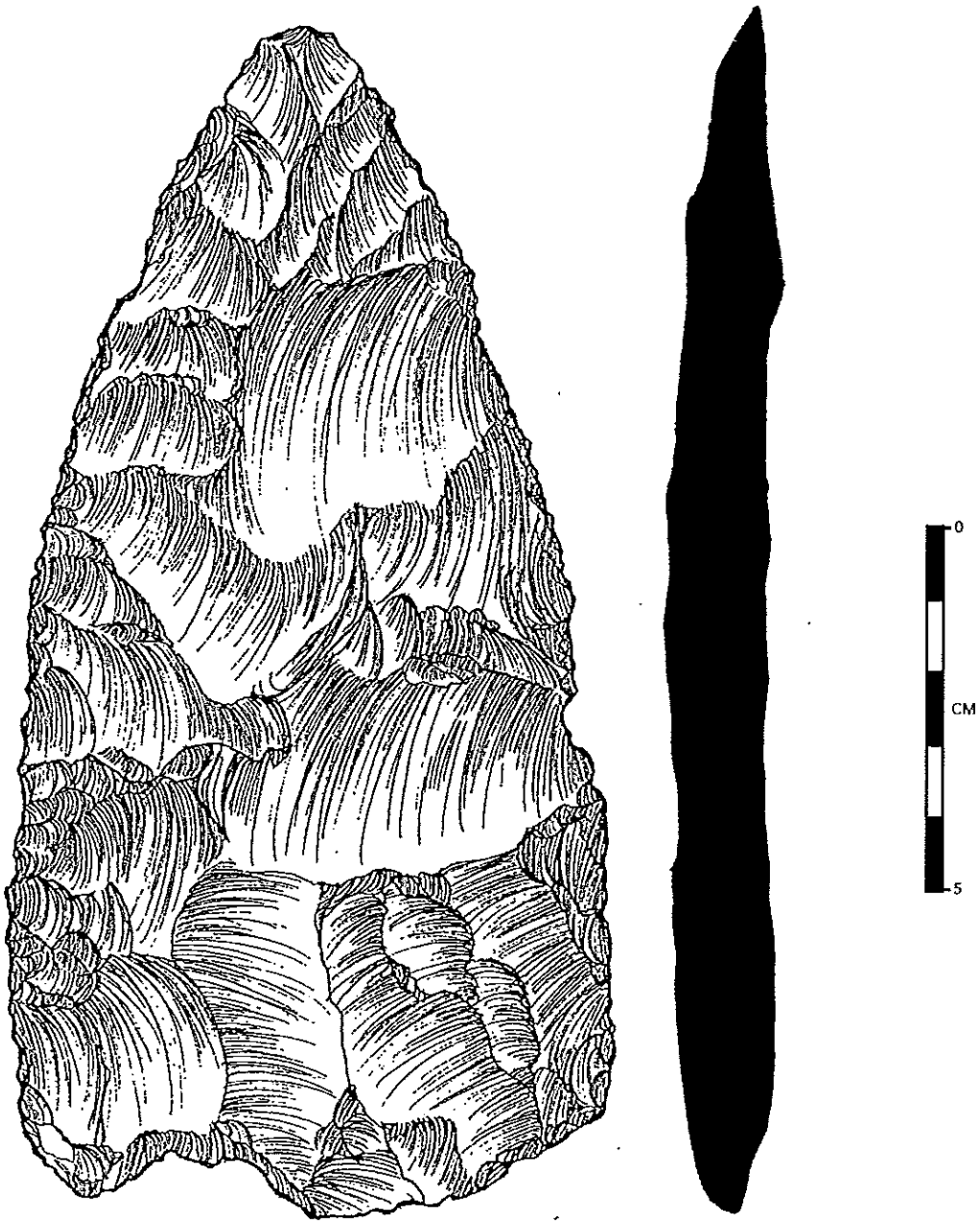
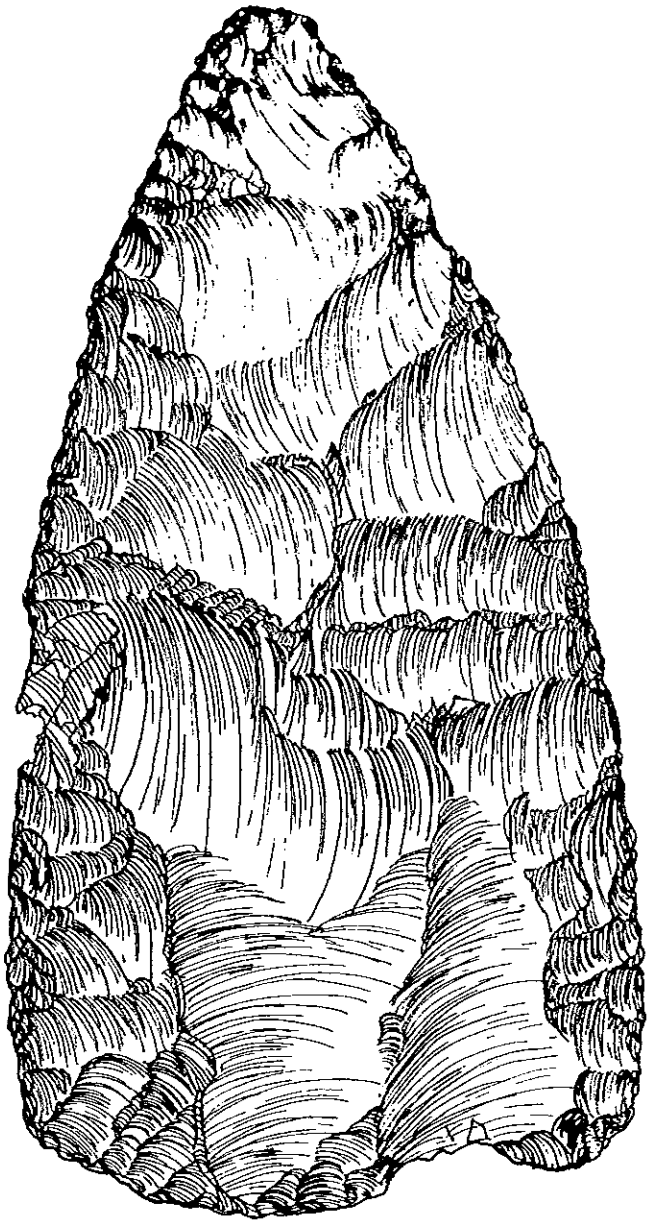


Figure 41. Specimen 19. Both sides, actual size.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Specimen #20 (Figures 42-43) The specimens is ovate in outline. The raw material is very different from the majority of this cache. UV light values differ as well. The raw material is tan to yellow in color with white inclusions running through it. Edges of the biface are not trimmed or abraded. No cortex remains on this specimen for comparison to the majority of this cache. Flake scars are large, random, and well spaced, and flake scar ridges are very pronounced. Many flake scars travel well past the biface midpoint and are overlapping. Large thinning flakes have been removed from both lateral edges, as well as from the base on both faces. Calame has seen a few, but similar, raw materials in the Nueces River bed load and occasionally among Uvalde gravels. Specimen #20 is also somewhat small compared to the majority of the pieces in this cache and may well have been made on a very large flake.

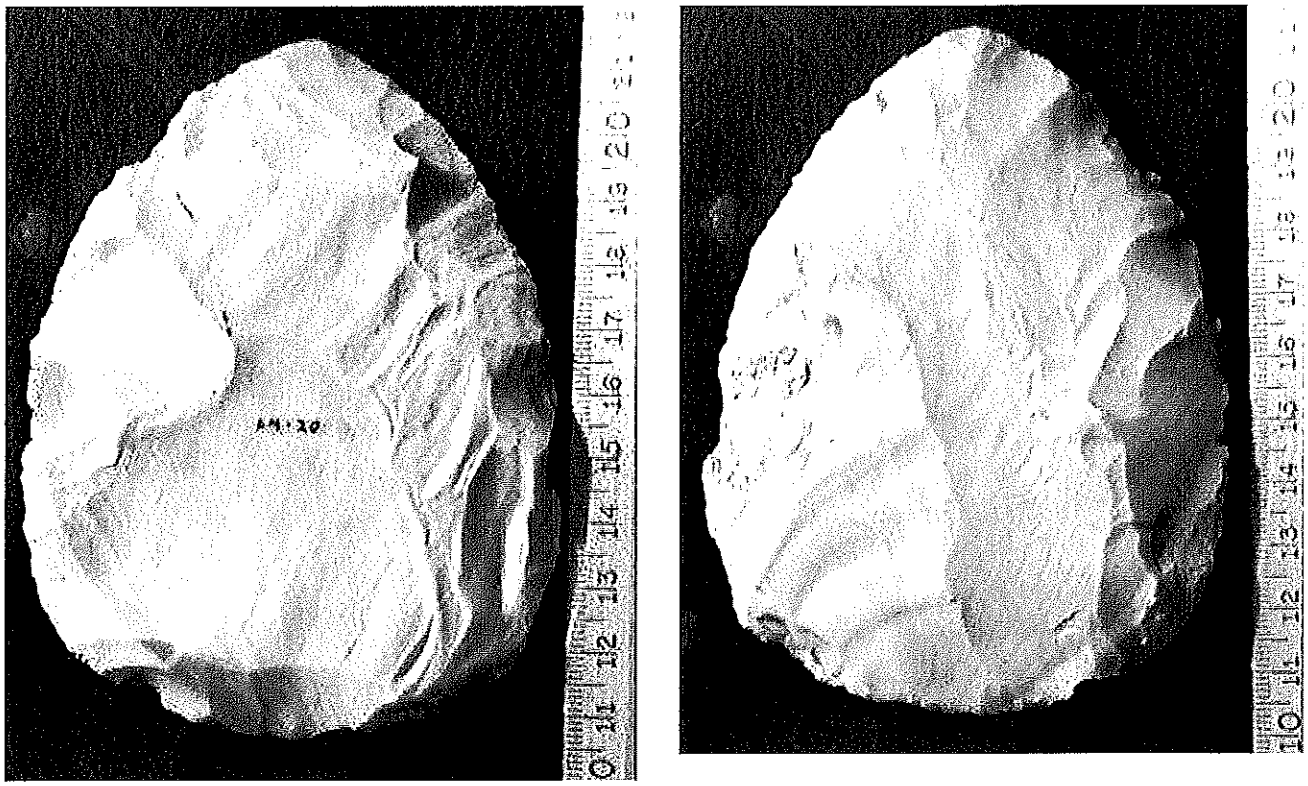


Figure 42. Specimen 20. Left, side A; right, side B.

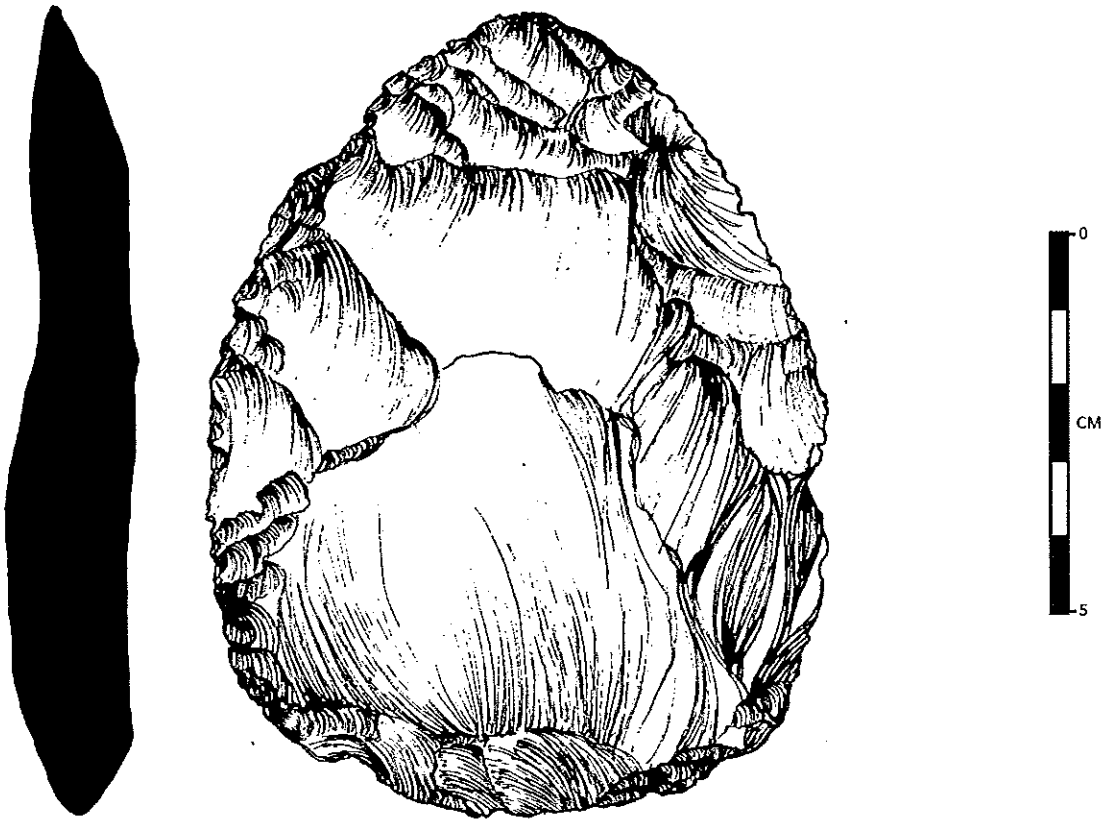
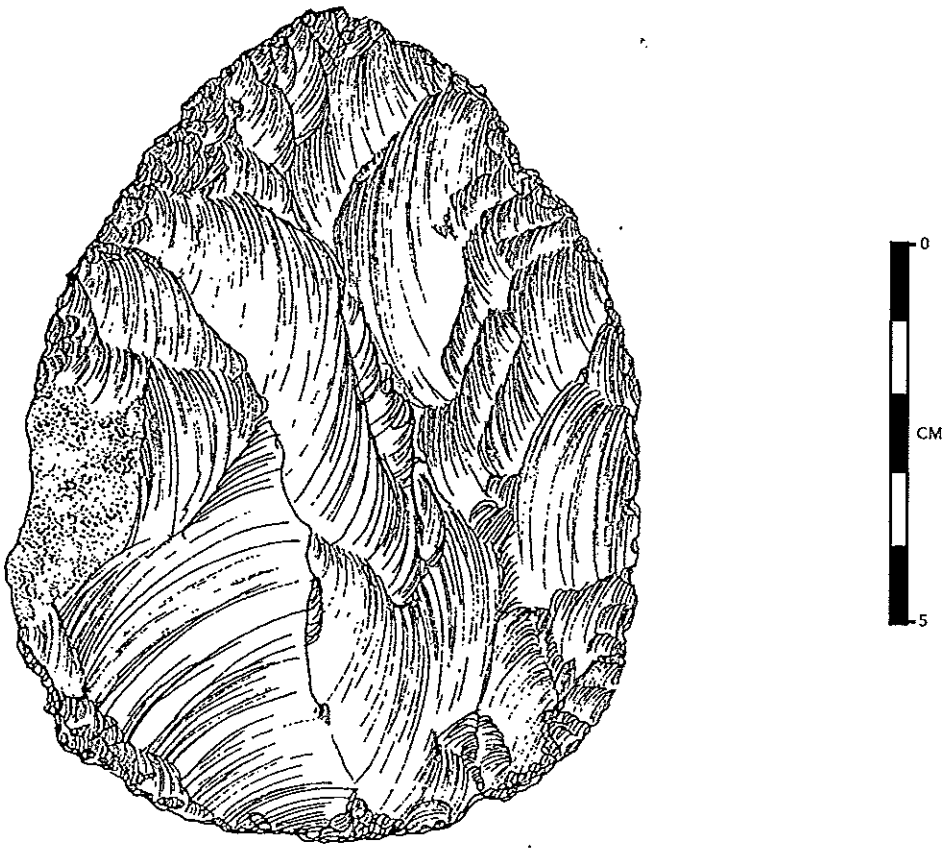


Figure 43. Specimen 20. Both sides, actual size.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Specimen #21 (Figures 44-45) This specimen is sub-triangular in outline. All edges are convex. Cortex remains on both faces so this specimen is the thinness of the originally collected nodule. The raw material and cortex on this piece is very consistent with the majority of this cache in both quality and characteristics. Flaking on side A is very well organized and spaced with large overlapping percussion flakes. Side B has only half the cortex removed and is very flat. Edges have not been lowered to remove cortex from side B, nor are they trimmed to build convexity; no prepared isolated platforms are evident. Some flake scars travel past the biface's midpoint. It appears that no large thinning flakes were removed from the base of this specimen on either face.

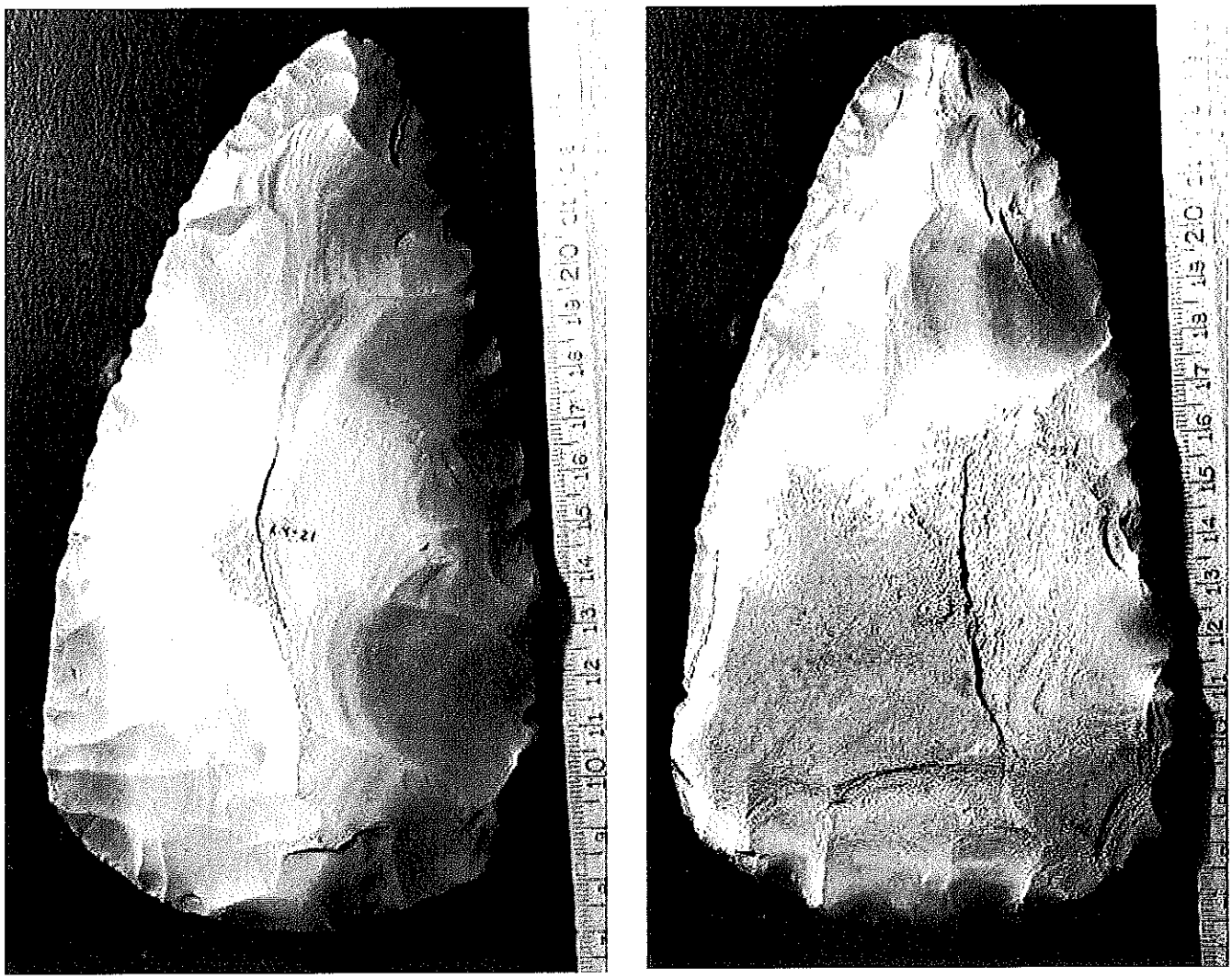


Figure 44. Specimen 21. Left, side A; right, side B.

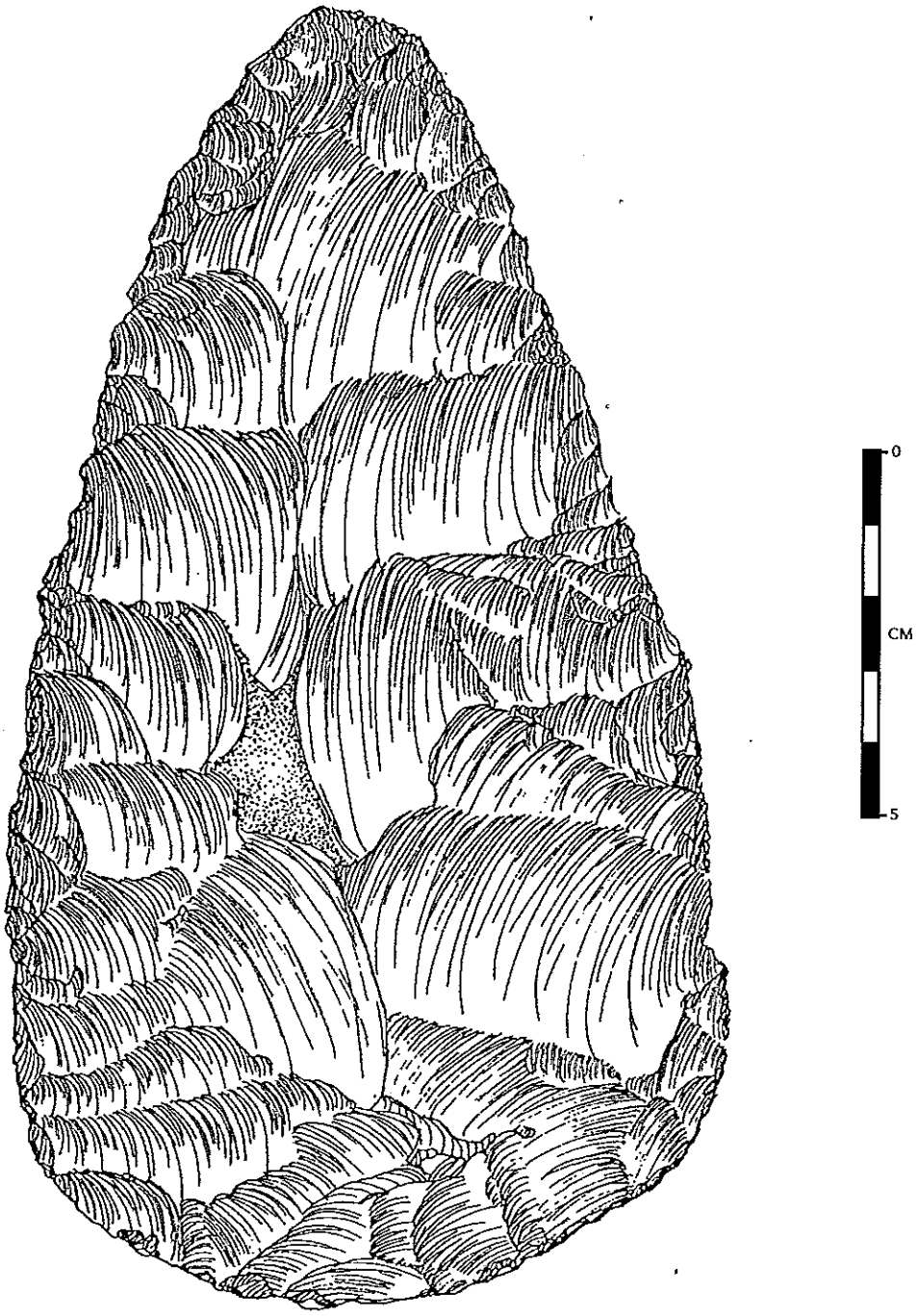
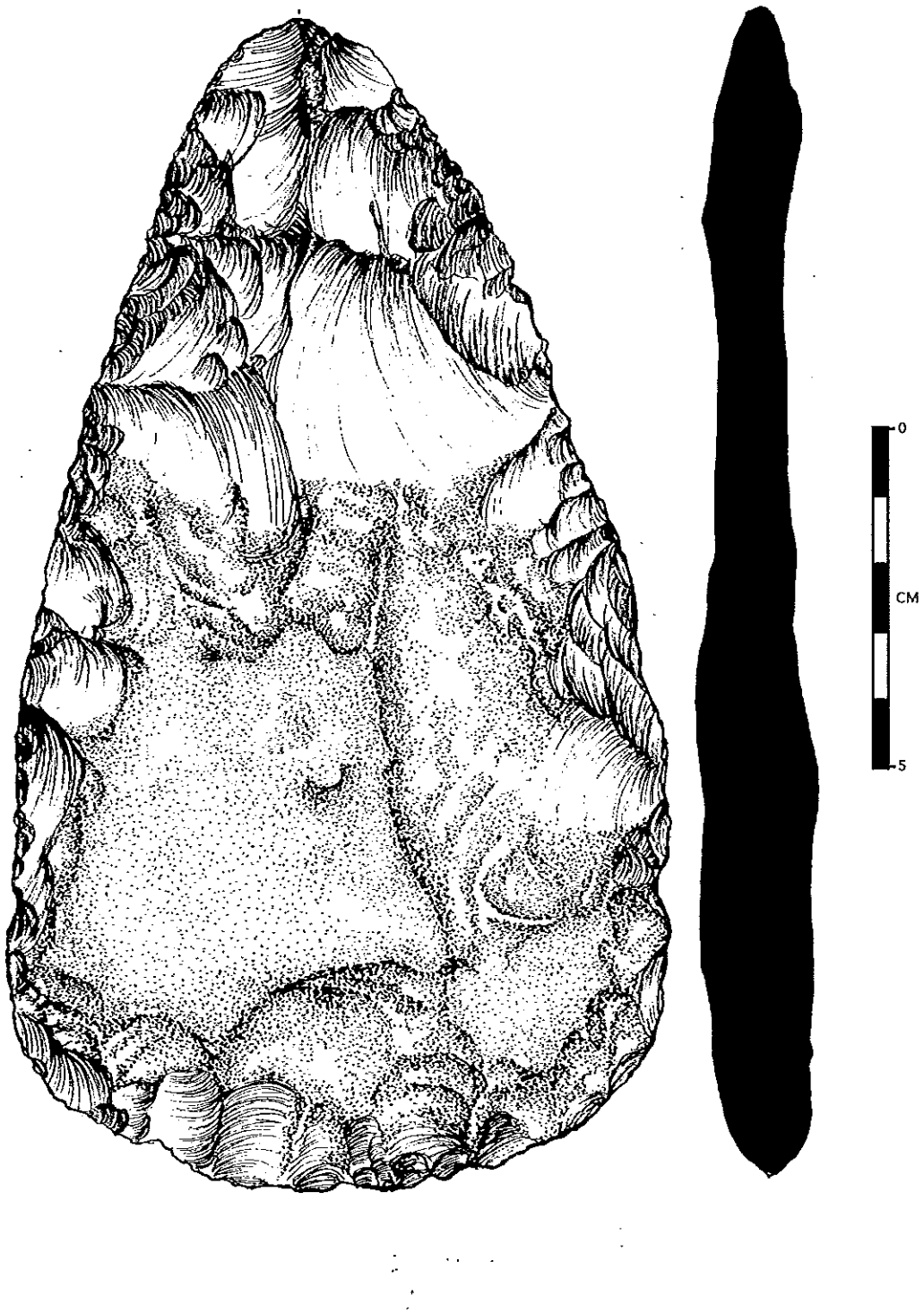


Figure 45. Specimen 21. Both sides, actual size.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Specimen #22 (Figures 46-47) The specimen is ovate in outline. Cortex remains on both faces. The raw material and cortex are very consistent with the majority of this cache in both quality and characteristics. Flake scars are very large, unorganized, and random, with some of the flake scars traveling more than half-way across the biface on both faces. Flake scars are often overlapping and struck from different directions, including the base and distal tip. Edges are lowered and trimmed in some places and there appears to be some unstruck platforms. Flake scars ridges are very pronounced. There appears to be some damage to the distal tip that may have occurred during the discovery of the cache, but they may also represent knapping error.

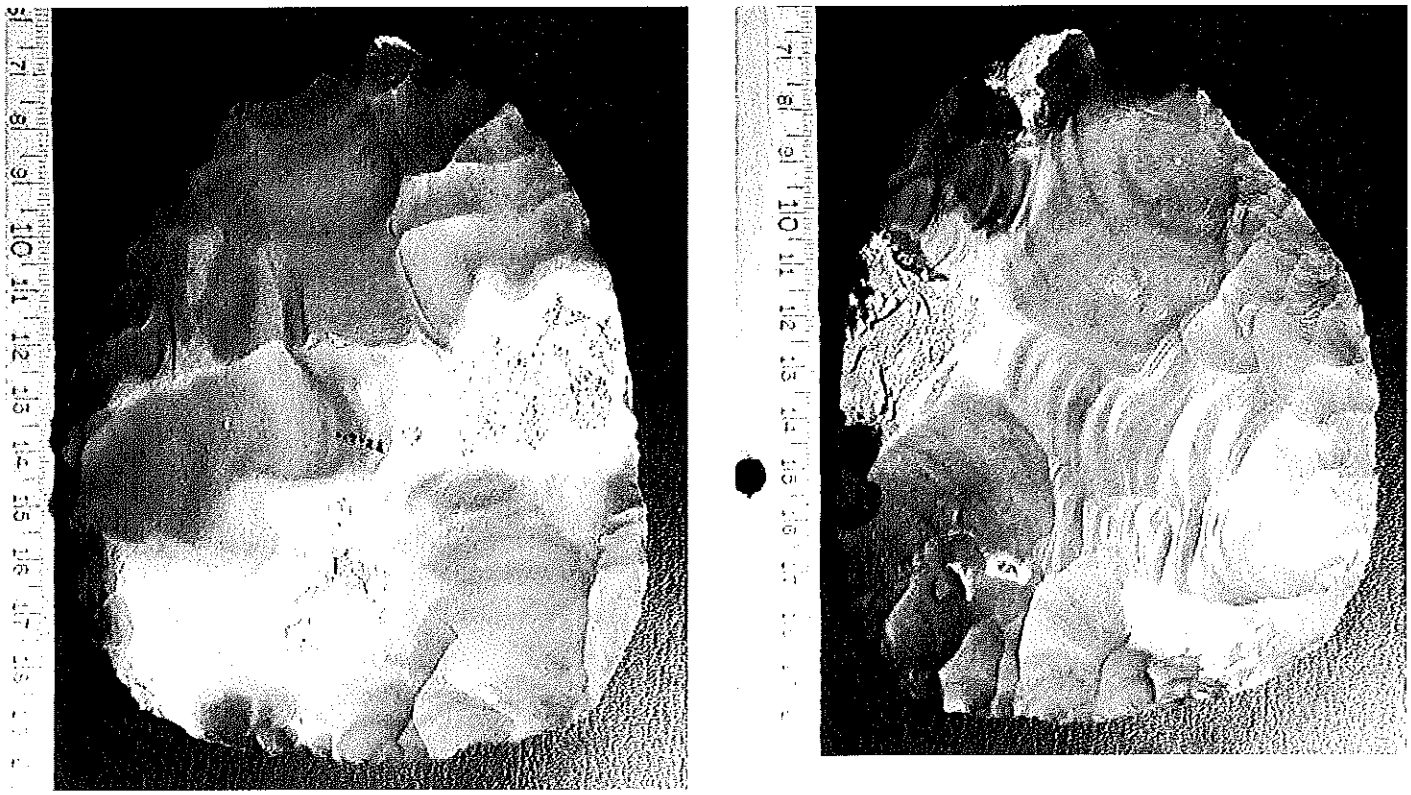


Figure 46. Specimen 22. Left, side A; right, side B.

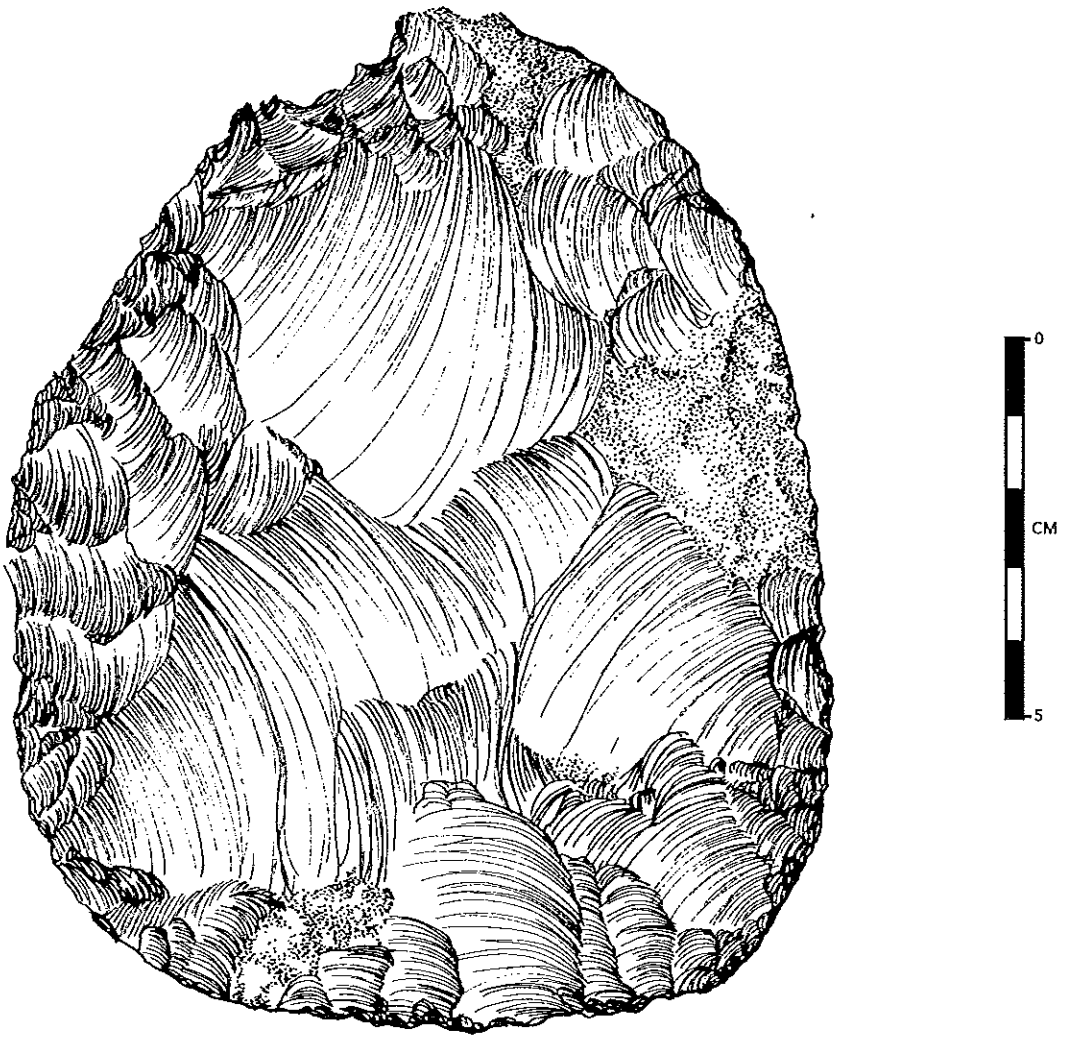
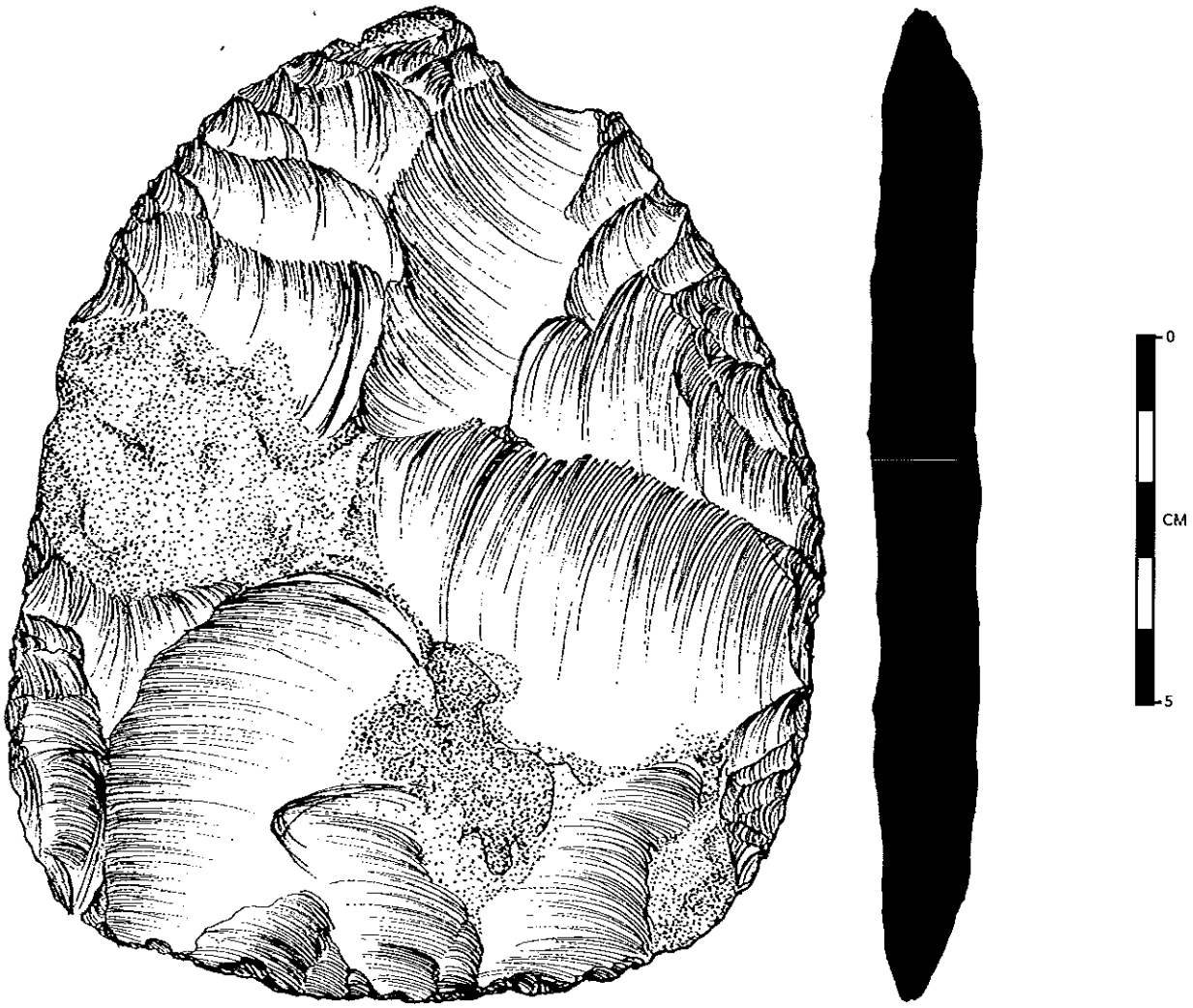


Figure 47. Specimen 22. Left, side A; right, side B.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Specimen #23 (Figures 48-49) This specimen is ovate in outline. Only one small patch of cortex remains on one face. Flaking on side A is very random, while side B flaking appears much more organized. Flake scar ridges are very pronounced and some flake scars travel more than halfway across the face and are overlapping. Thinning flakes have been struck from lateral edges and from the base on both faces. Edges are trimmed in some areas; however, no abrading is apparent. This specimen is very consistent with the majority of this cache in both quality of the raw material and cortex characteristics.

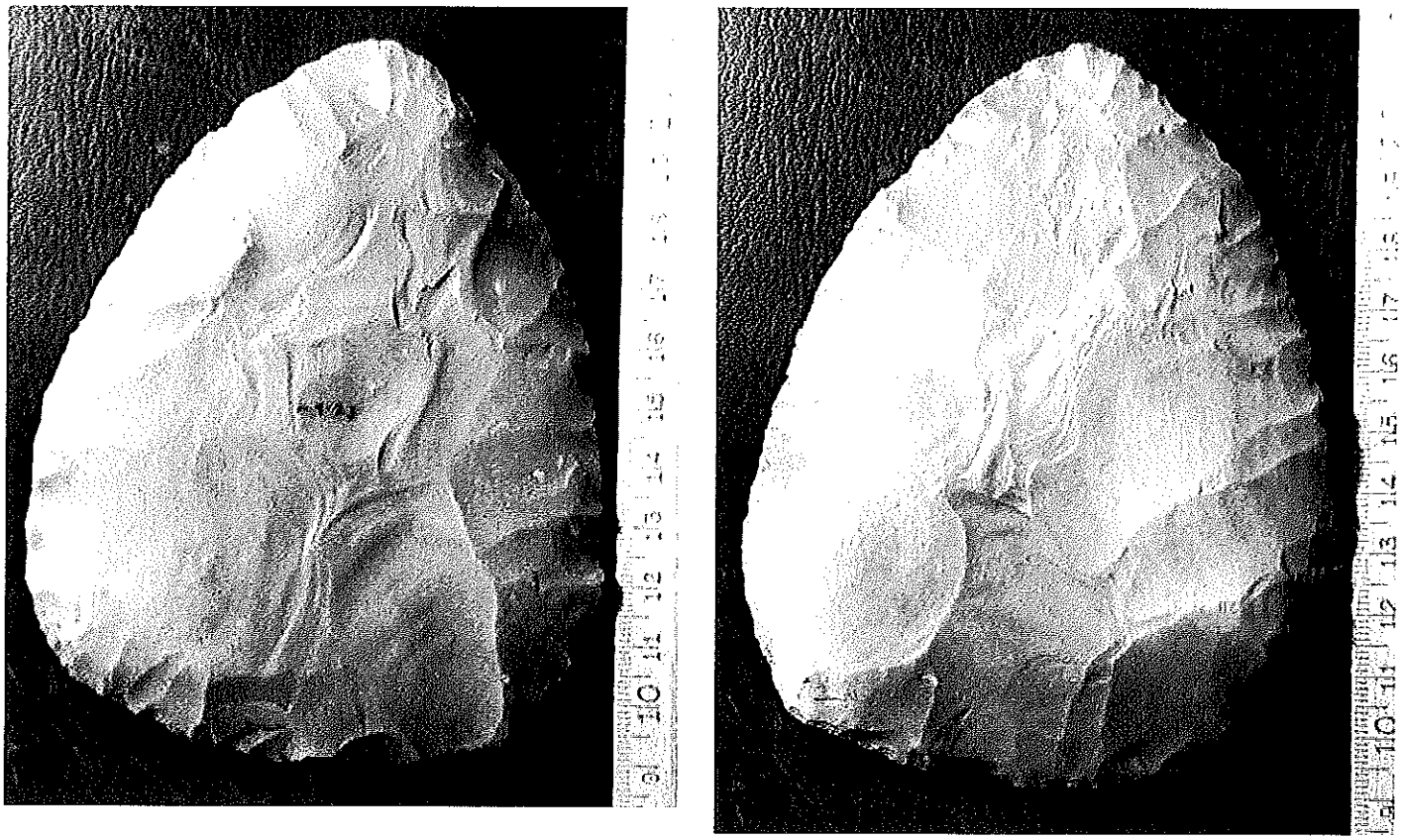


Figure 48. Specimen 23. Left, side A, right; side B.

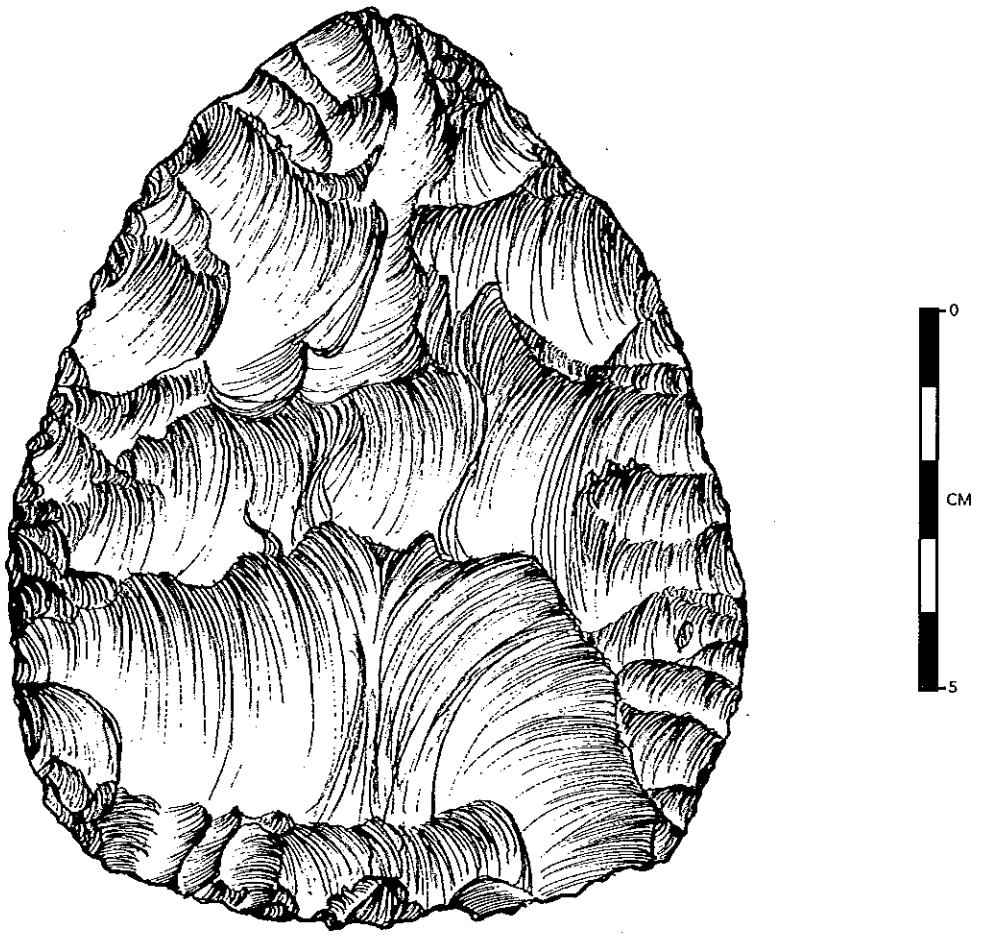
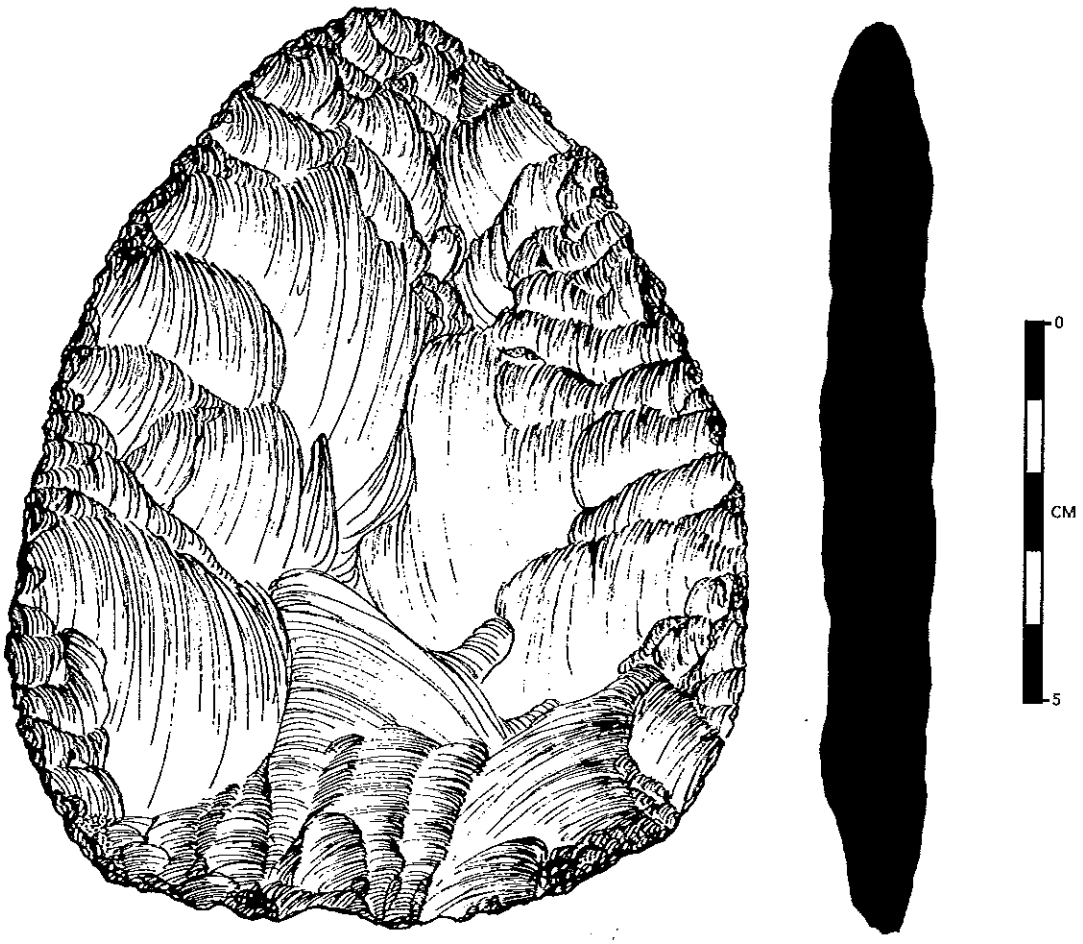


Figure 49. Specimen 23. Both sides, actual size.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Specimen #24 (Figures 50-51) This specimen has a irregular triangular outline. Cortex remains on both faces. The irregular shape of the biface is probably due to the shape of the originally collected nodule. Both faces exhibit very large, well spaced, flake scars, many traveling well past the biface midpoint and are overlapping. Large thinning flakes have been struck from both lateral edges and from the base on both faces. Flake scar ridges are very pronounced. Edges have been lowered and trimmed in some areas, and some unstruck platforms remain for both faces. Its raw material and cortex are very consistent with the majority of this cache in both quality and cortex characteristics.

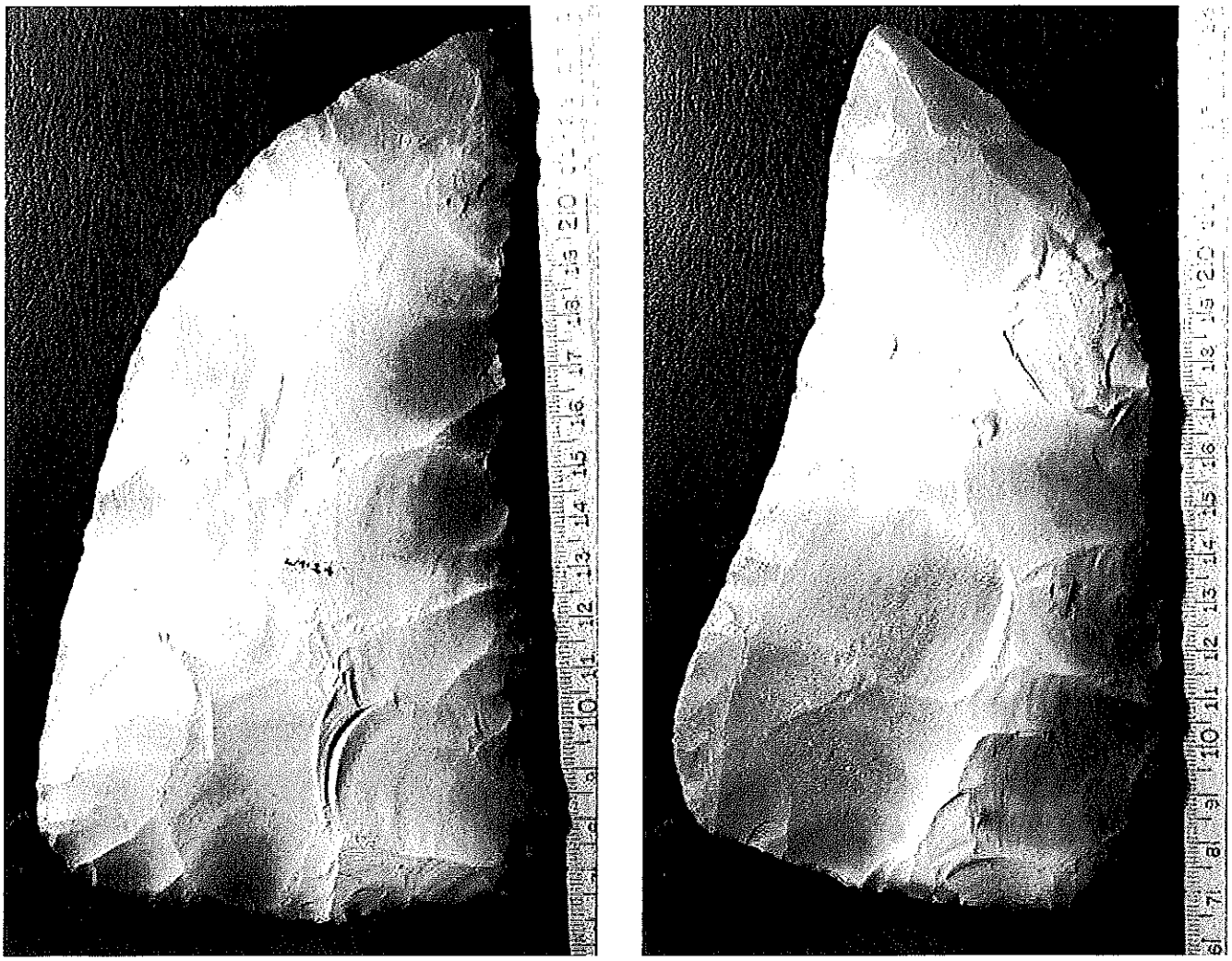


Figure 50. Specimen 24. Left, side A; right, side B.

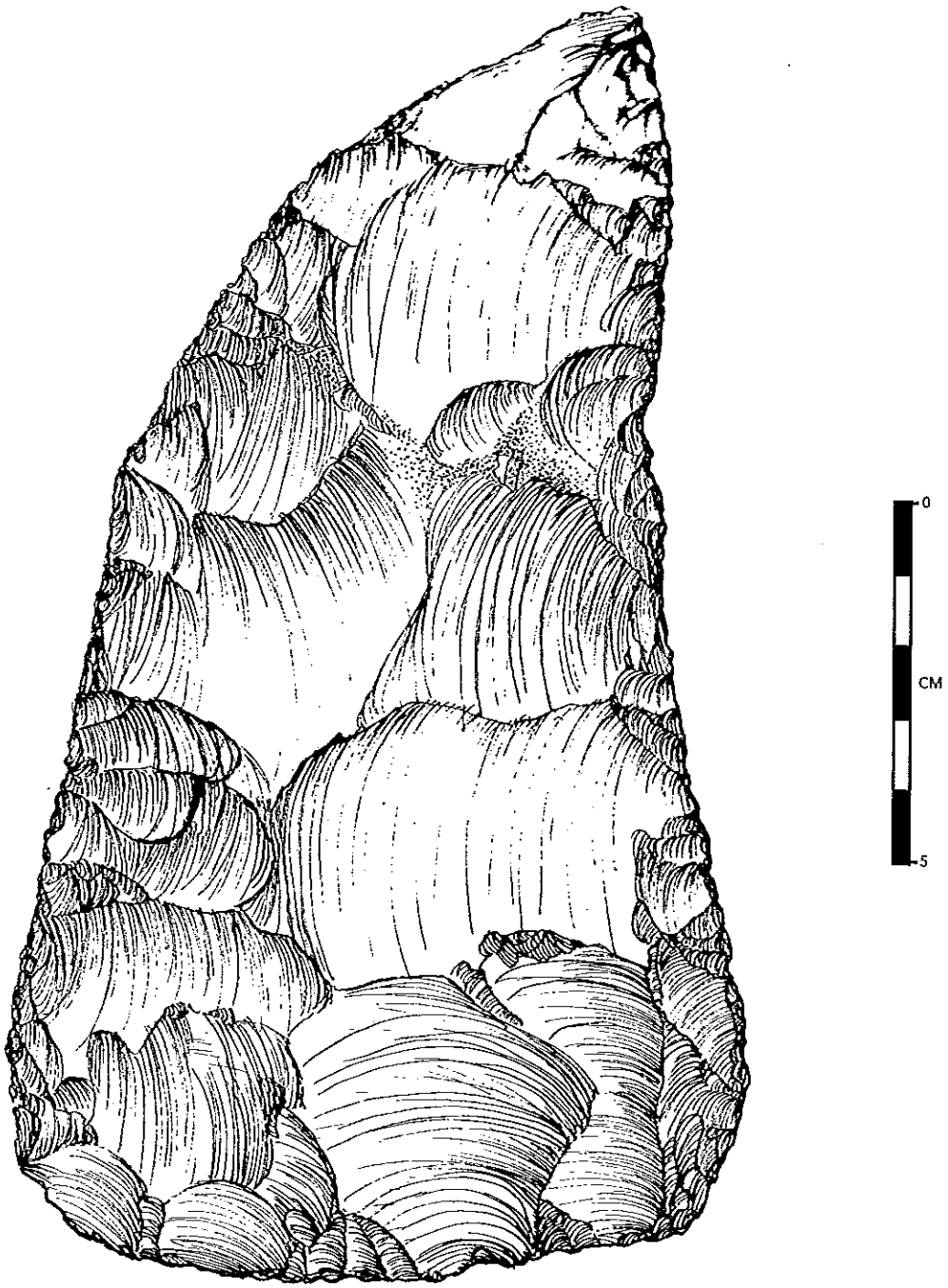
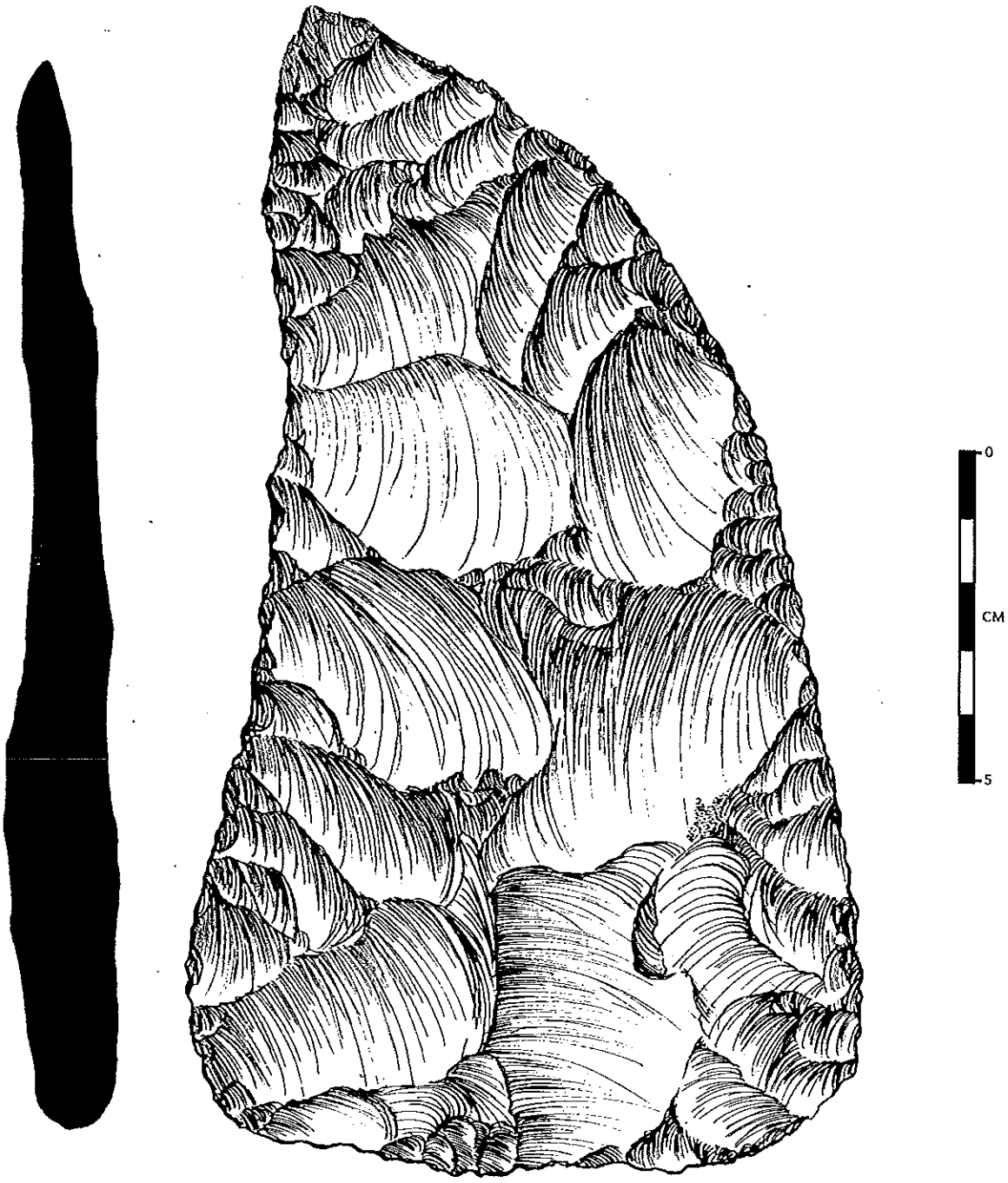


Figure 51. Specimen 24. Both sides, actual size.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Specimen #25 (Figures 52-53) This specimen is sub-triangular in outline. No cortex remains on either face of this biface. The raw material is very consistent with the majority of this cache in quality. Flaking is very random and unorganized. Thinning flakes have been struck from lateral edges as well as from the base on both faces. Edges in some areas have been lowered and trimmed, however, no unstruck isolated platforms are apparent. Some flake scars travel well past the biface midpoint and overlap, and flake scar ridges are very pronounced. A blue permanent marker inscription is seen on this specimen, noting a date of 5/27/81 and the name "Anderson."

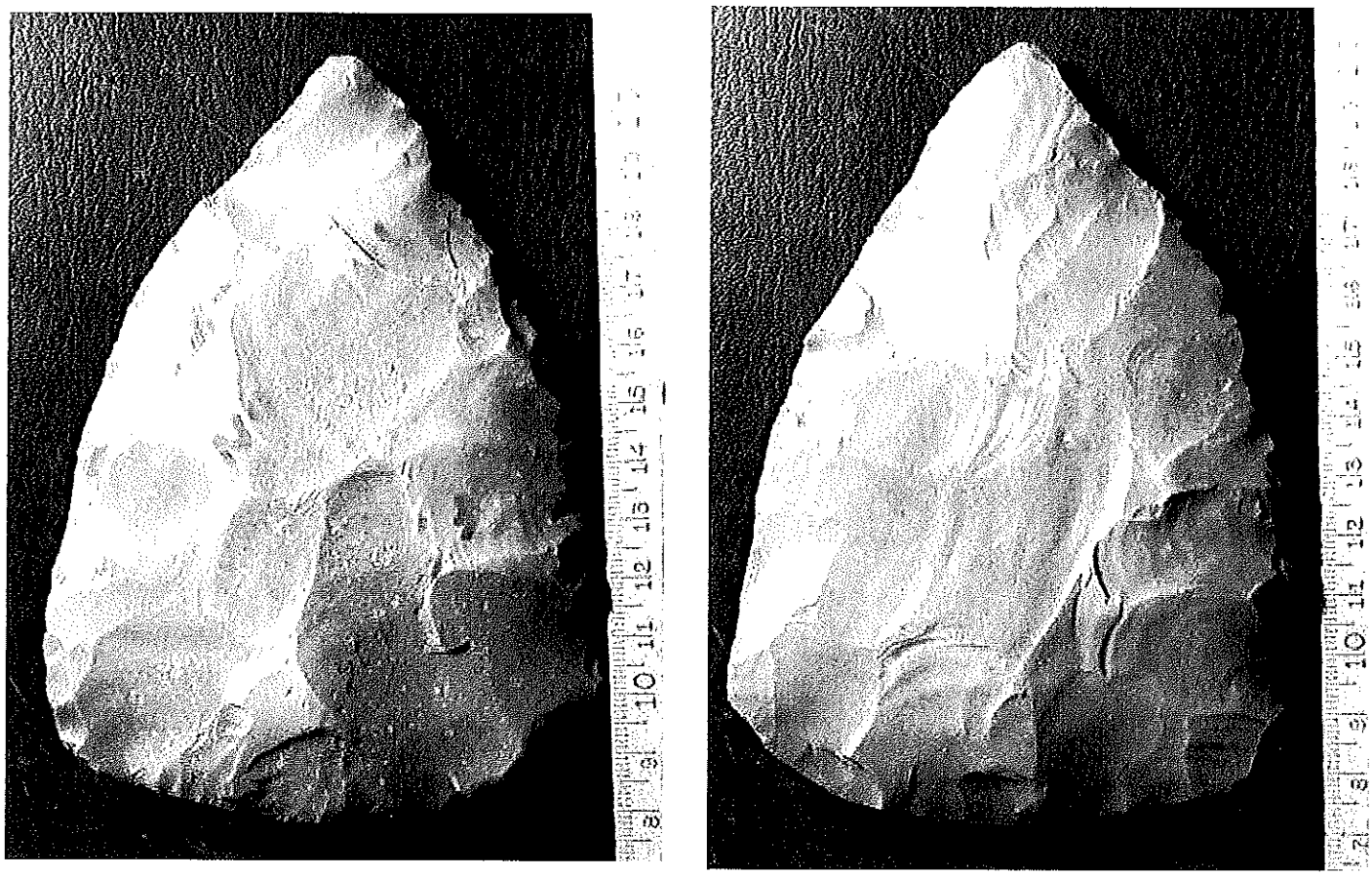


Figure 52. Specimen 25. Left, side A; right, side B.

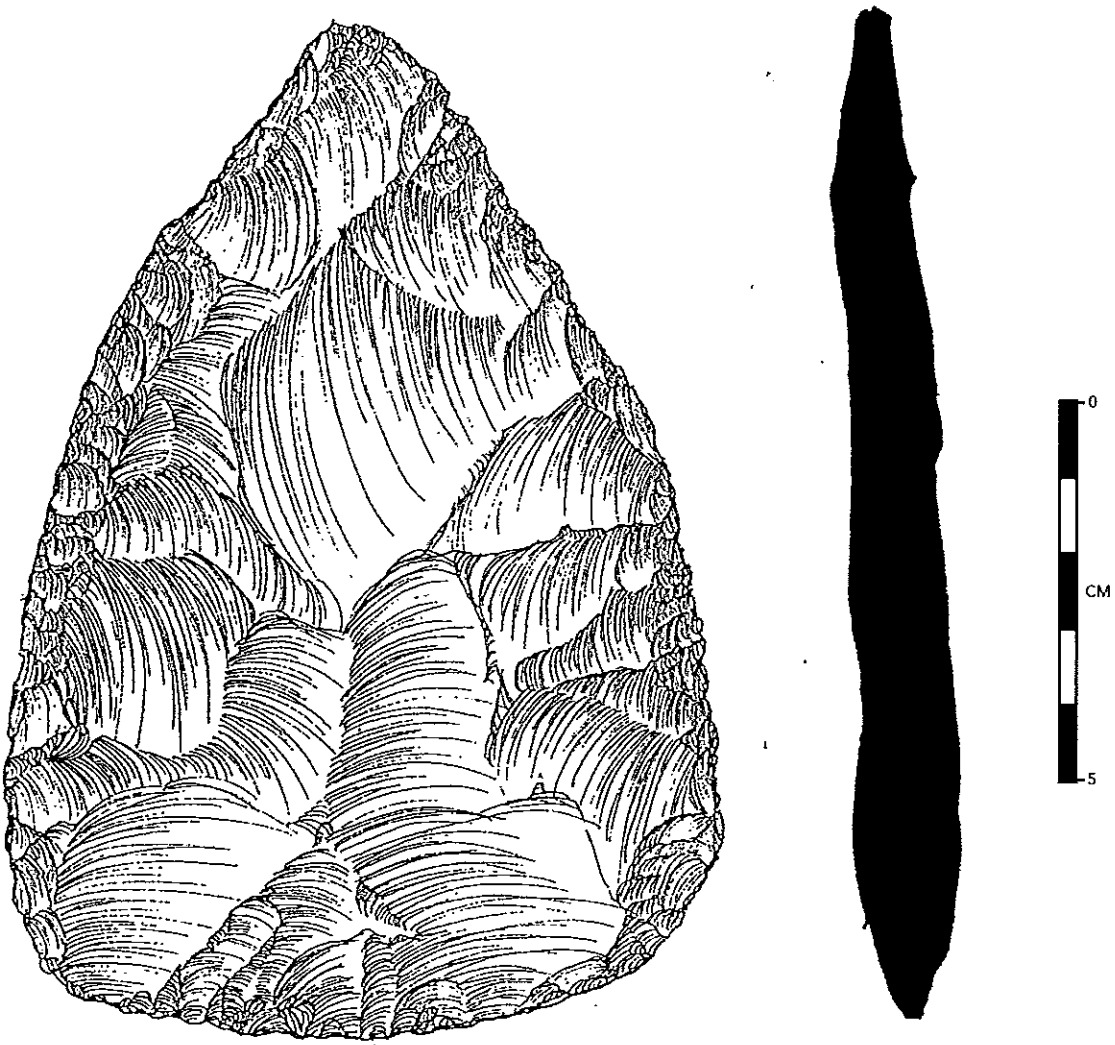
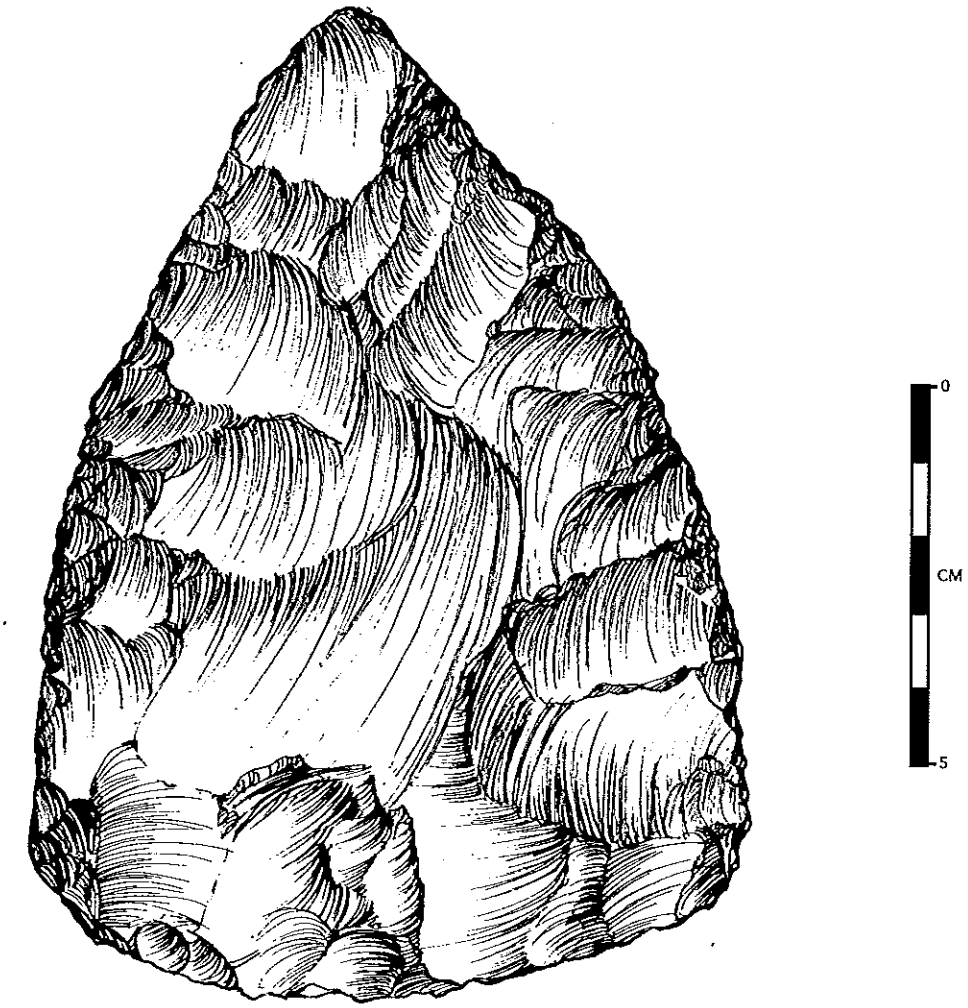


Figure 53. Specimen 25. Left, side A; right, side B.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Specimen #26 (Figures 54-55) The specimen is sub-triangular in outline. Cortex remains on both faces. The raw material is a dark brown, high quality, Edwards chert, very consistent with the majority of this cache in both material quality and cortex characteristics. Both faces exhibit large, well-spaced, percussion flaking, and the flake scars often overlap. Large thinning flakes have been taken from all edges including the base on both faces. Flake scar ridges are very pronounced. Edges have been trimmed in some areas, and there are unstruck platforms. Some of the percussion flake scars travel well past the midpoint. There appears to be some metal scarring on biface, probably due to cache discovery damage.

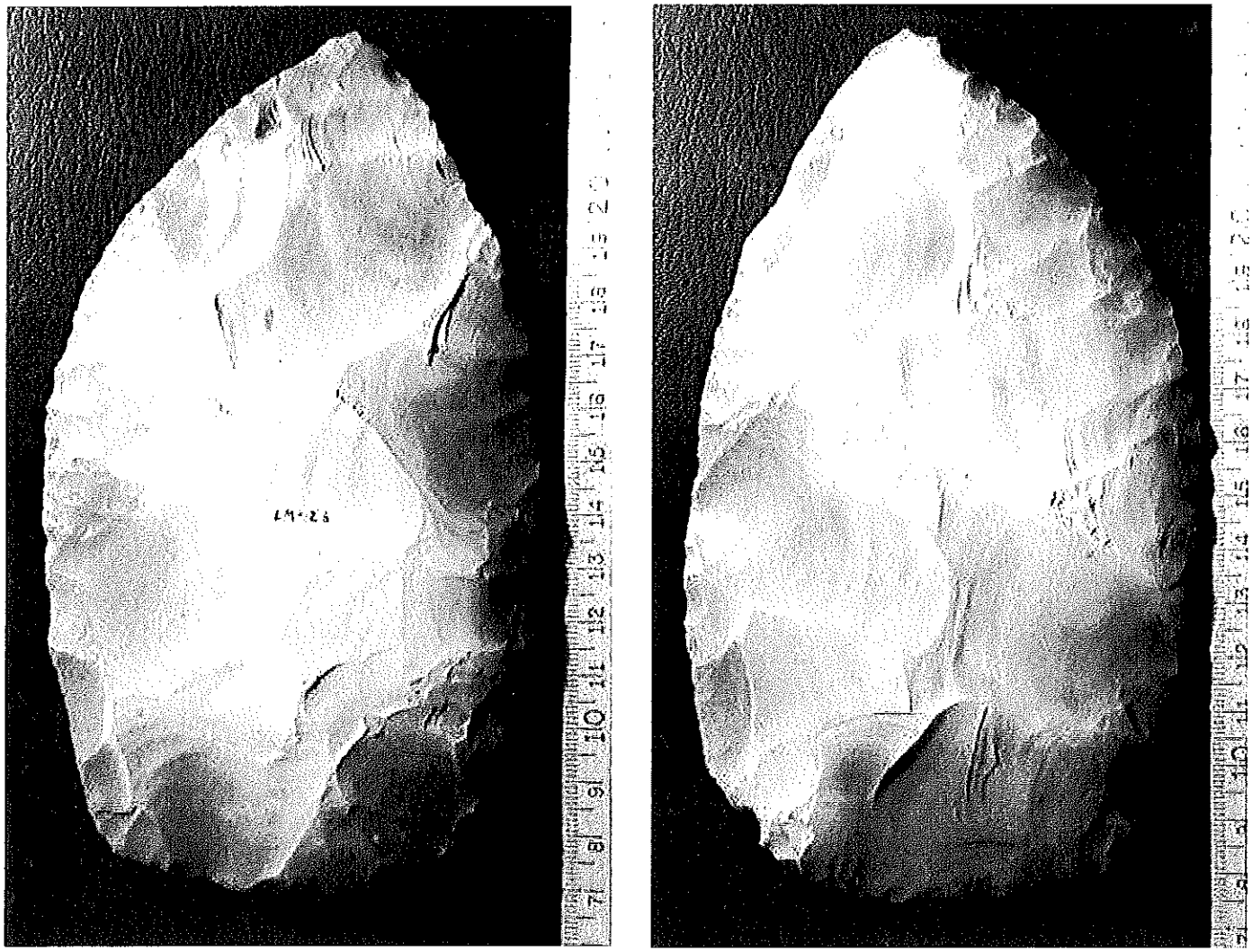


Figure 54. Specimen 26. Left, side A; right, side B.

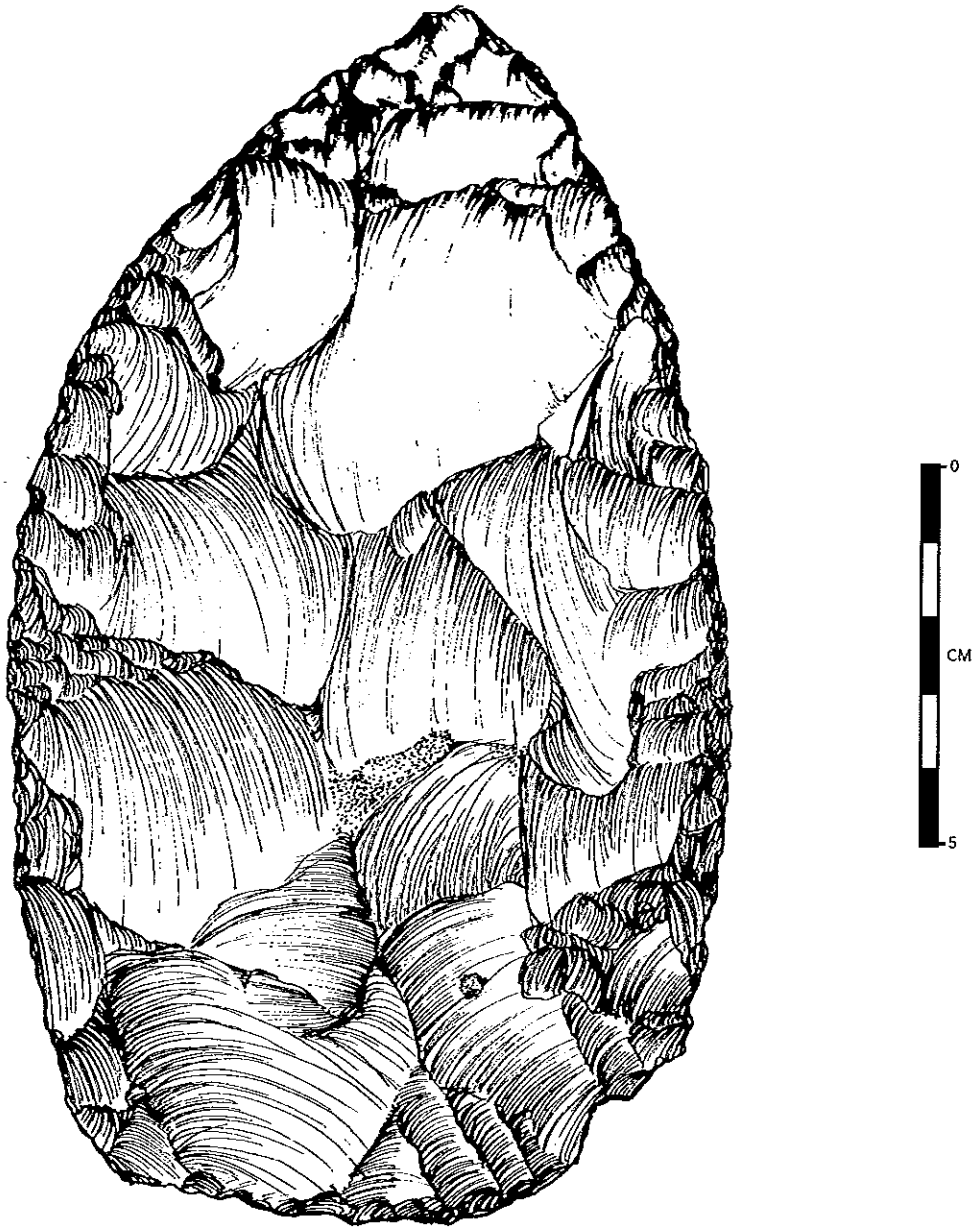
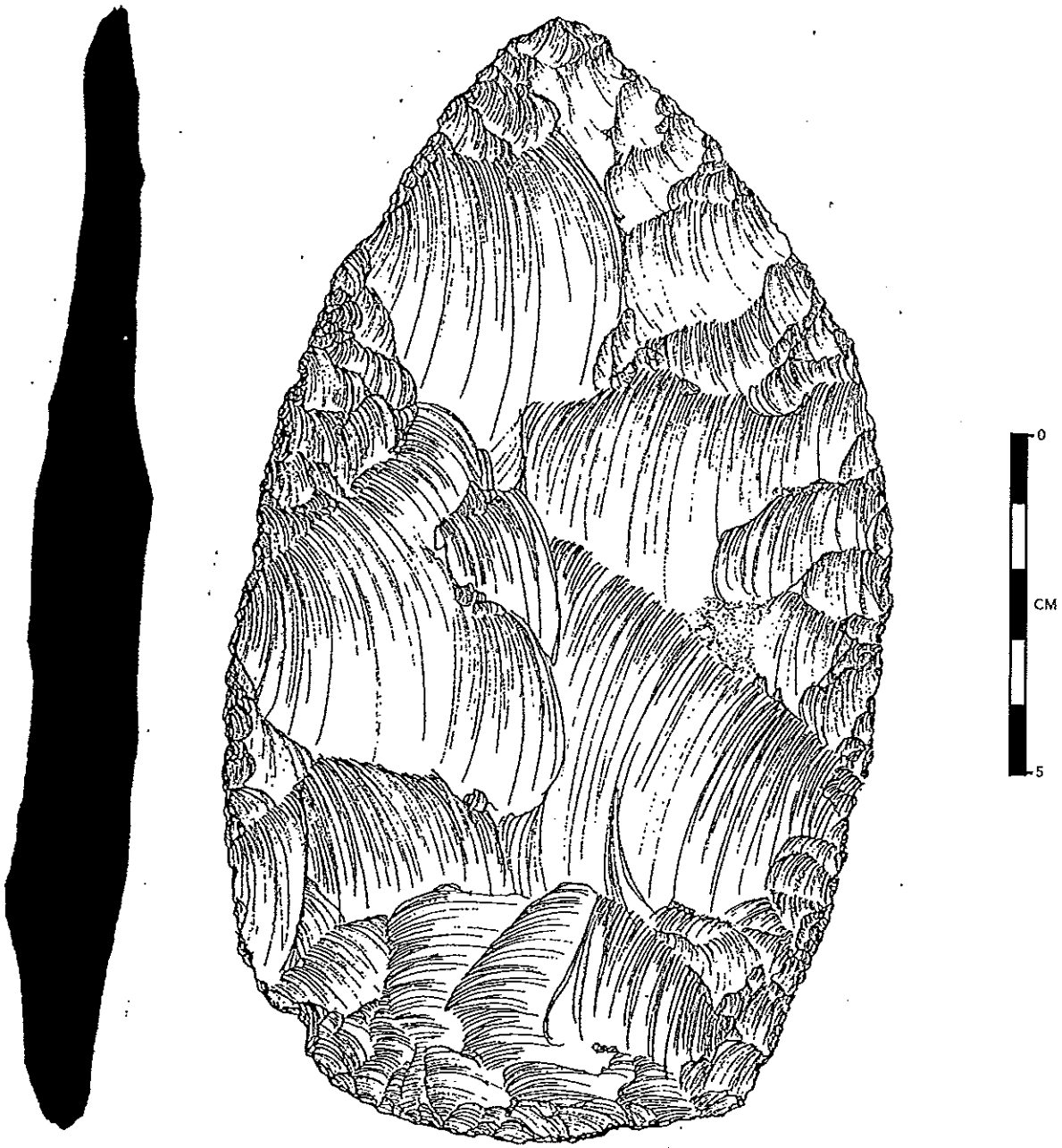


Figure 55. Specimen 26. Both sides, actual size.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Specimen #27 (Figures 56-57) The biface is sub-triangular in outline. The raw material is not consistent with the majority of this cache but of a higher quality generally than noted with the other cache specimens. The biface is made from a brown, with a slight lavender tint, Edwards chert. The right lateral edge on side B has been lowered in preparation for thinning flake removals; however, no prepared platforms are evident. The left edge on side A is fairly straight while the right edge is convex, because the next series of flakes were never removed, even though the edge had been lowered. Flake scar ridges are pronounced and many percussion flakes scars travel well past the biface midpoint and overlap. It appears no large thinning flakes were removed from the base of this specimen on either face.

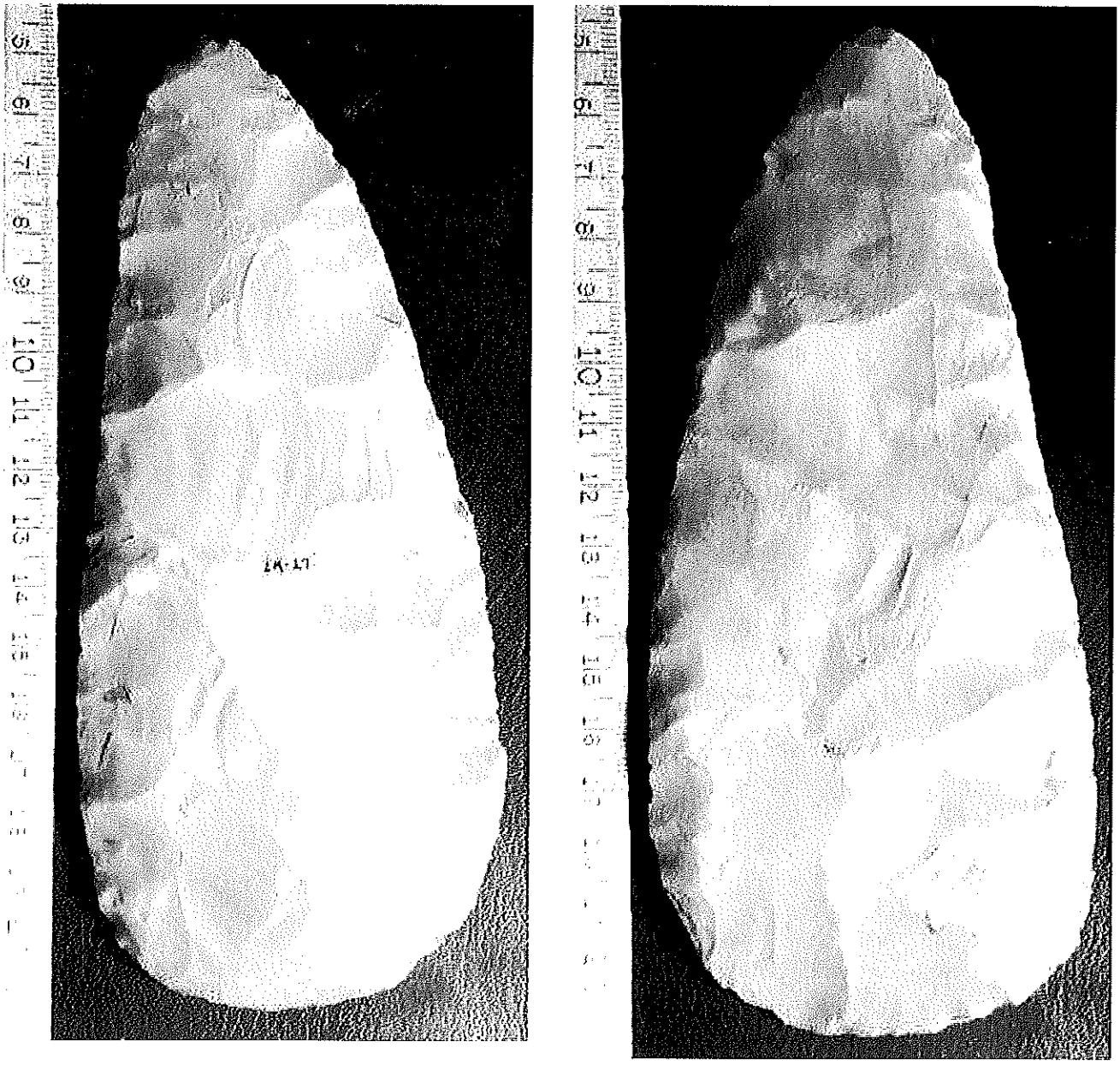


Figure 56. Specimen 27. Left, side A; right, side B.

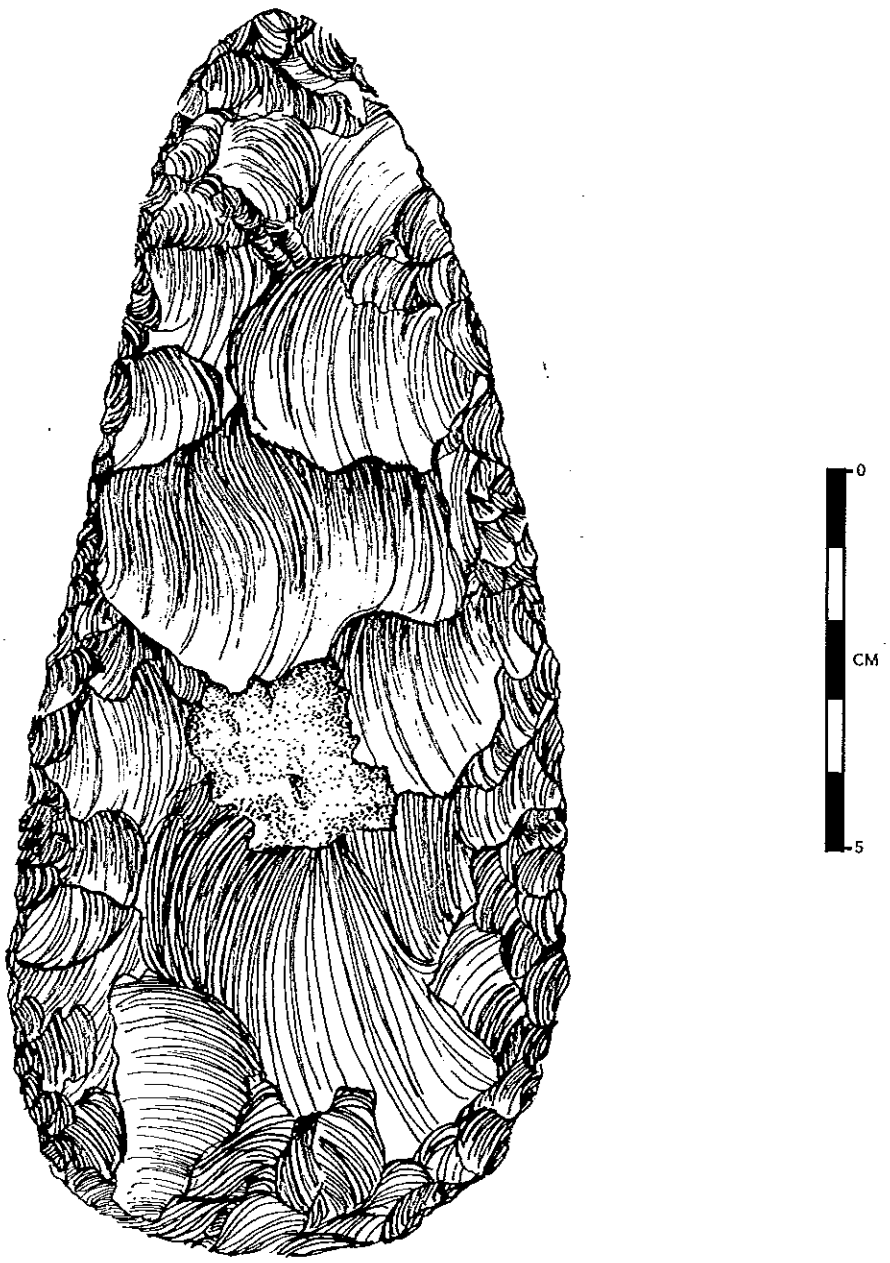
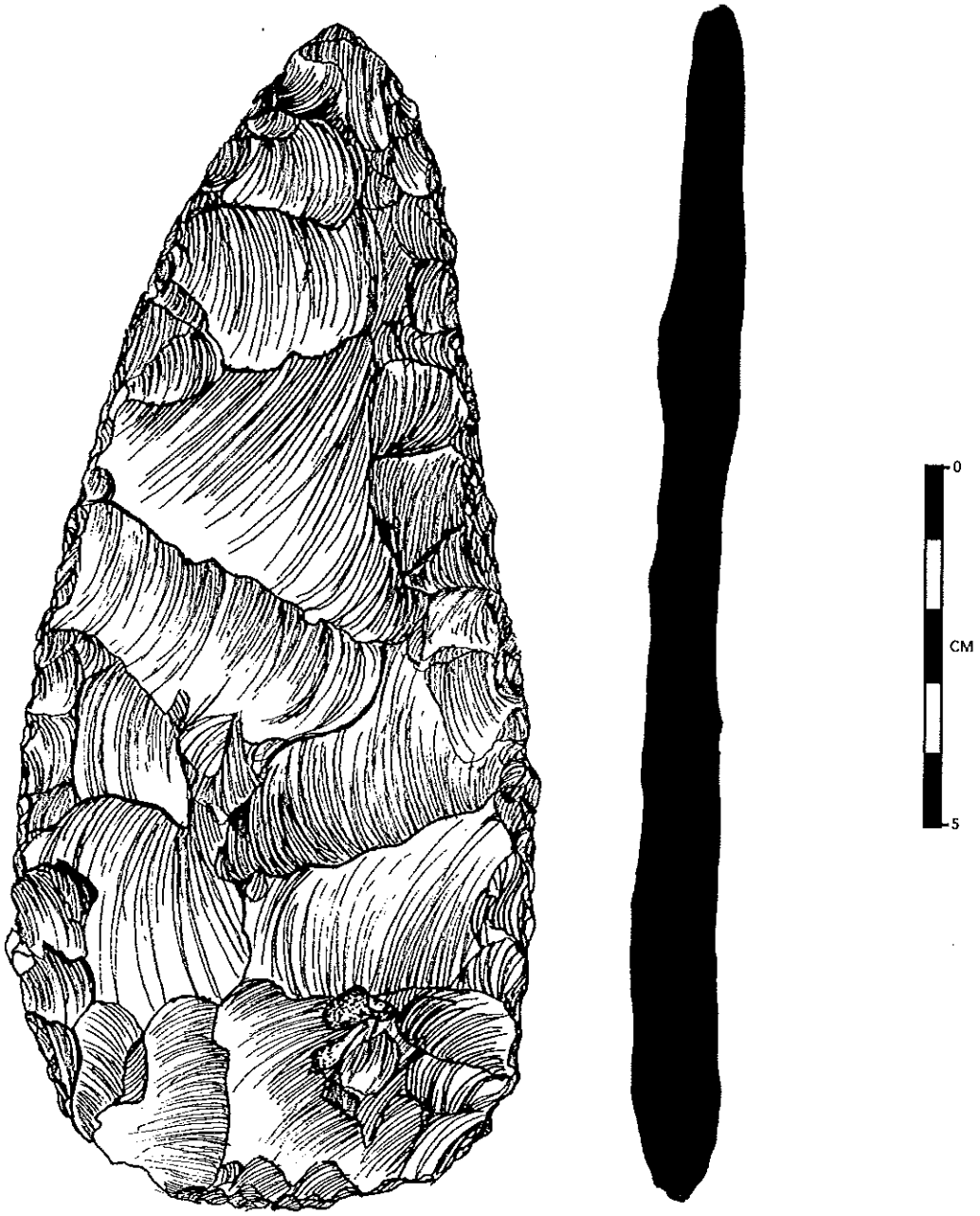


Figure 57. Specimen 27. Both sides, actual size.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Specimen #28 (Figures 58-59) This specimen has a wide lanceolate outline. Cortex remains only on side B and the raw material and cortex is very consistent with the majority of this cache in quality and characteristics. Some edges have been trimmed and appear to have been abraded to remove thin edges. Platforms remain for removal of cortex on side B. Flaking is random, but well spaced on side A, with many flake scars traveling well past the biface midpoint and overlapping. Side B has at least 50 percent of its surface covered with cortex. Some unstruck platforms remain on both faces, and flake scar ridges are pronounced. Only small thinning flakes have been removed from the base on this specimen.

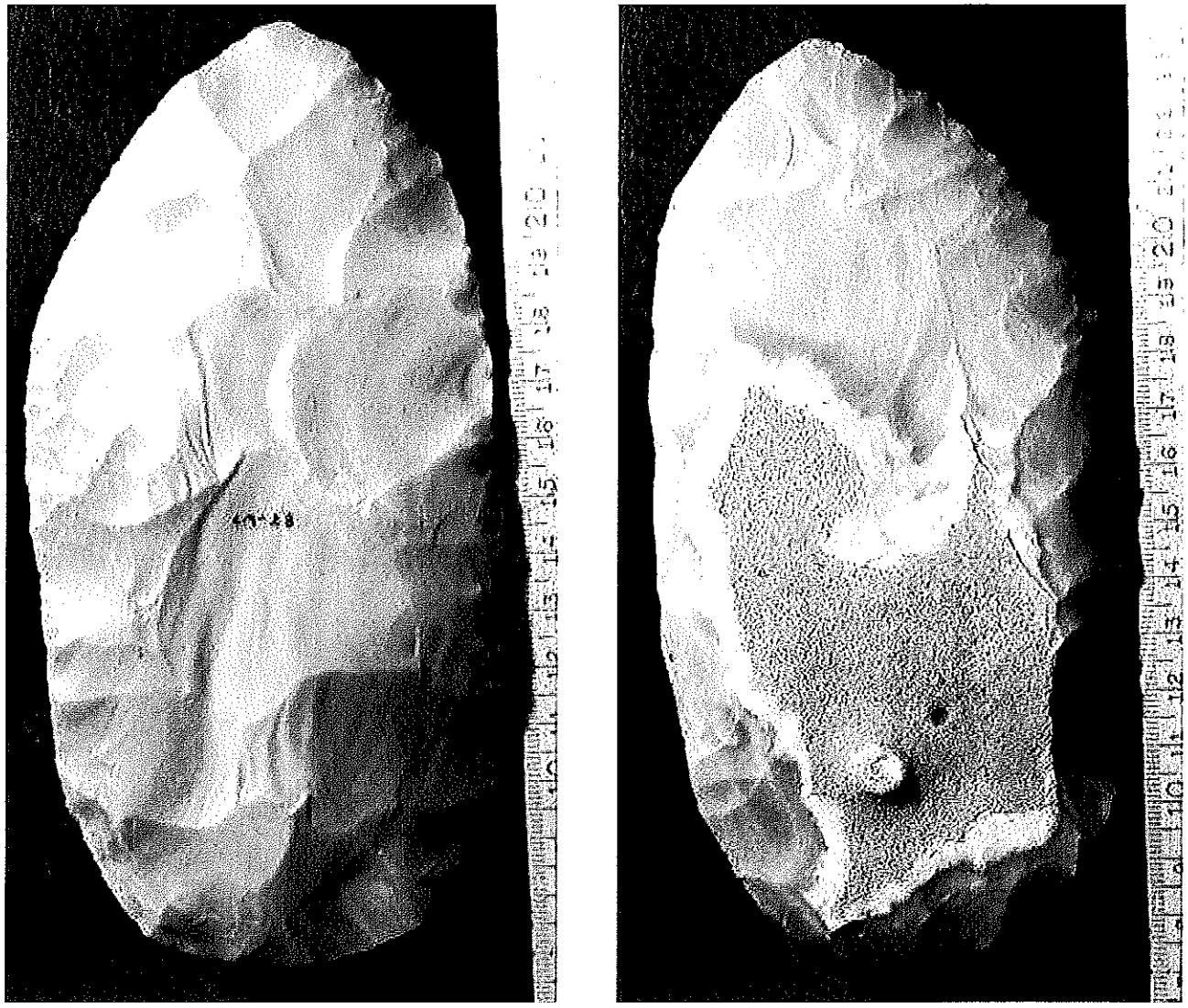


Figure 58. Specimen 28. Left, side A; right, side b.

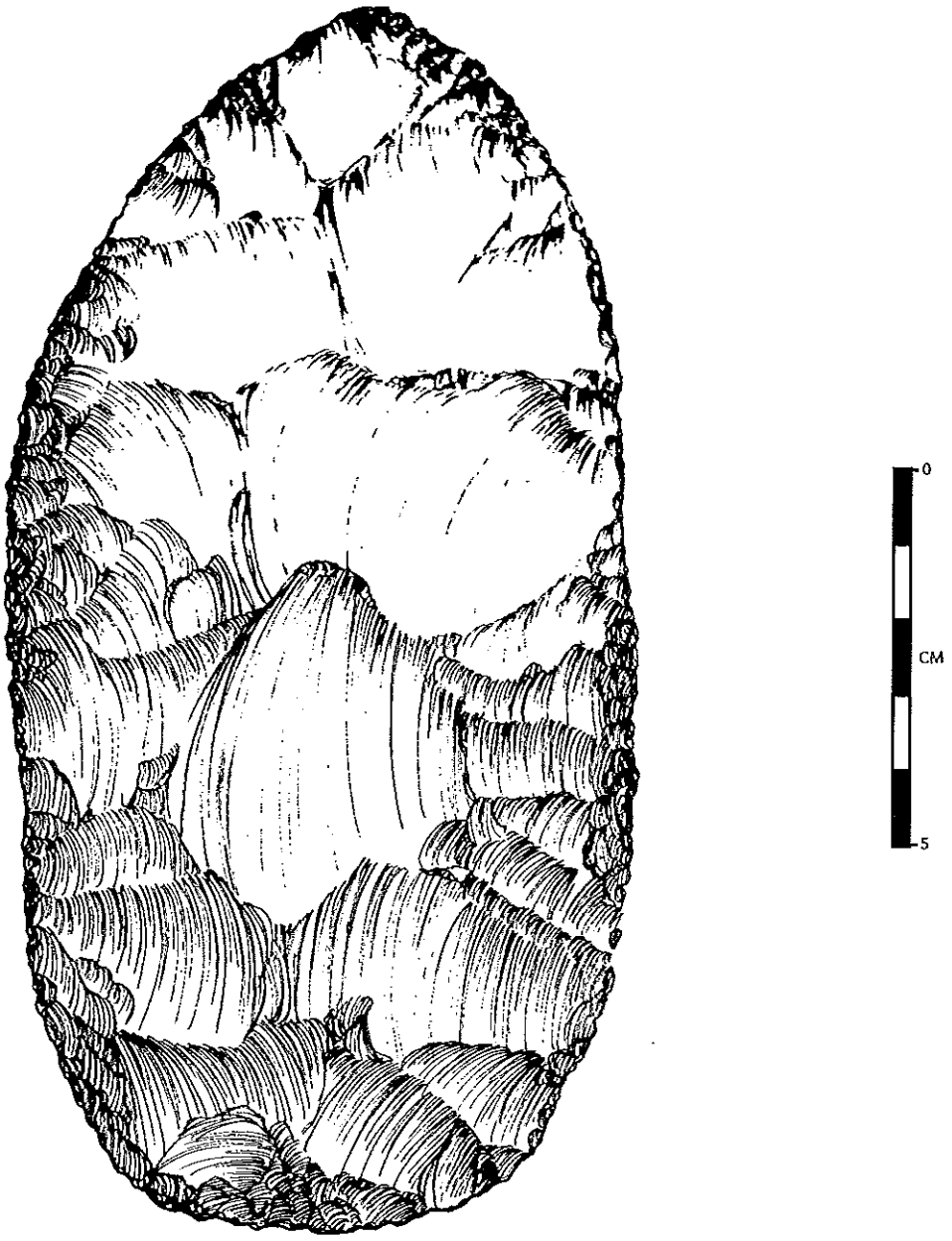
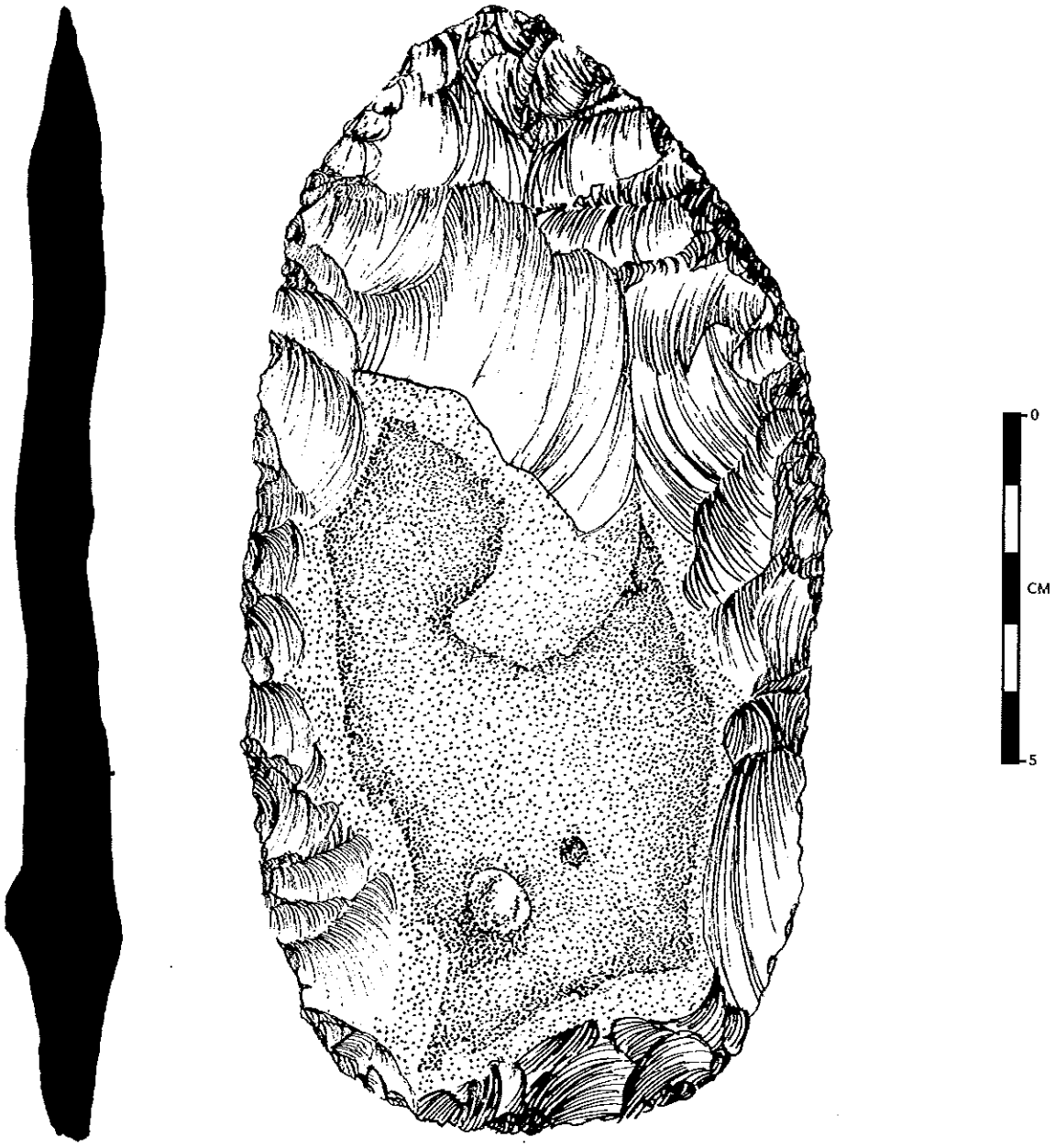


Figure 59. Specimen 28. Left, side A; right, side B.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Specimen #29 (Figures 60-61) The specimen is sub-triangular in outline. Cortex remains only on side B. Material is a high quality Edwards chert. Flaking is random and well spaced, with many flake scars overlapping well past the biface midpoint. Edges are lowered for thinning flake removals on side B. Few large thinning flakes have been removed from the base on either face. One flake appears to have overshot on side B. Most negative bulbs of percussion are very shallow, and some flake scar ridges are pronounced. This biface is somewhat smaller than the majority of bifaces in this cache (see Table 1).

Figure 60. Specimen 29. Left, side A; right, side B.

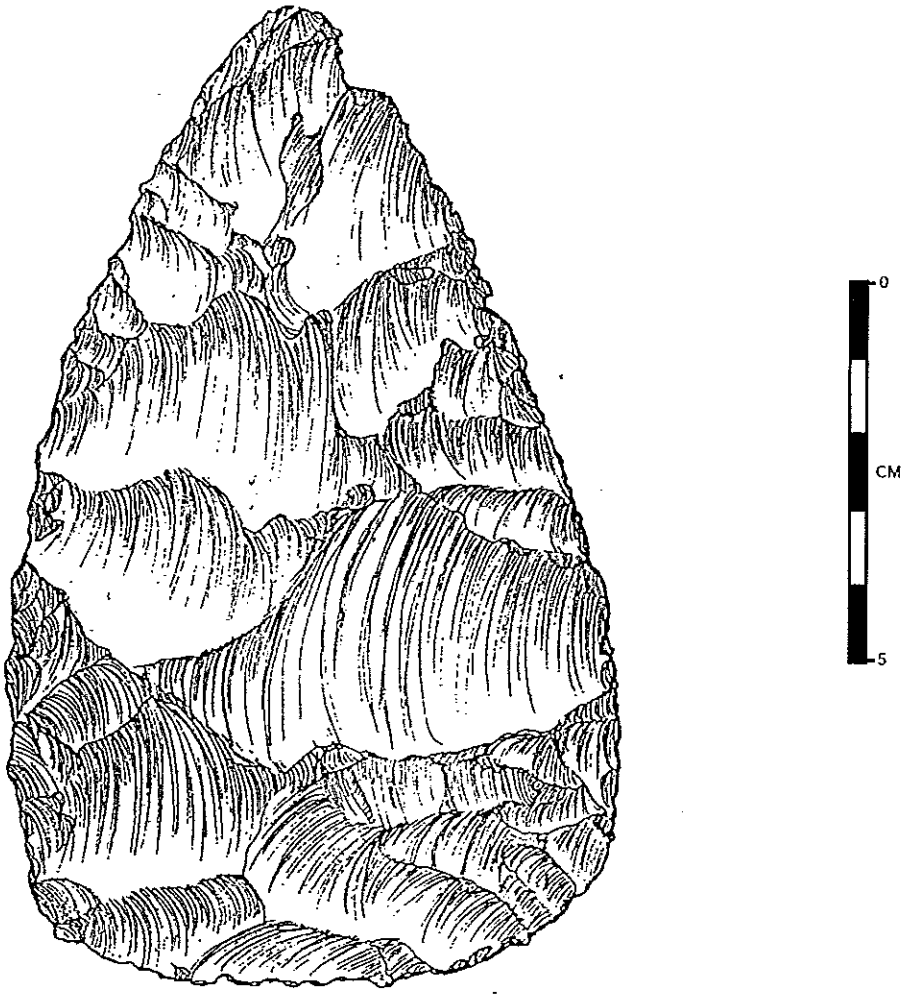
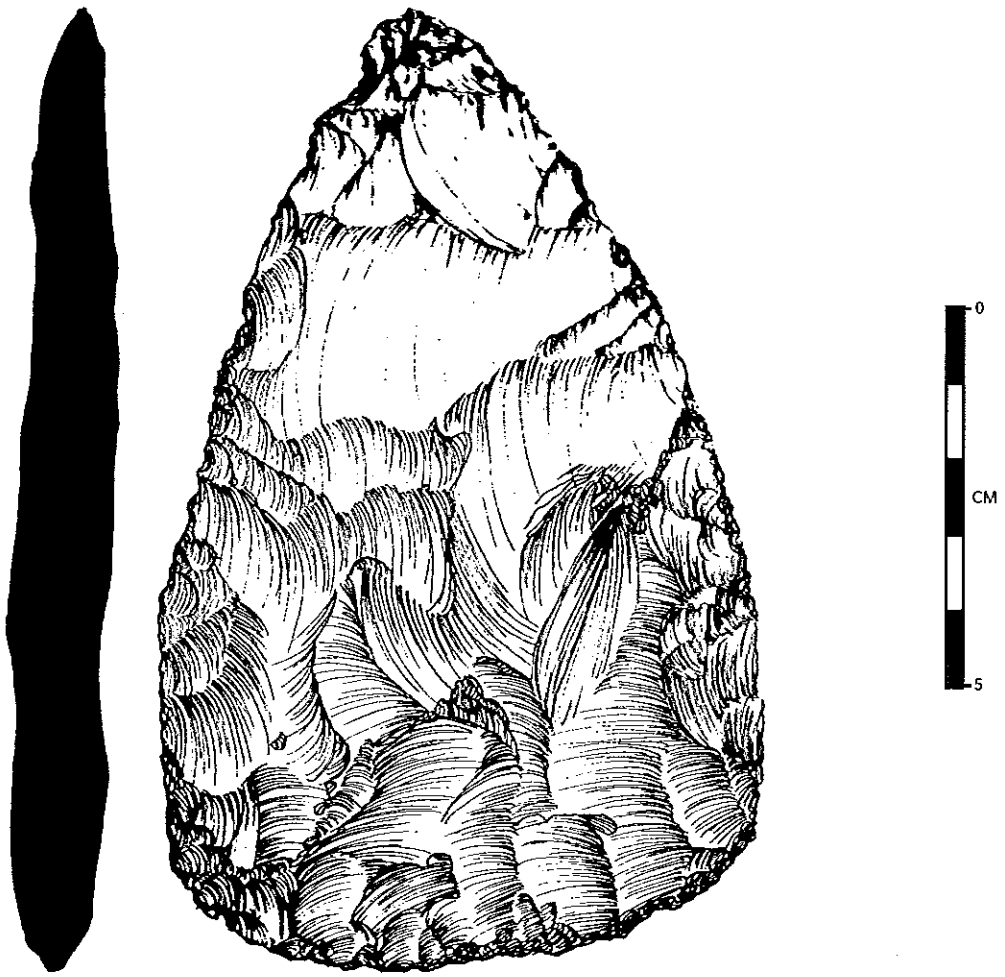


Figure 61. Specimen 29. Both sides, actual size.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Specimen #30 (Figures 62-63) The specimen is sub-triangular in outline. The material is of a high grade tan Edwards chert, with a scattering of small holes that seem to run through the specimen and can be matched up on either face. The luster, complexion, and density of this material is very consistent with this cache in terms of material quality. No cortex remains on either face for comparisons with other cache specimens. Flaking is random and well spaced with many flake scars overlapping well past the biface midpoint. Few very large thinning flakes were taken from the base. The edges are trimmed in some areas but not abraded. No obvious unstruck platforms remain on the biface. Some of the negative bulbs of percussion are deep, but most are shallow. Flake scar ridges are pronounced. This specimen has some very broad thinning flake scars.

Figure 62. Specimen 30. Left, side A; right, side B.

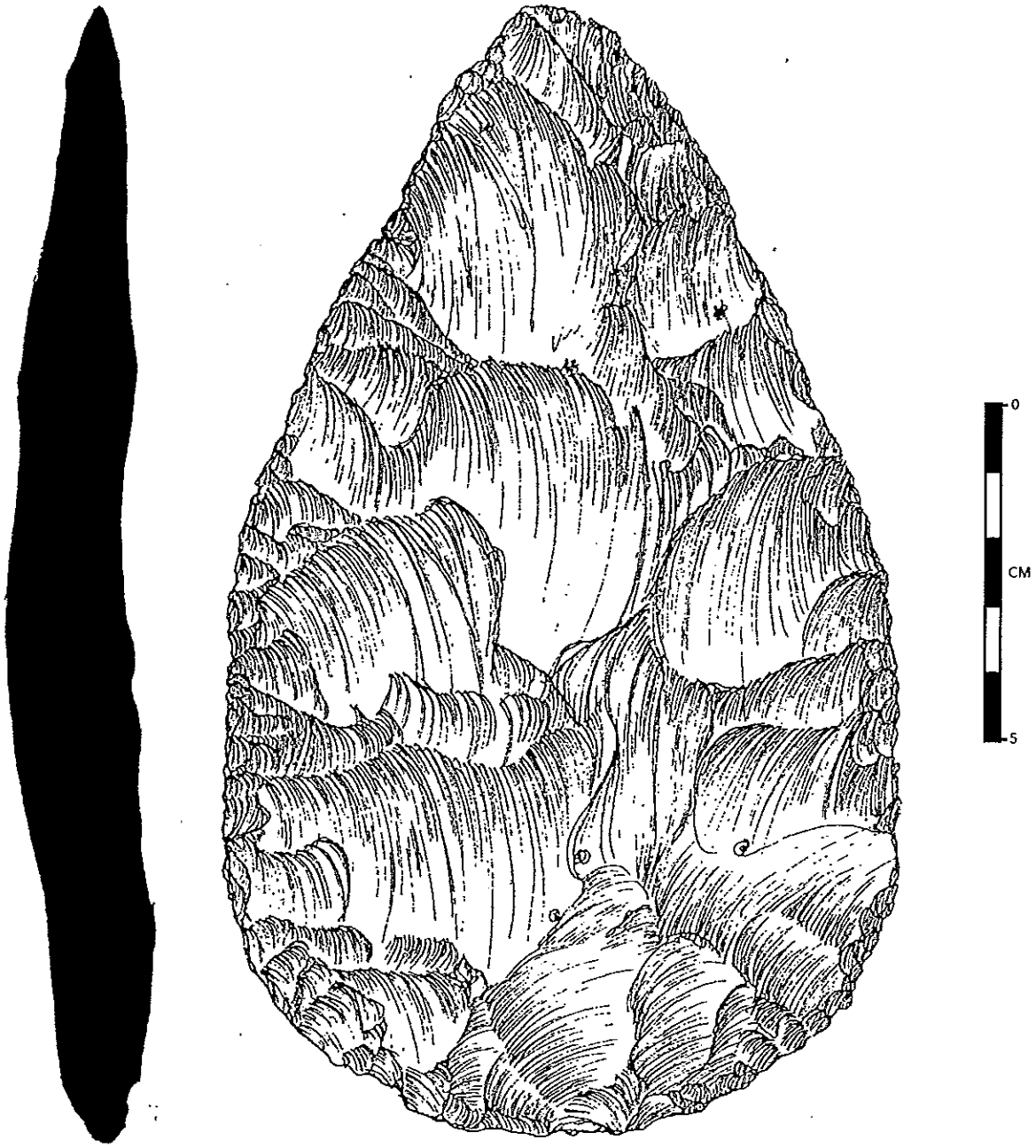
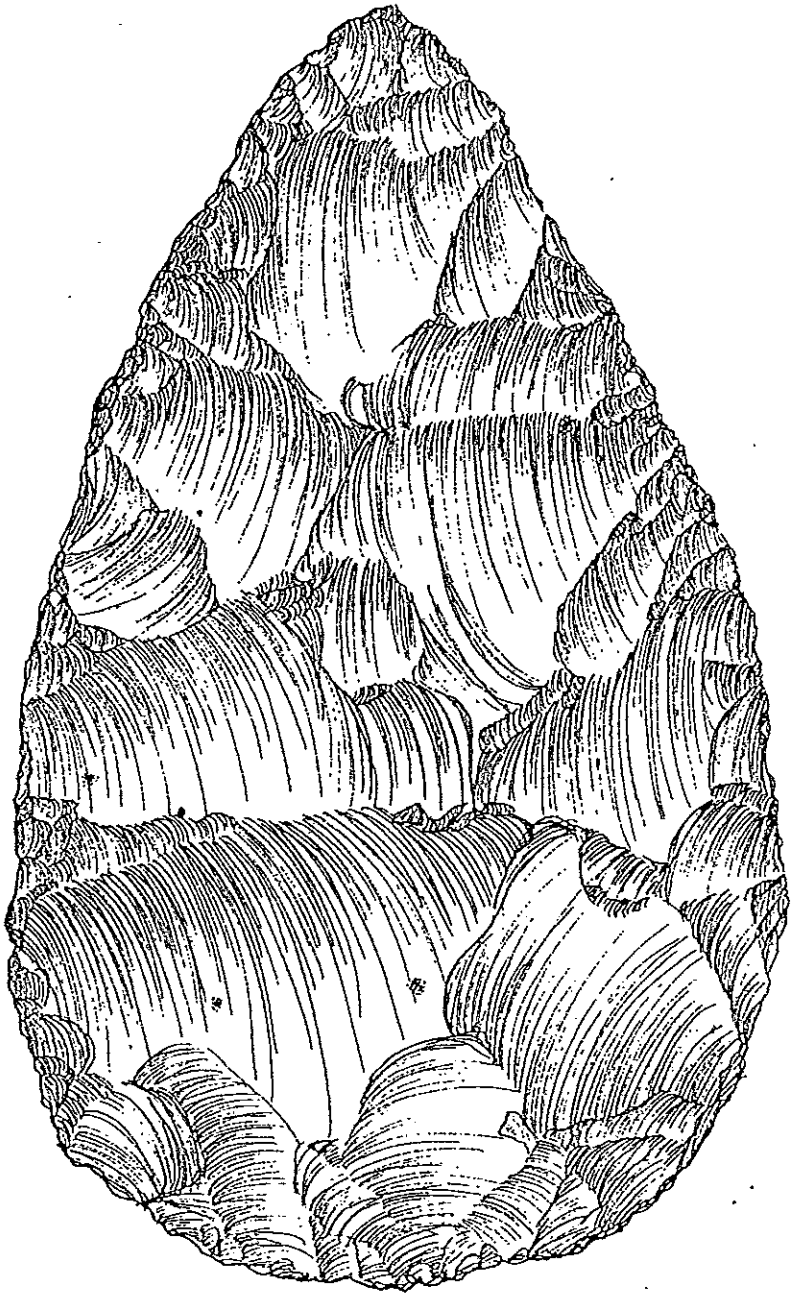


Figure 63. Specimen 30. Both sides, actual size.



Specimen #31 (Figures 64-65) This specimen is sub-triangular in outline, and very thin and convex in profile. Cortex remains on both faces. The raw material and cortex are very consistent with the majority of this cache in quality and characteristics. One lateral edge is much more convex than the other. Negative bulbs of percussion on this specimen are very shallow. Side B has had nearly all the cortex removed, while side A still has perhaps 25 percent of it surface cortex remaining. Edges are trimmed and some unstruck platforms for thinning side A remain. The edges do not appear to have been abraded. Flake scars are large and well-spaced, with many large percussion flake scars overlapping. Some large thinning flakes were struck from the base on both faces. Flake scar ridges are pronounced, and some flake scars travel well past the biface midpoint.

Figure 64. Specimen 31. Left, side A; right, side B.

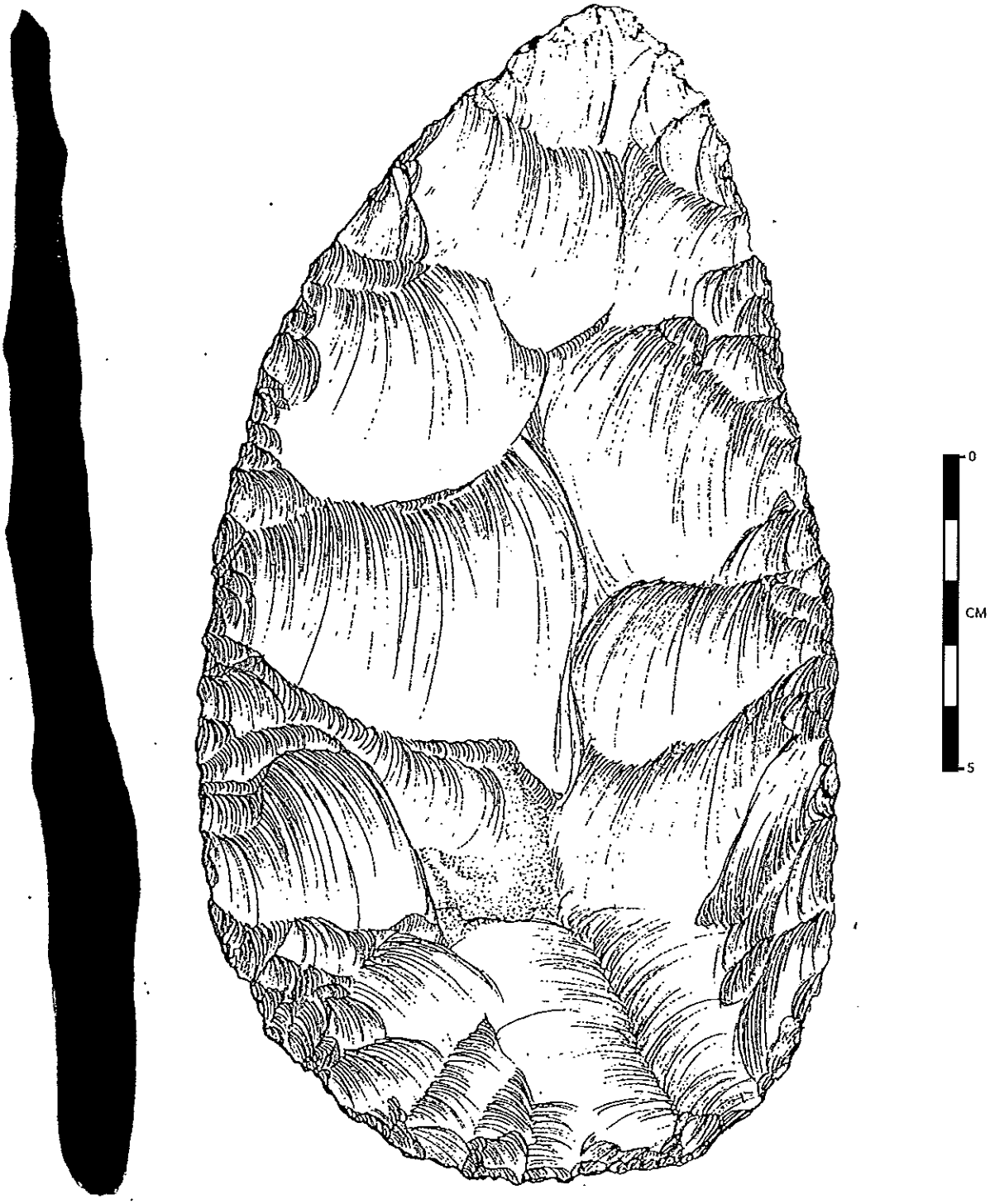
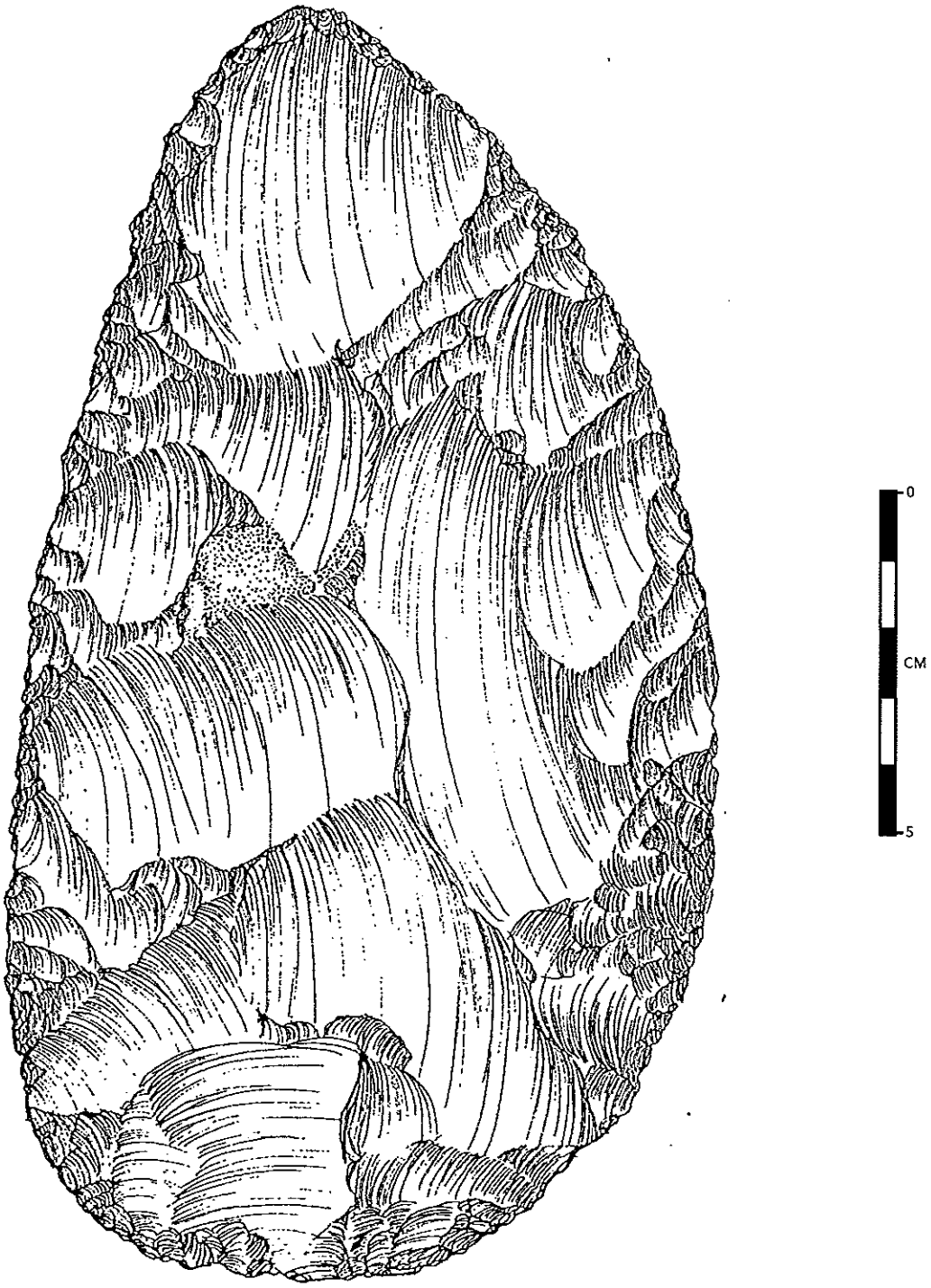


Figure 65. Specimen 31. Both sides, actual size.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Specimen #32 (Figures 66-67) The specimen is sub-triangular in outline. Lateral edges are both convex, while the base is nearly straight. Cortex remnants remain on side B only. The raw material is very consistent with the majority of the pieces in this cache. Both faces exhibit random but large well-spaced percussion flake scars, many overlapping. At least two very large thinning flakes (8 cm) were removed from the base on both faces. Flake scar ridges are pronounced. The edges have been trimmed in some areas and unstruck platforms remain for thinning side B. Notable on this specimen are large thinning flakes struck from the base on both faces. Some flake scars travel well past the biface midpoint.

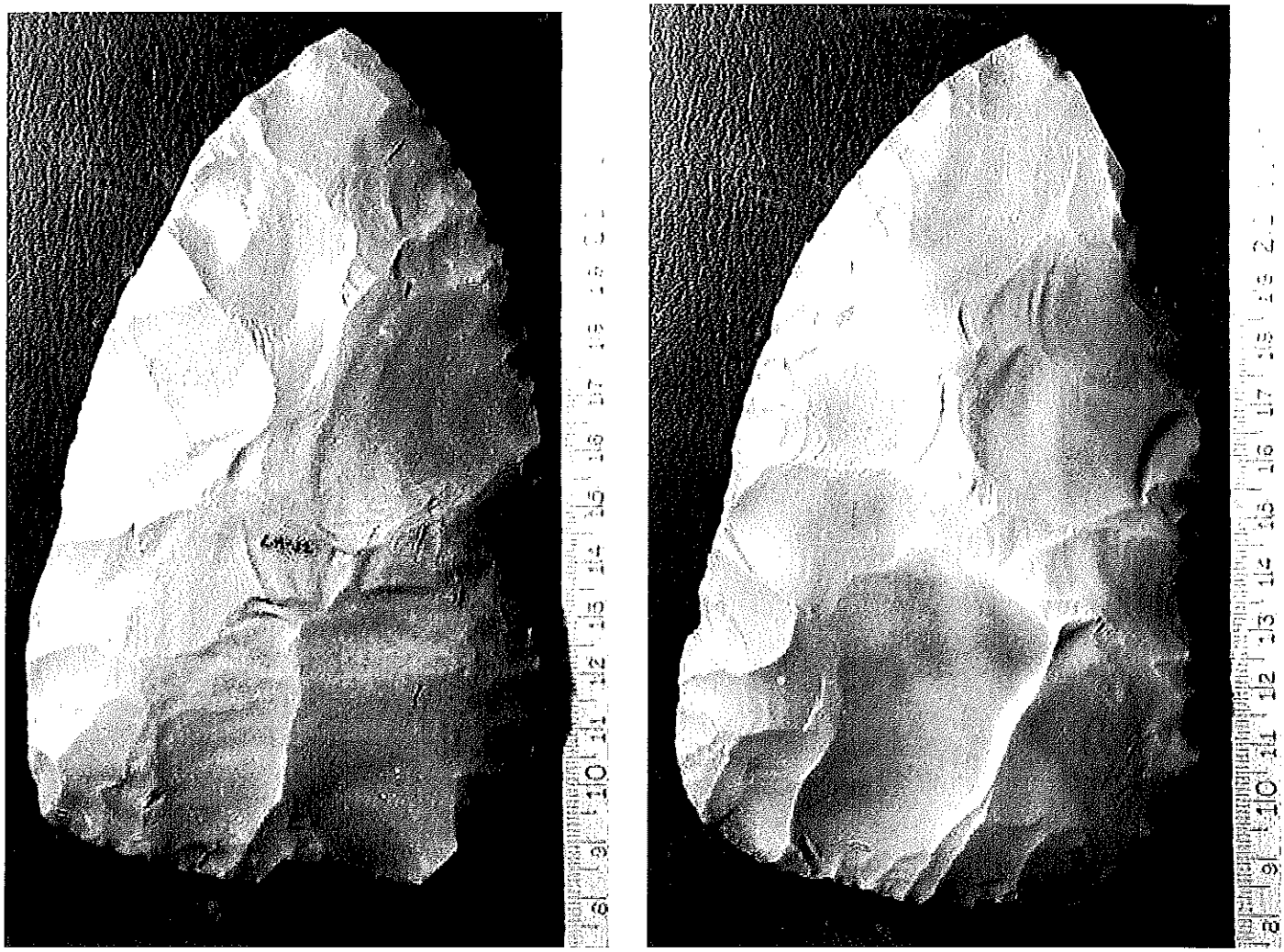


Figure 66. Specimen 32. Left, side A; right, side B.

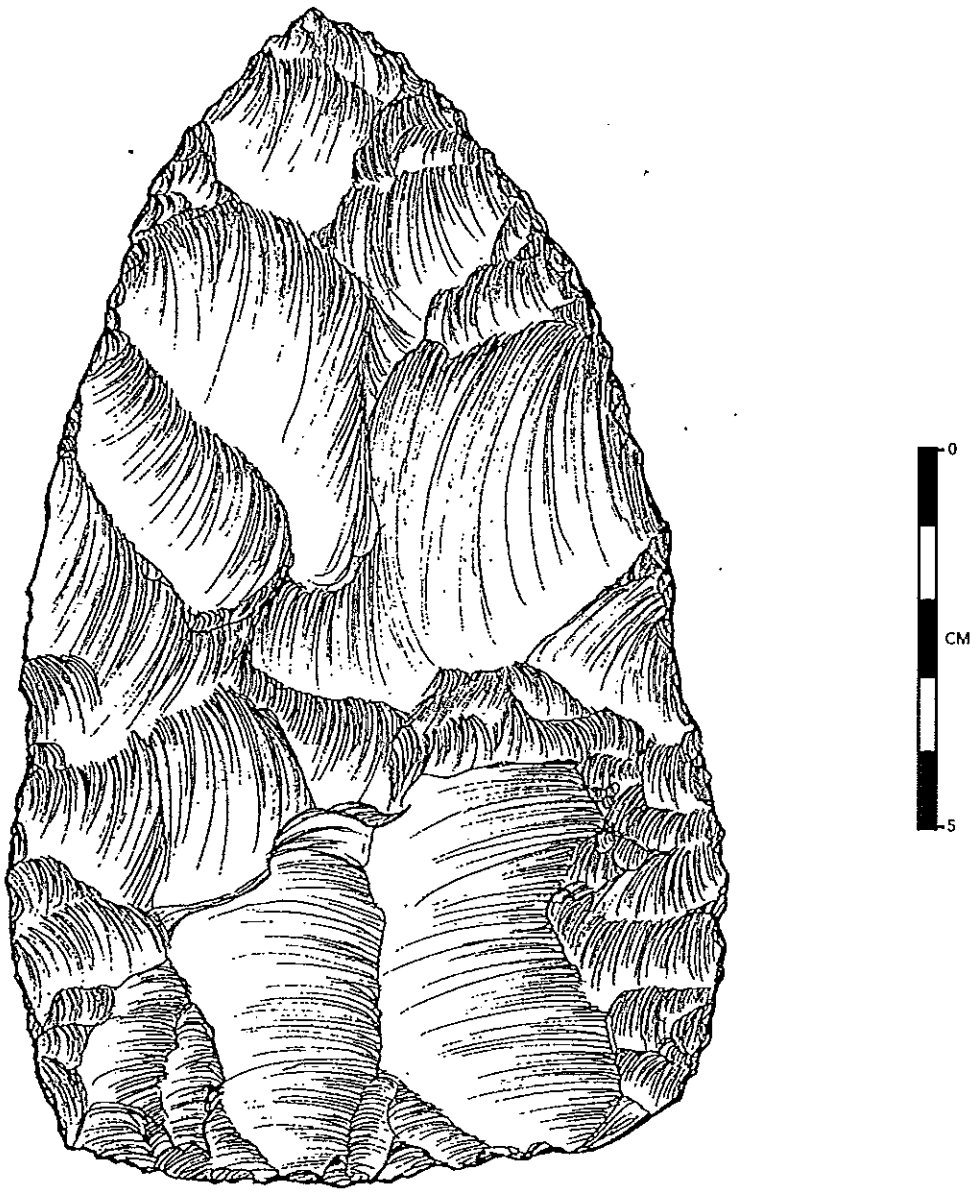
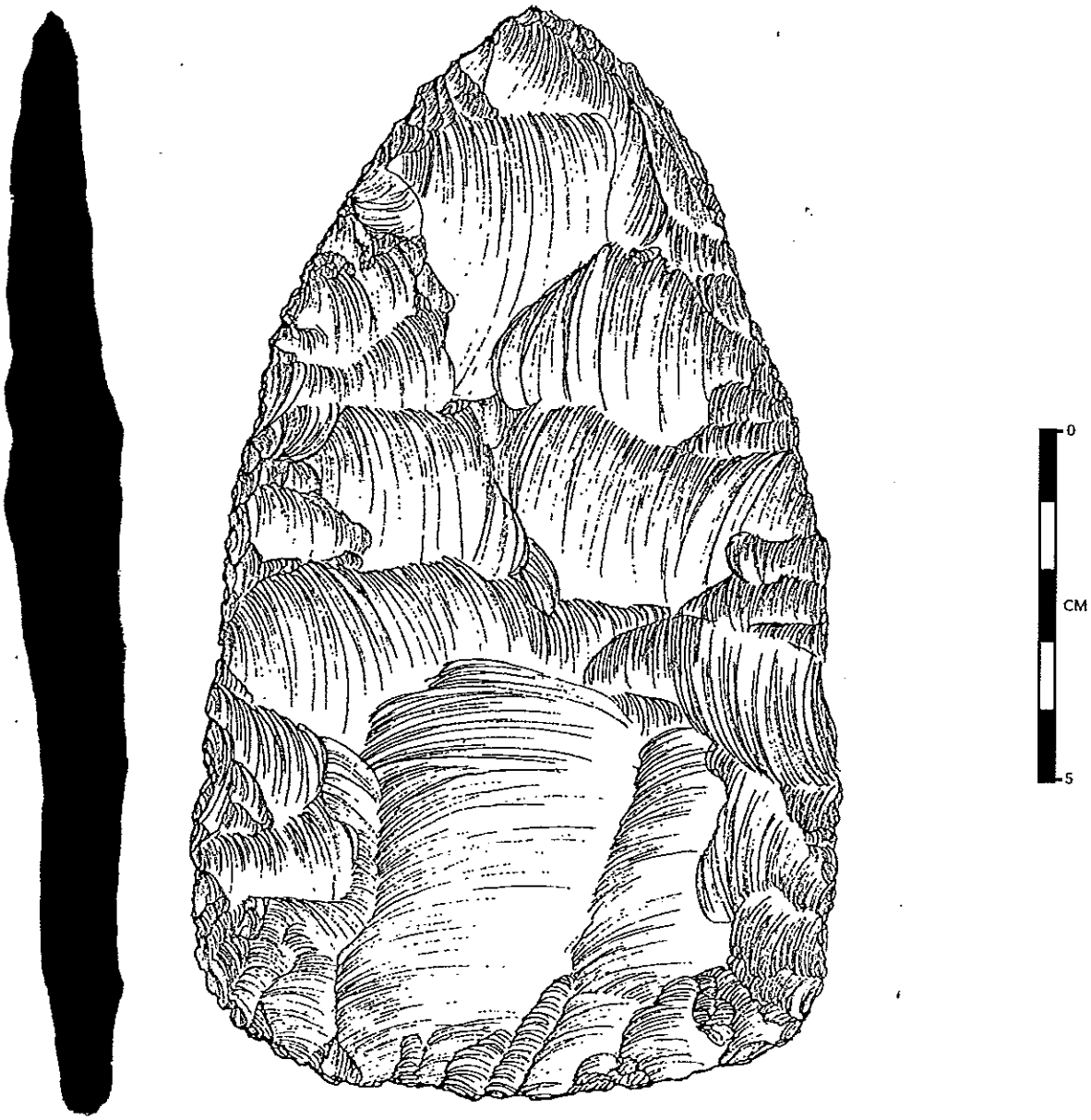


Figure 67. Specimen 32. Both sides, actual size.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Specimen #33 (Figures 68-69) The specimen is sub-triangular in outline. Cortex remains only on side B. The raw material is very consistent with the majority of this cache, in both quality and cortex characteristics. Both lateral edges are very convex; however, the base is straighter, with rounded corners. Both faces exhibit large, random, unorganized flake scars, with many overlapping. Flake scar ridges are very pronounced. Some negative bulbs of percussion are very deep. The edges are trimmed in some areas and some unstruck platforms remain. Several flake scars travel well past the biface midpoint. This biface also has very large (8 cm) percussion thinning flakes taken from the base.

Figure 68. Specimen 33. Left, side A; right, side B.

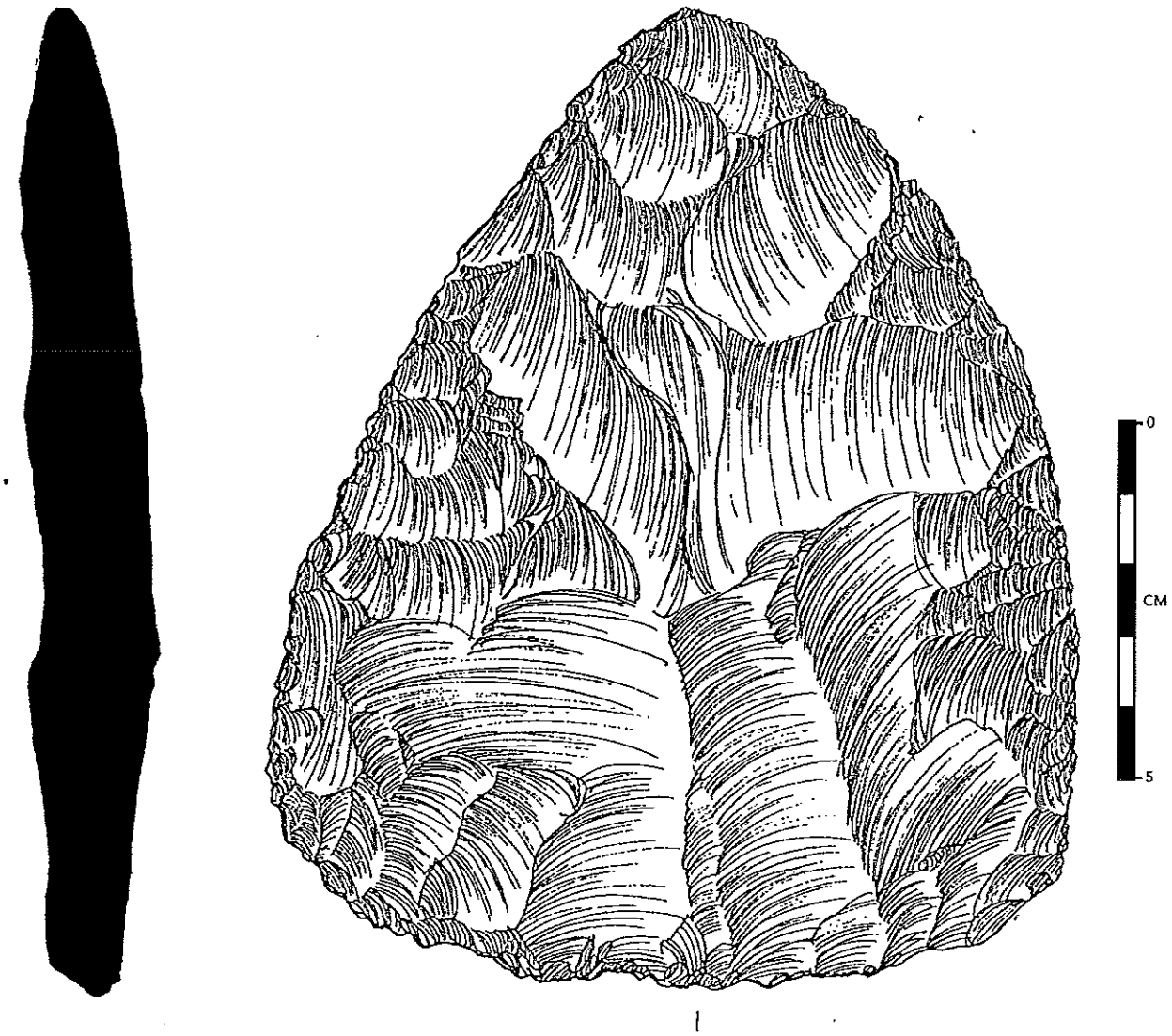
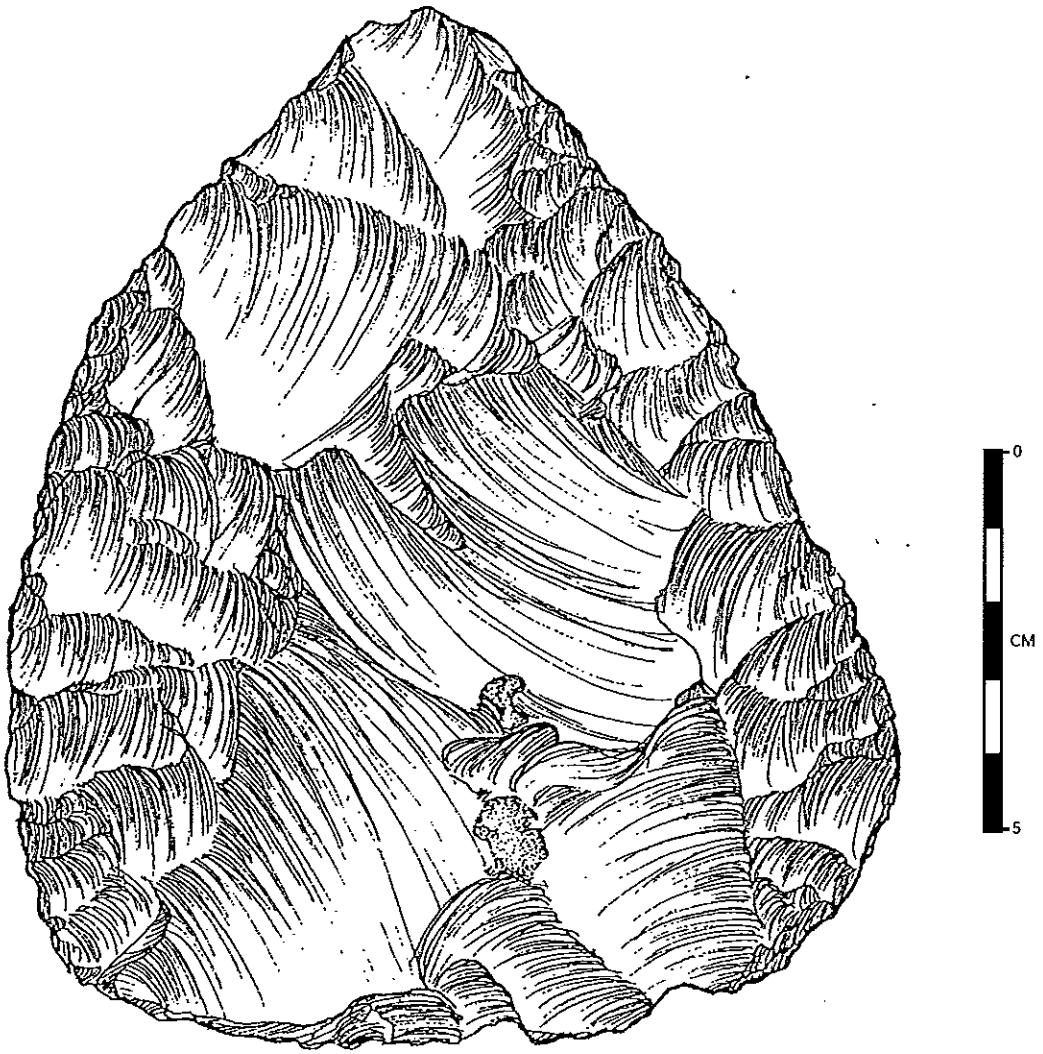


Figure 69. Specimen 33. Both sides, actual size.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Specimen #34 (Figures 70-71) This specimen is ovate in outline. The raw material of the piece is very consistent with the majority of this cache both in quality and cortex characteristics. The cortex, does not appear to have been stream rolled, suggesting a quarry or bedrock find. Both faces retain almost all the original cortex. The specimen is very nearly the shape of the originally collected nodule. About 50 percent of the nodule's edges have been trimmed. Few large percussion flakes have been struck off this specimen and those that have were mainly to trim the edges. The specimen was already very thin as a collected nodule. Both faces exhibited abraded lines generally running parallel to the longitudinal axis. This specimen fits well into the open palm and may have been used to abrade the edges of other specimens that were being knapped. No apparent intentional geometric designs can be detected in the abraded lines.

Figure 70. Specimen 34. Left, side A; right, side B.

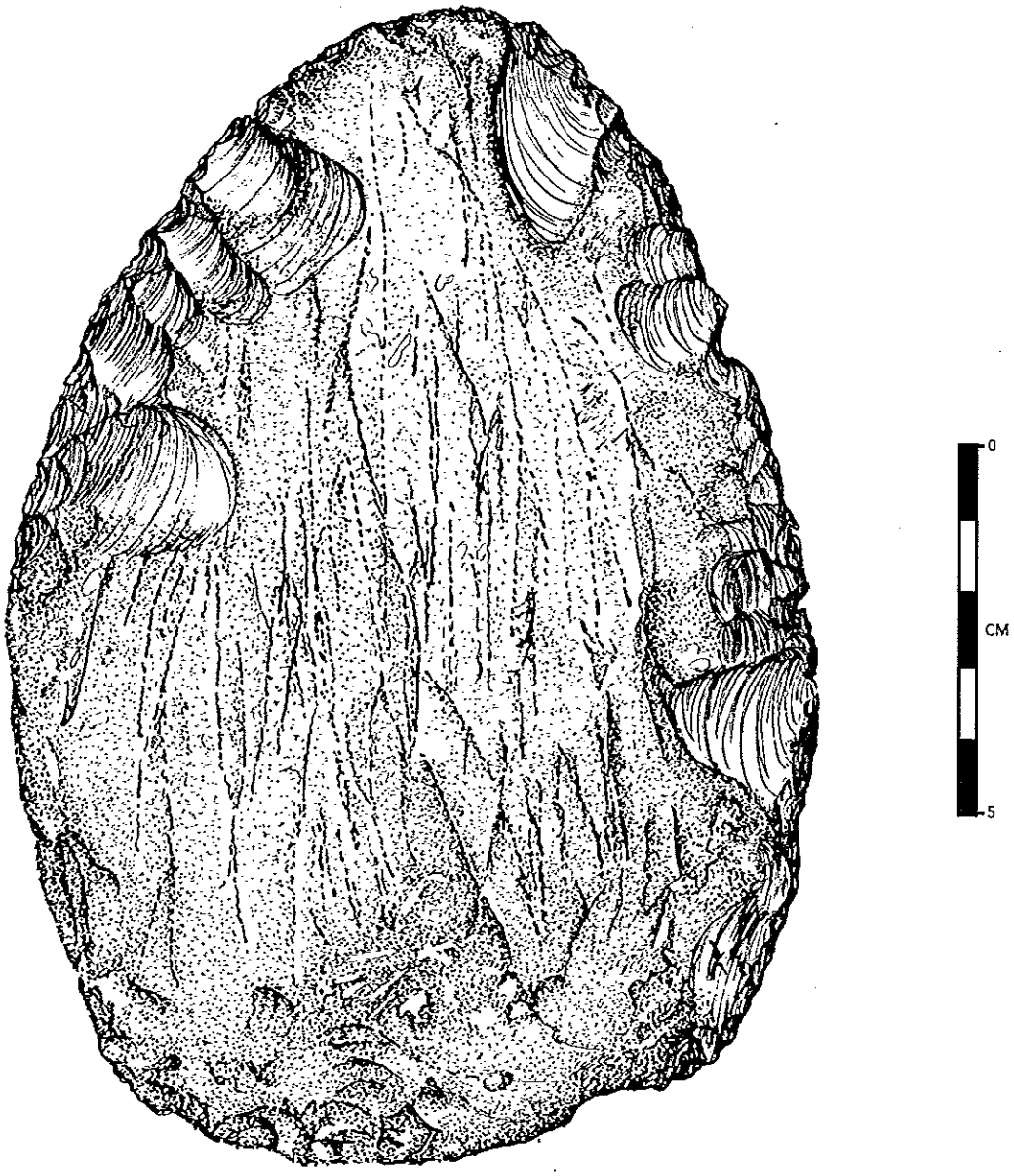
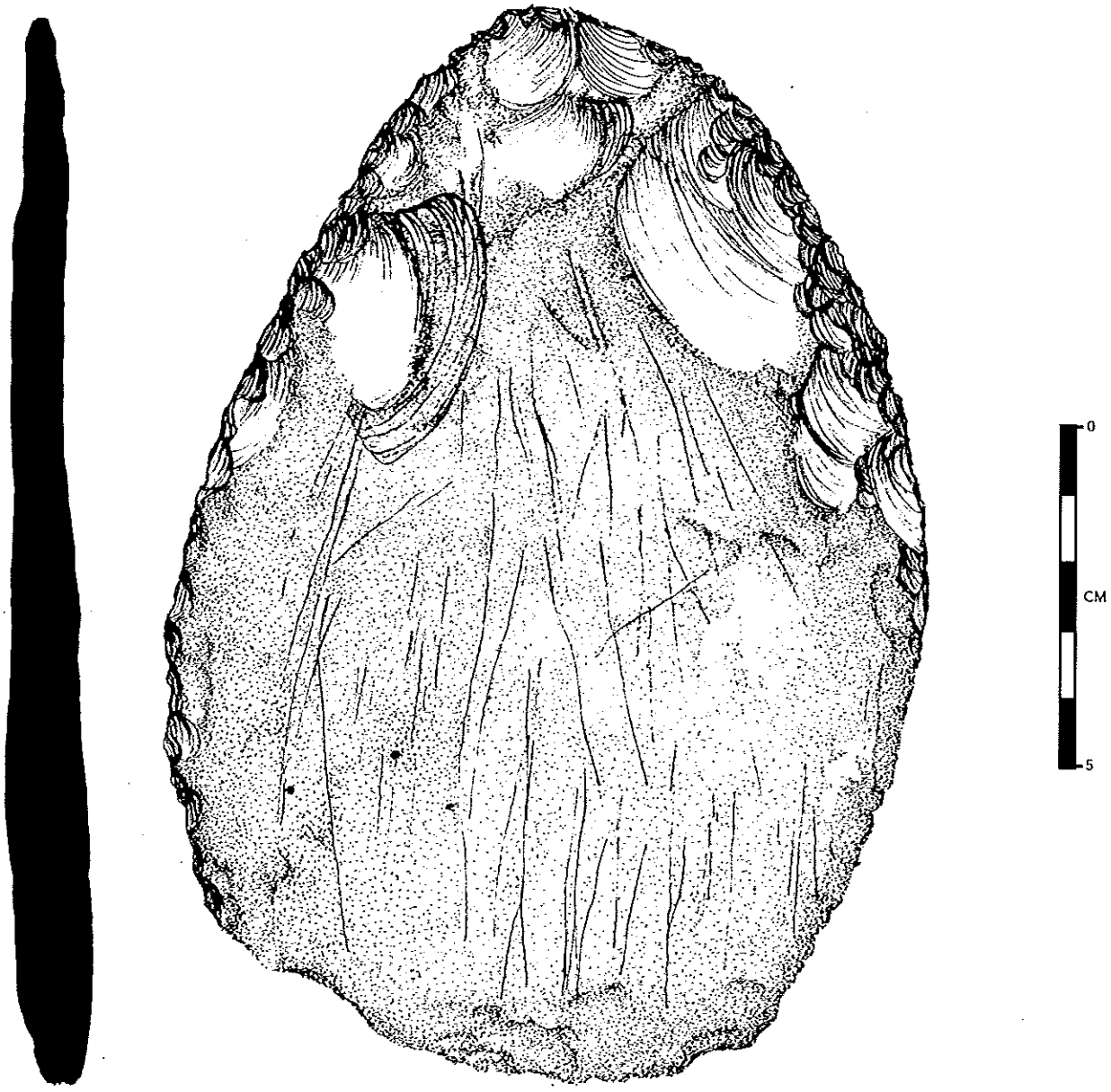


Figure 71. Specimen 34. Both sides, actual size.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Specimen #35 (Figures 72-73) The biace is sub-triangular in outline. This specimen is very consistent with the majority of the cache pieces in both material quality and cortex characteristics. Cortex remains on both faces and thus this specimen is the same thinness as the originally collected nodule. Flaking consists of large, random, well-spaced percussion flaking, with many overlapping flake scars. Some large thinning flakes were struck from the base of this specimen. Flake scar ridges are very pronounced, and some of the flake scars extended well past the biface midpoint. Slight damage to the left lateral edge of side A was probably caused during discovery of the cache; however, it is possible that this damage simply represents a crushed platform. Edges on side A have been trimmed in preparation for flake removals for side B. Some negative bulbs of percussion are fairly shallow.

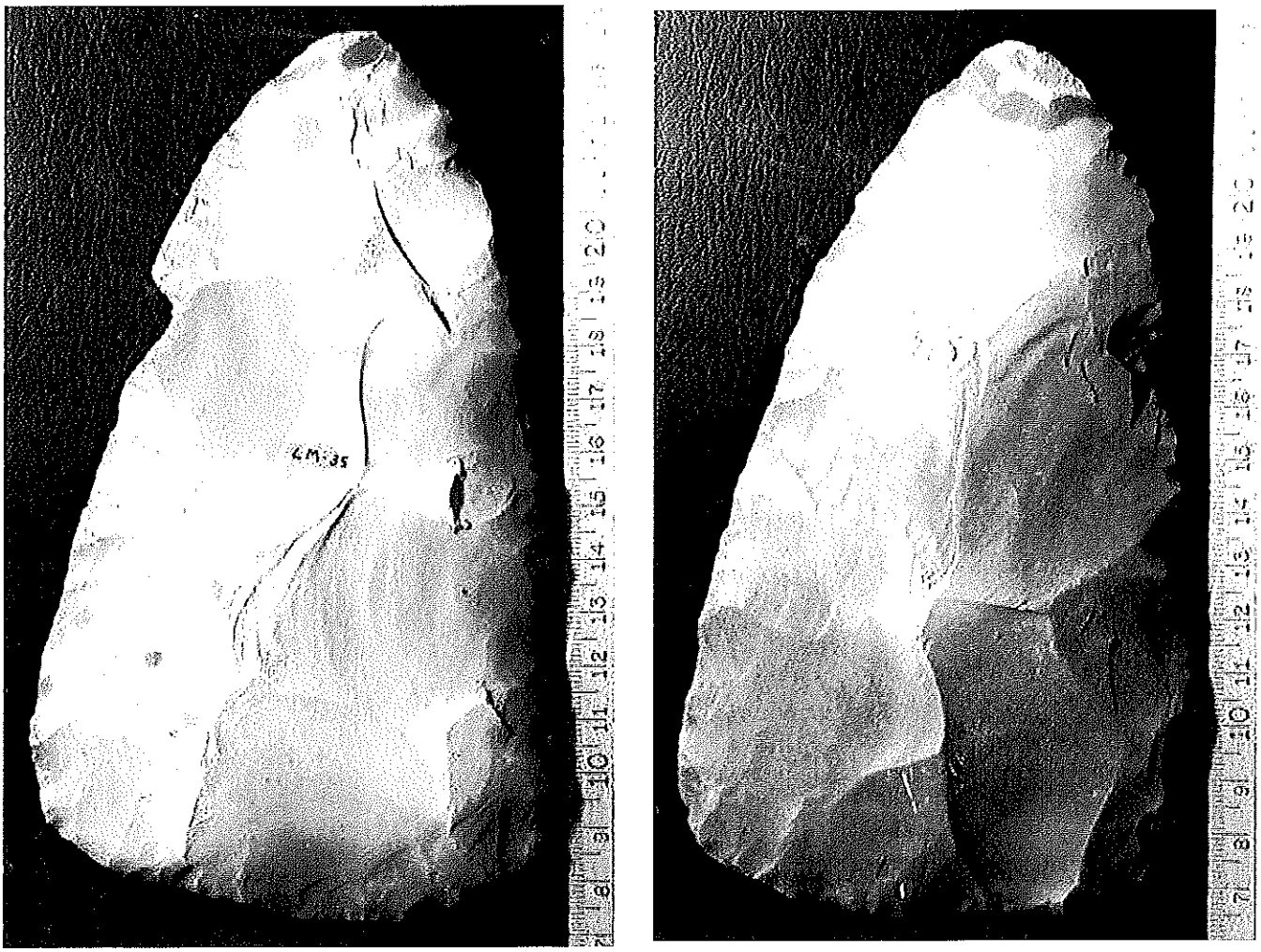


Figure 72. Specimen 35. Left, side A; right, side B.

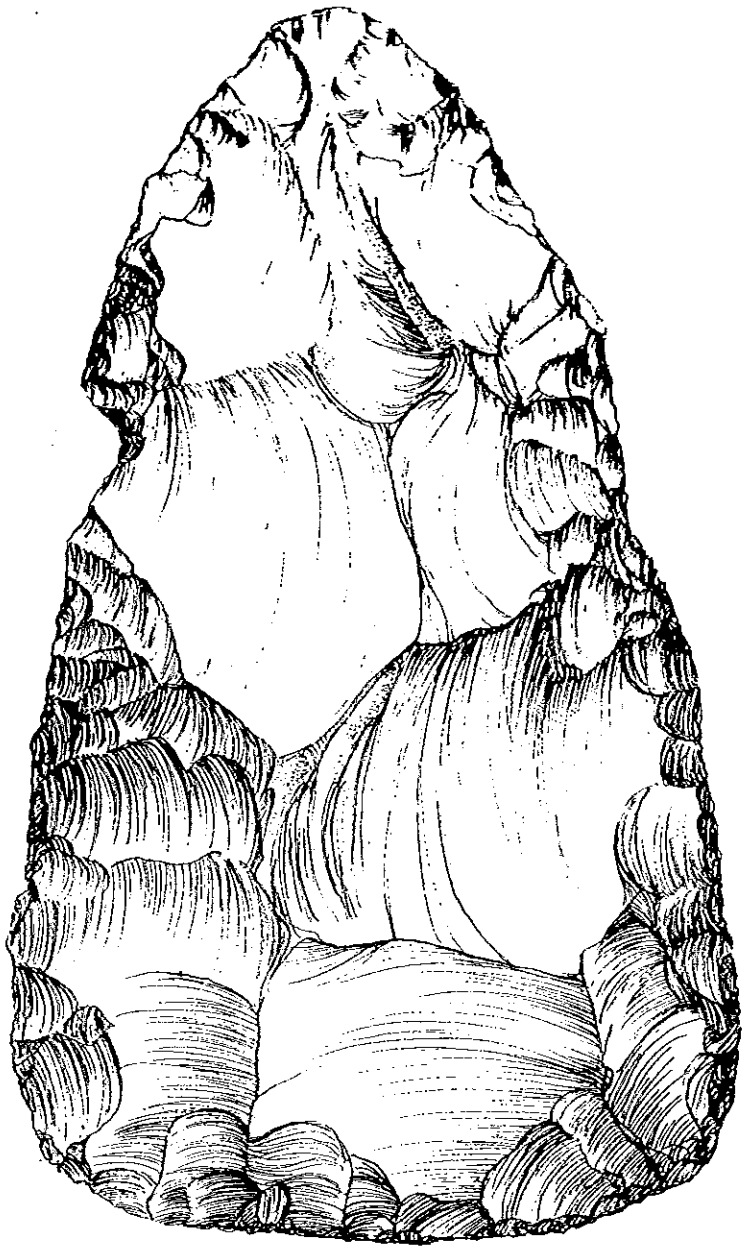
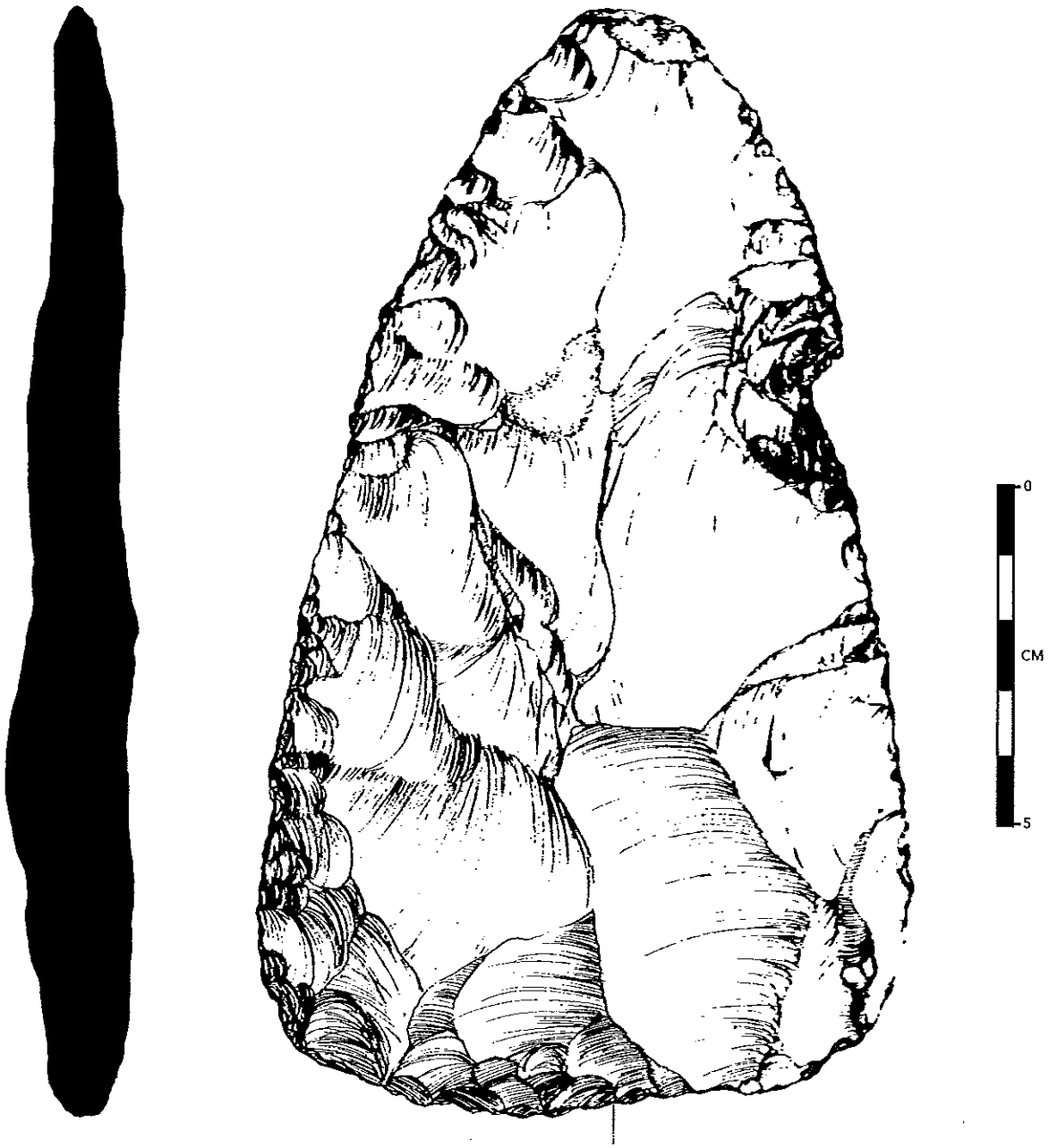


Figure 73. Specimen 35. Both sides, actual size.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Specimen #36 (Figures 74-75) The specimen is sub-triangular in outline. No cortex remains on either face for cortex comparisons. The raw material is lighter in color than the other cache pieces and it has irregularities and inclusions that are not at all consistent with the majority of this cache; however, the specimen's quality of material, size, and shape are consistent. Flaking is generally straight in from the lateral edges, random and well-spaced, with many large flake scars overlapping. No apparent large thinning flakes have been taken from the base of this specimen. Flake scar ridges are pronounced. Some edges have been trimmed, but no prepared platforms are apparent. Negative bulbs of percussion are generally shallow and many flake scars extended past the biface's center.

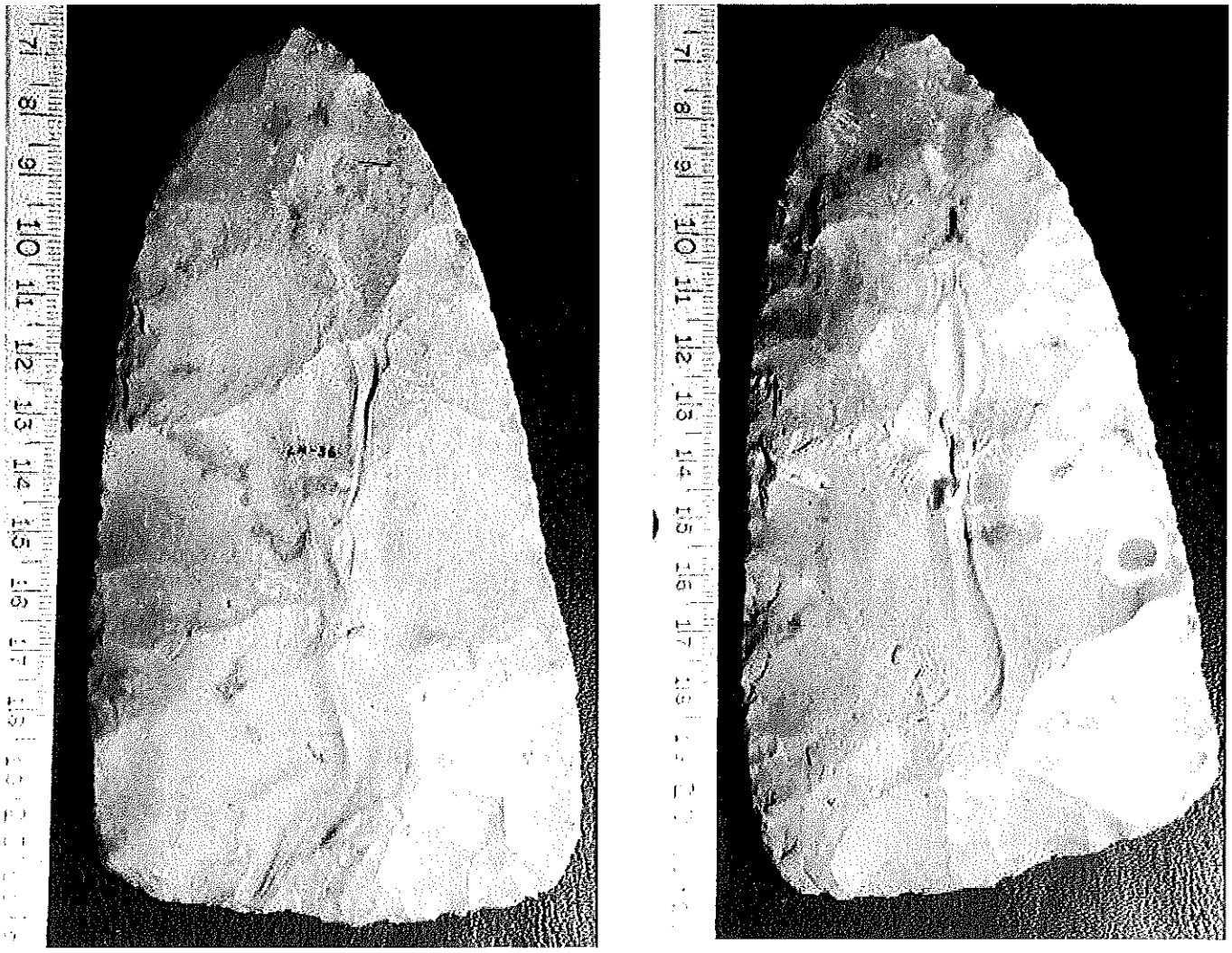


Figure 74. Specimen 36. Left, side A; right, side B.

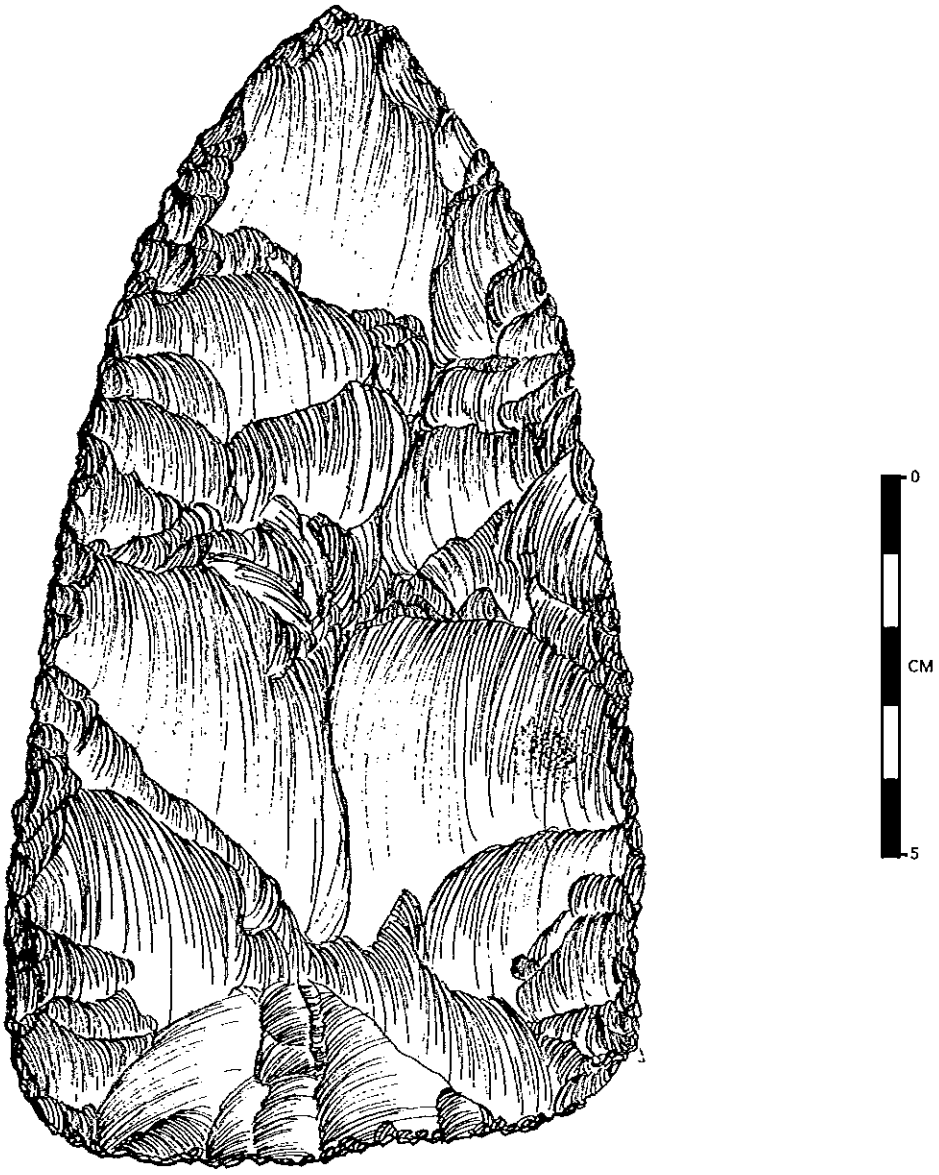
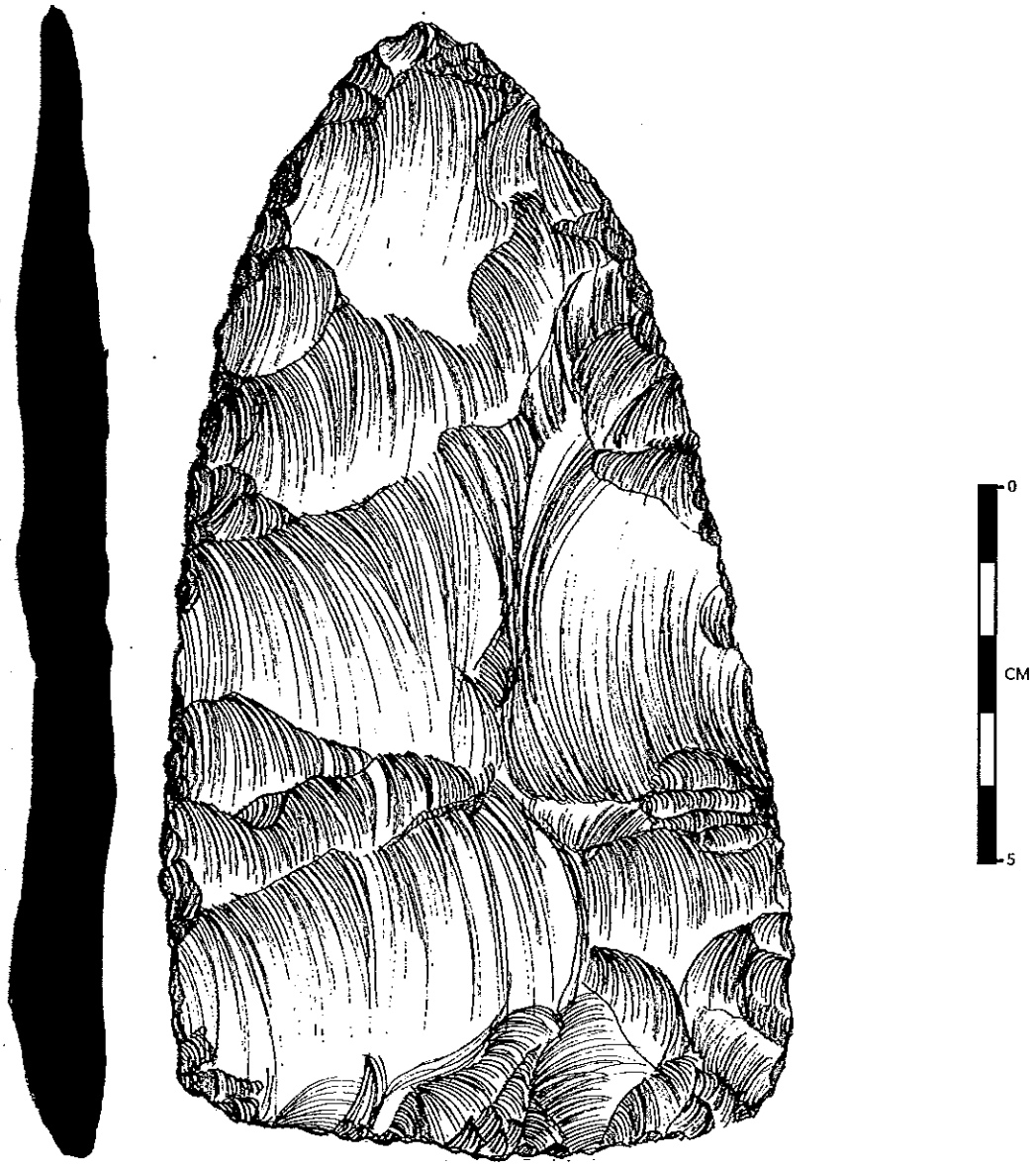


Figure 75. Specimen 36. Both sides, actual size.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Specimen #37 (Figures 76-77) This specimen is bi-pointed in outline and slightly curved in profile. Some cortex remains on both faces. The raw material is very consistent with the majority of this cache in both quality and cortex characteristics. Flake scars are large, thinning, percussion flakes generally struck straight in from the lateral edges, with many overlapping. Flaking is random and well-spaced. Some edges are trimmed and some unstruck platforms remain. The specimen somewhat resembles that of a four-beveled quadrilateral biface (Brown et al, 1982: Fig. 22), but its shape was most probably determined by the originally collected nodule. Some flake scars travel well past the biface's midpoint. Flake scar ridges are pronounced. Accomplished knapper Richard Dobie considers this biface to have been intentionally shaped by the prehistoric knapper.

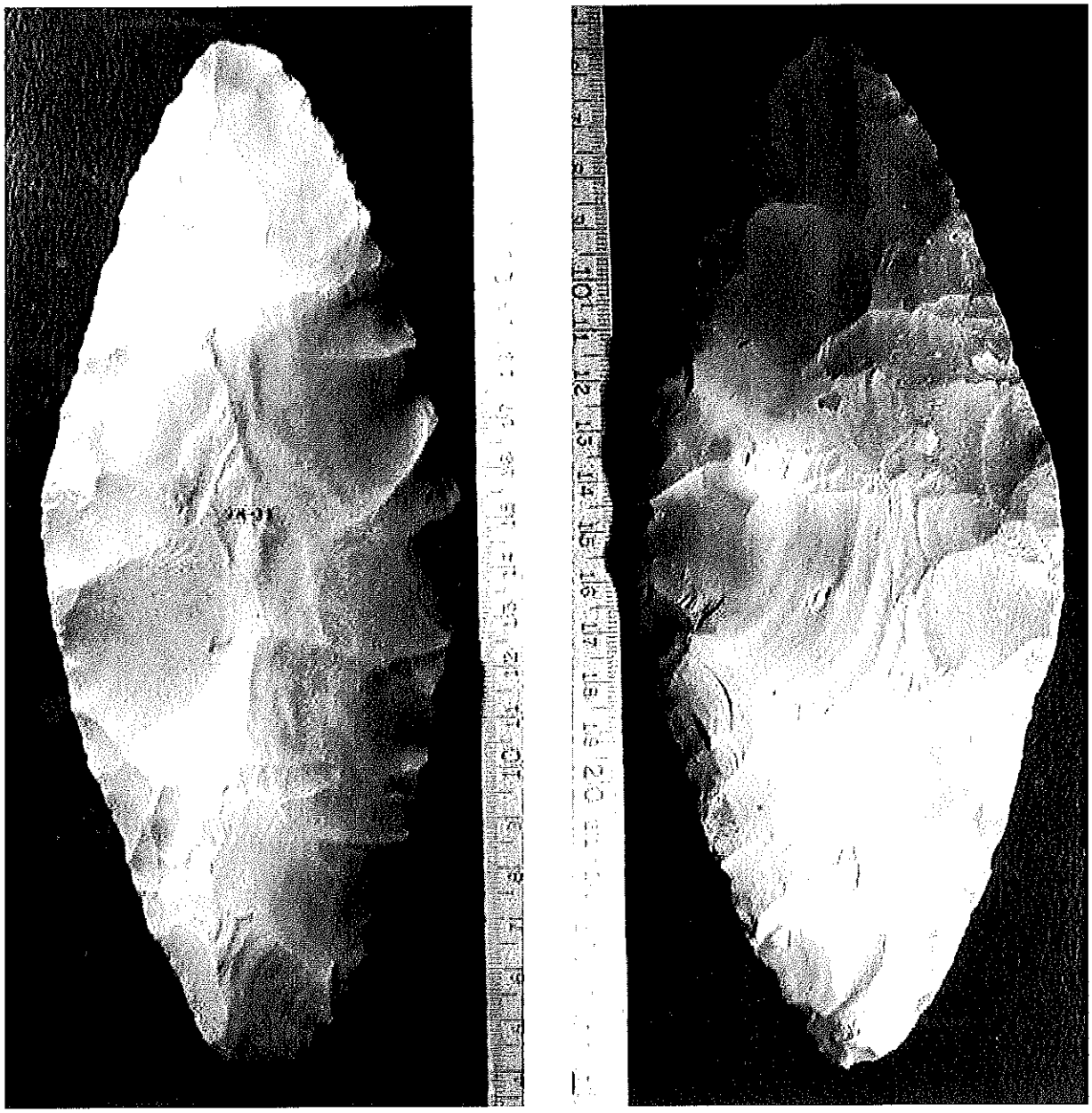


Figure 76. Specimen 37. Left, side A; right, side B.

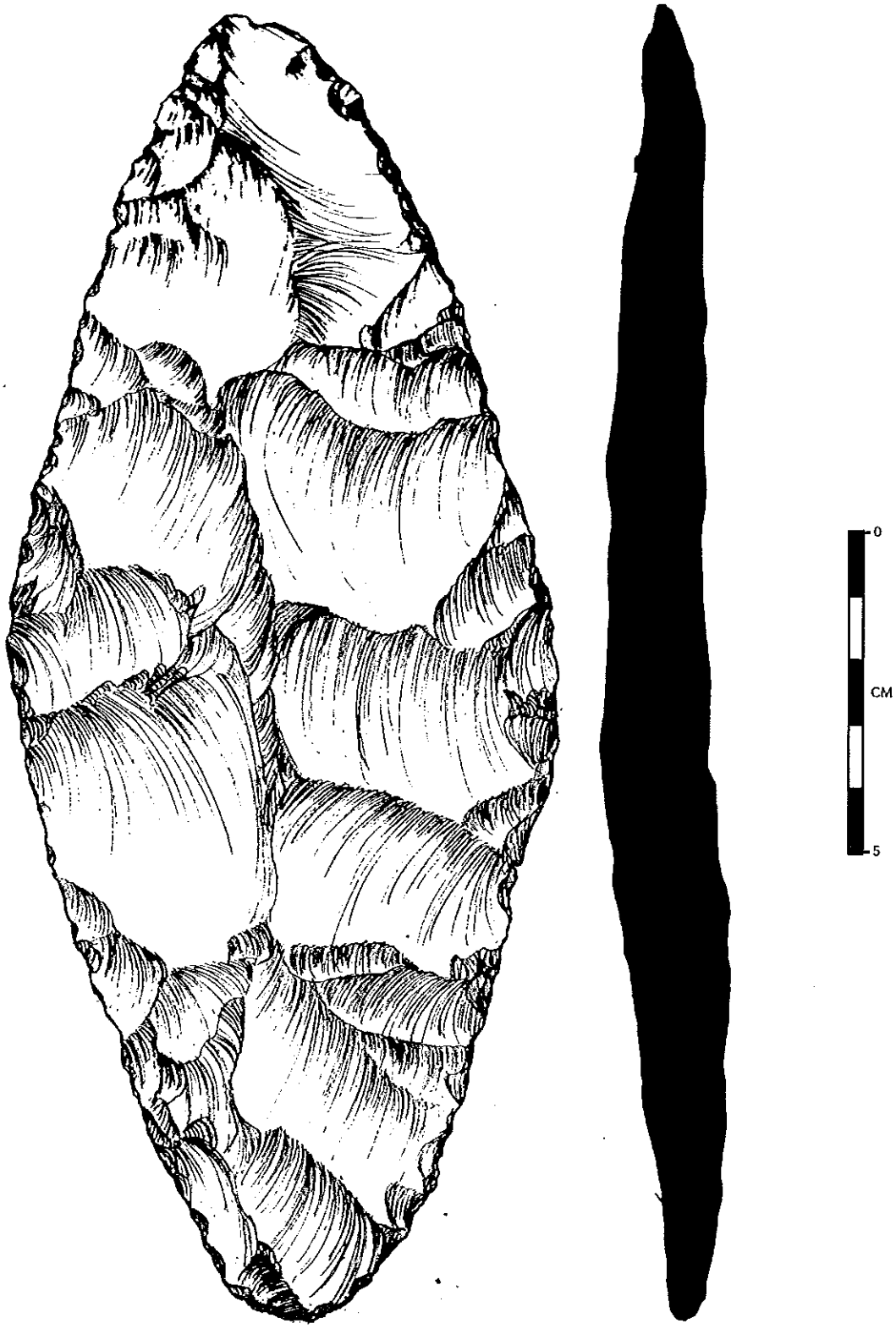
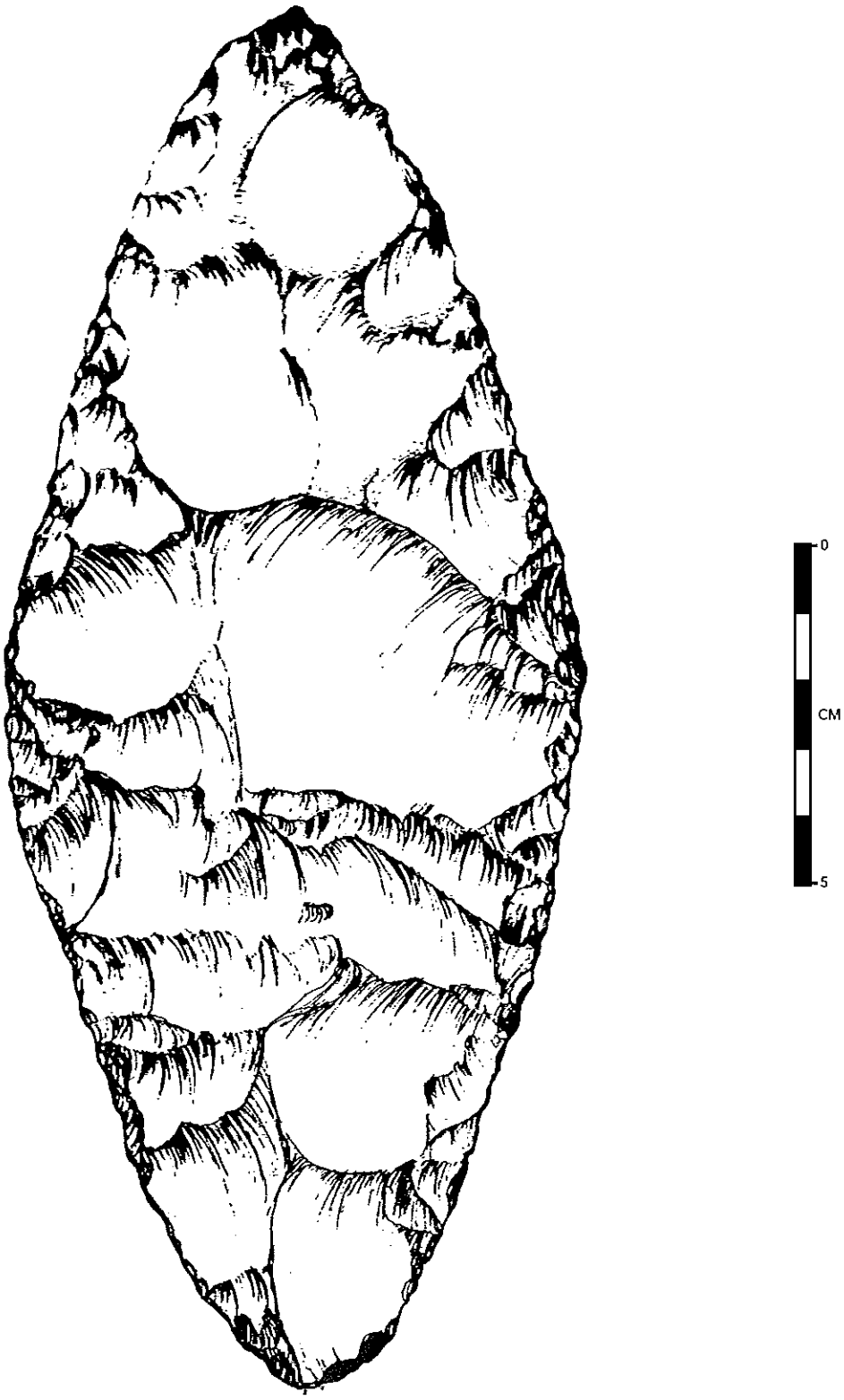


Figure 77. Specimen 37. Both sides, actual size.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Specimen #38 (Figures 78-79) This specimen is ovate in outline. Some cortex remains on both faces, making it evident that this specimen is the same thickness as the originally collected nodule. The specimen is very consistent with the majority of this cache in both material quality and cortex characteristics. Both faces exhibit large, random, but well-spaced percussion flaking, and many flake scars travel well beyond the biface midpoint on both faces. Few large thinning flakes were taken from the base on either face. Flake scar ridges are pronounced. Flaking is generally straight in from the lateral edges. In some areas of the biface, the edges have been trimmed and unstruck platforms remain. Negative bulbs of percussion are very shallow and all struck platforms appear to have been trimmed. This specimen's outline is slightly unsymmetrical because of unstruck platforms as seen on side A's right lateral edge towards the distal tip, which would have removed thinning flakes from side B.

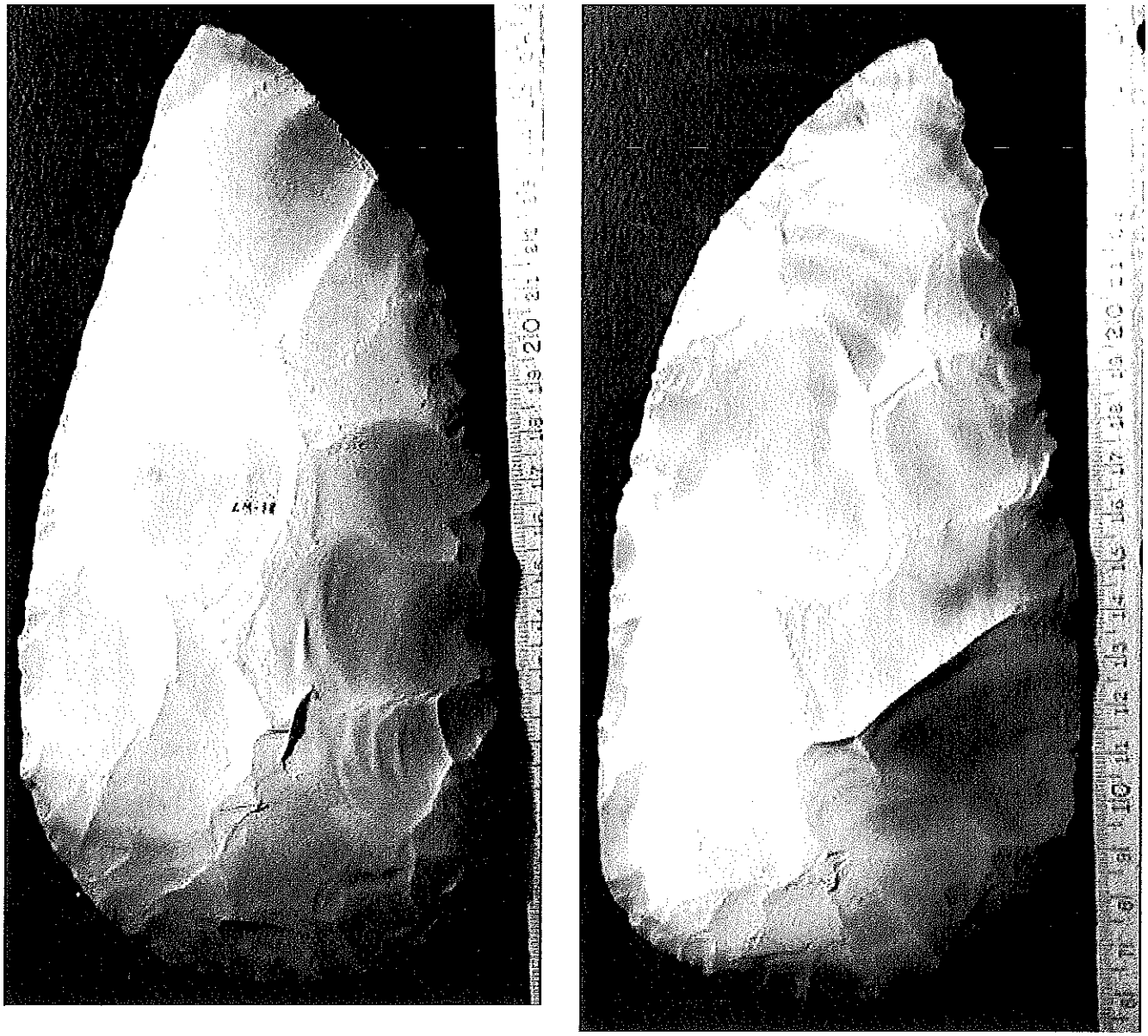


Figure 78. Specimen 38. Left, side A; right, side B

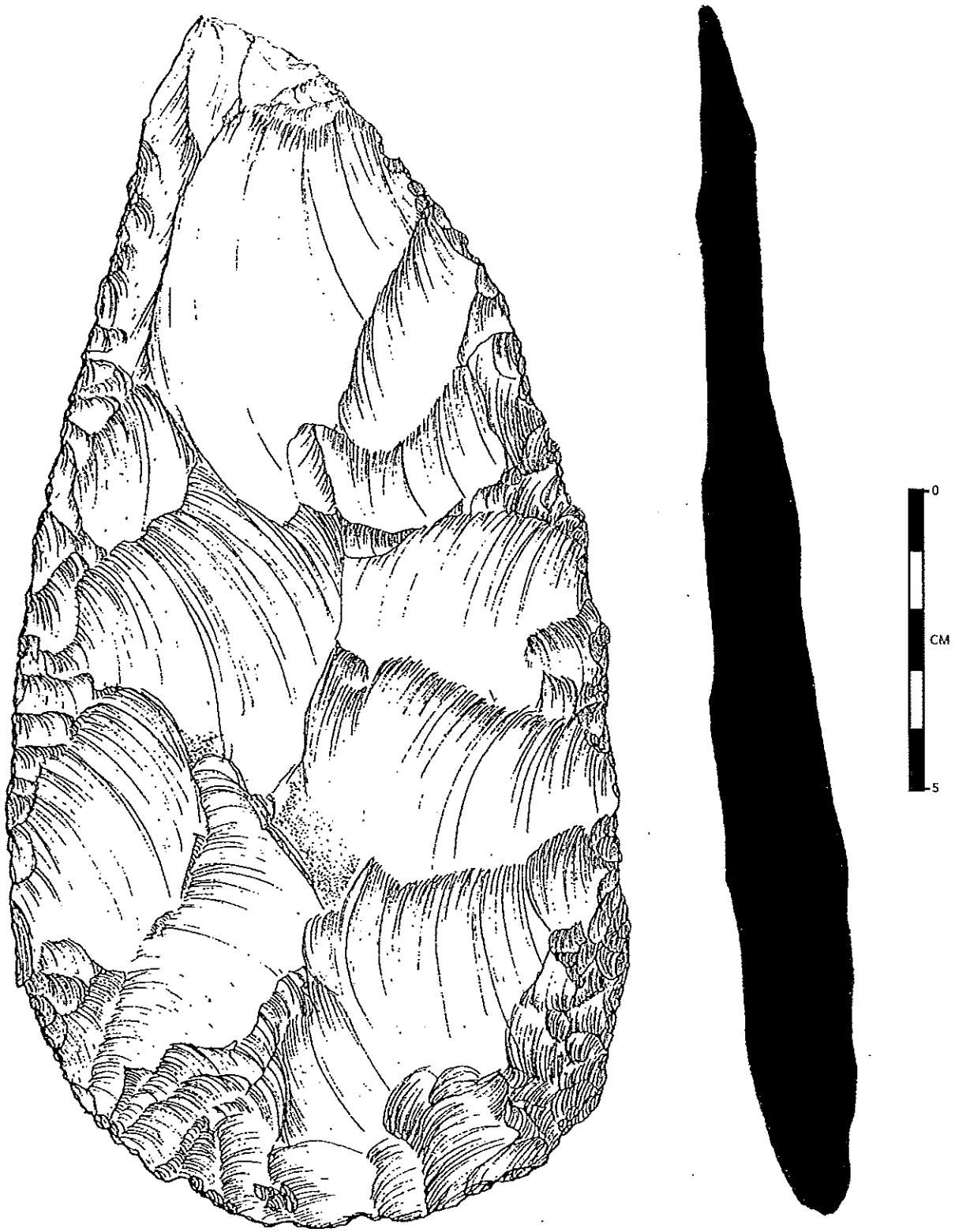
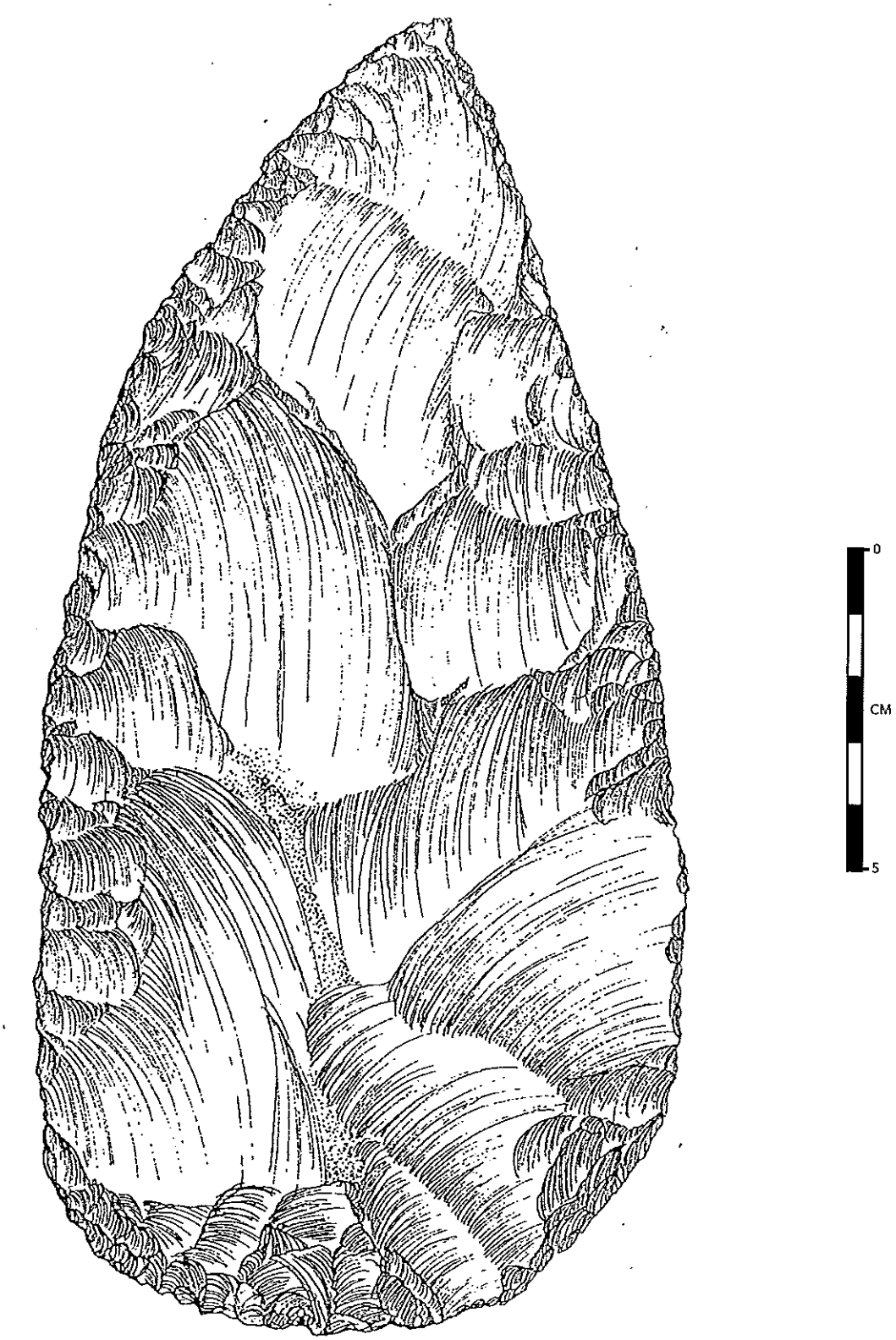


Figure 79. Specimen 38. Both sides, actual size.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Specimen #39 (Figures 80-81) The specimen is sub-triangular in outline with only one small patch of cortex remaining on side B. The raw material is a dark brown Edwards chert, with a speckling of small white, non-inclusive, spots. The chert is very homogenous and, even though darker than many of the pieces, it is very consistent with the majority of this cache in both quality of material and cortex characteristics. The piece has been thinned by large, wide, long, percussion flakes, with many flake scars traveling well past the biface midpoint; thinning flakes were taken from the base as well. Flake scar ridges are pronounced. Flaking is random, yet well-spaced, and most flaking was struck straight in from the lateral edges. The lateral edges are convex and the base is straight. Edges have not been trimmed and no unstruck platforms remain. The base has been thinned with large percussion flakes.

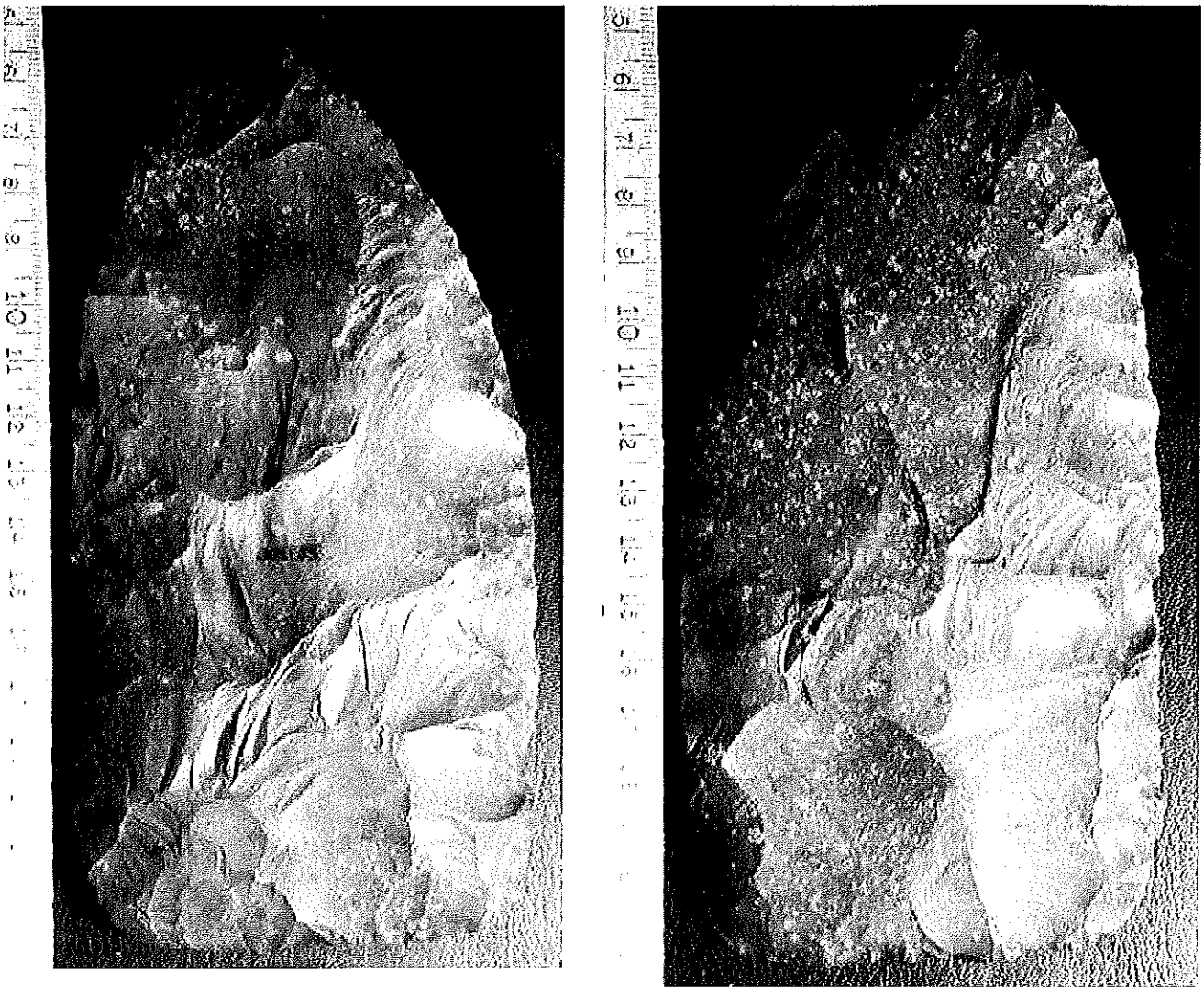


Figure 80. Specimen 39. Left, side A; right, side B..

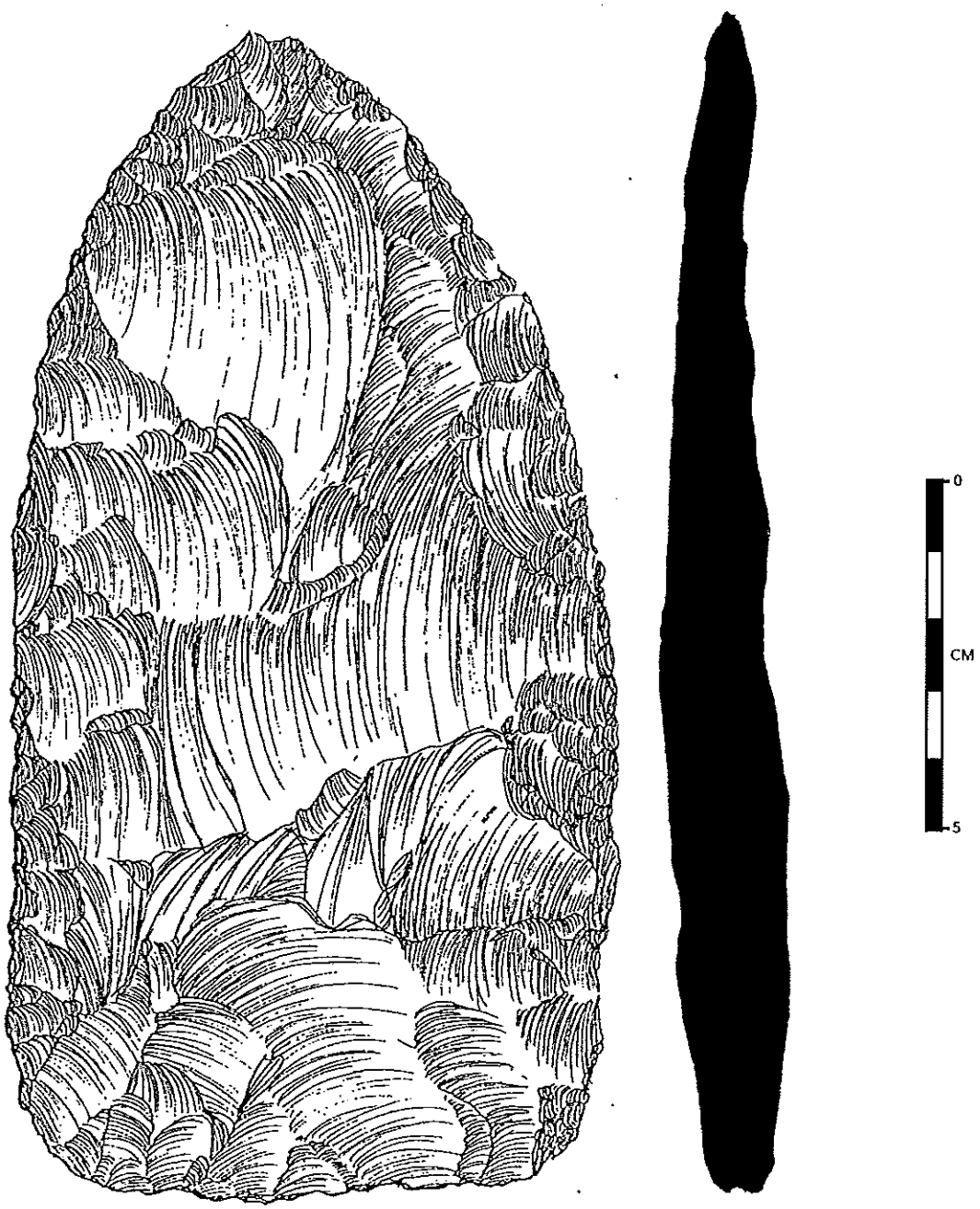
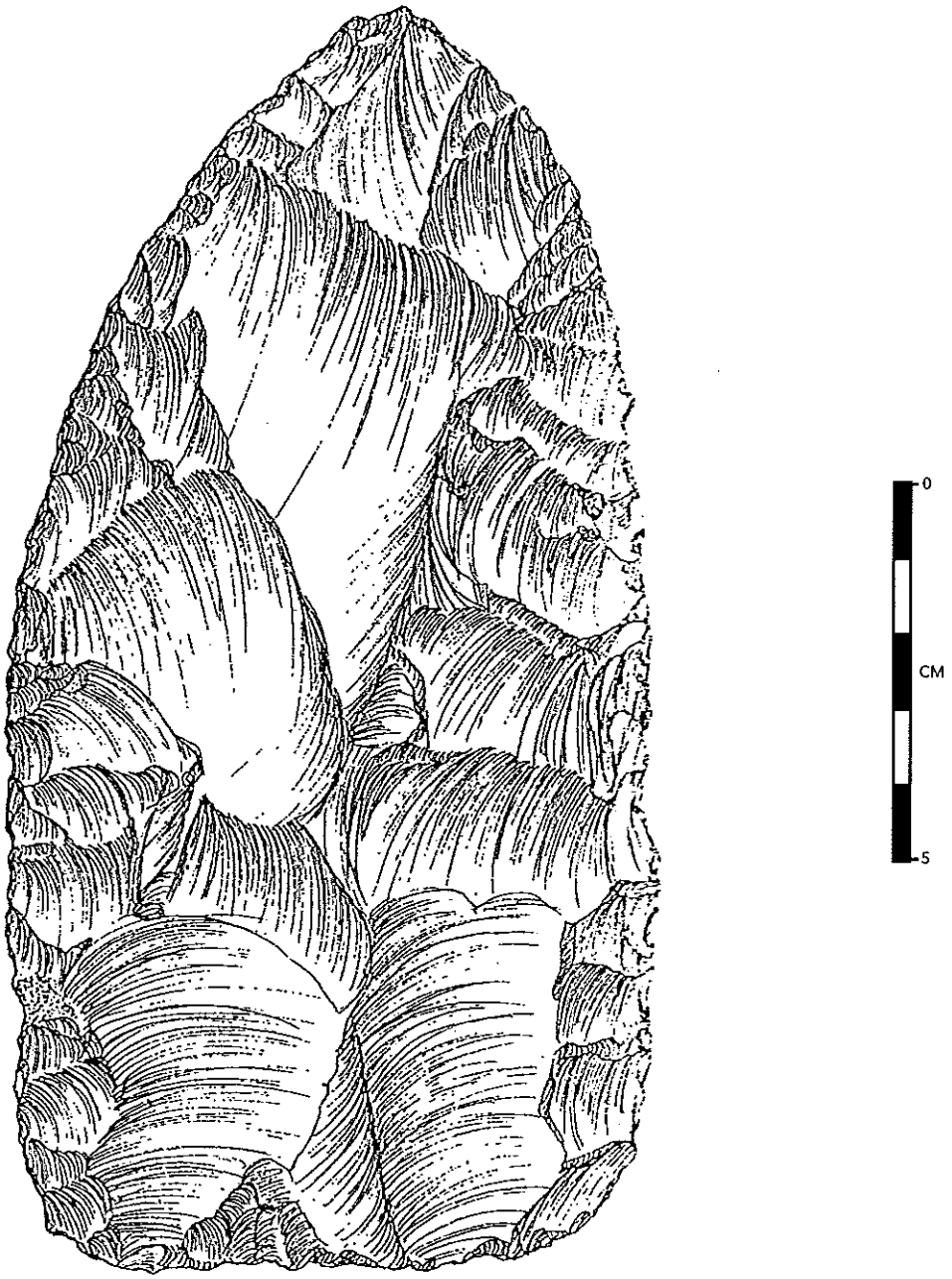


Figure 81. Specimen 39. Both sides, actual size.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Specimen #40 (Figures 82-83) This cache specimen is ovate in outline and convex in profile. Some cortex remains on both faces, evidence that this biface is the same thinness as the originally collected nodule. The chert raw material is tan in color and is a very high quality material, having a waxy feel and is very homogenous in appearance. This specimen is very consistent with the majority of this cache in material quality and cortex characteristics. This specimen is different from the majority of the pieces in this cache in that it exhibits small pinpoint holes scattered across both faces, some of which apparently line up and go completely through the biface, a characteristics exhibited in only a few other specimens. Flaking is random, well-spaced, and overlapping. Some large thinning flakes were struck also from the base on both faces. Some unstruck platforms remain and some areas of the lateral edges have been trimmed and possibly abraded. Negative bulbs of percussion are shallow and narrow and at least some remnants have been trimmed away. Flake scar ridges are pronounced, and some flake scars extend past the biface midpoint.

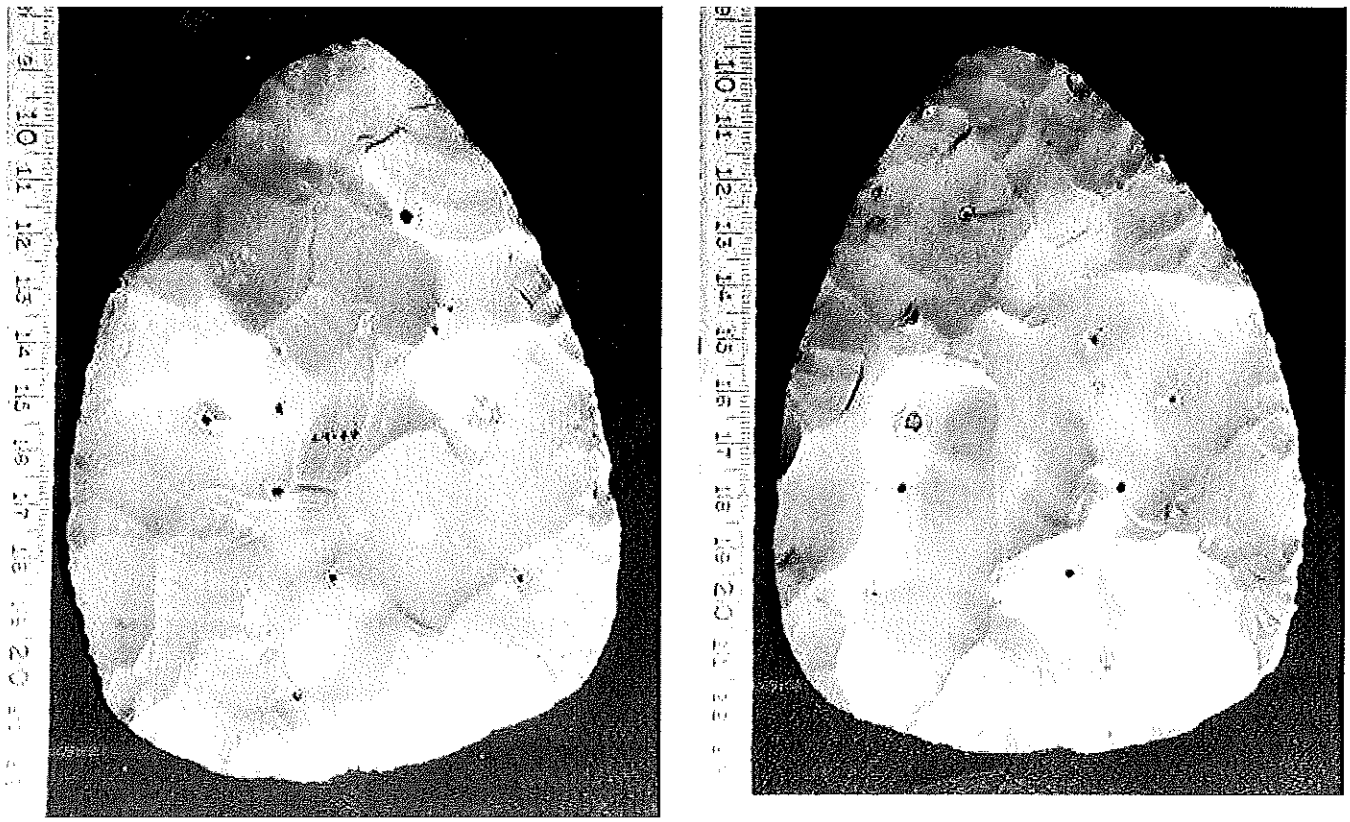


Figure 82. Specimen 40. Left, side A; right, side B.

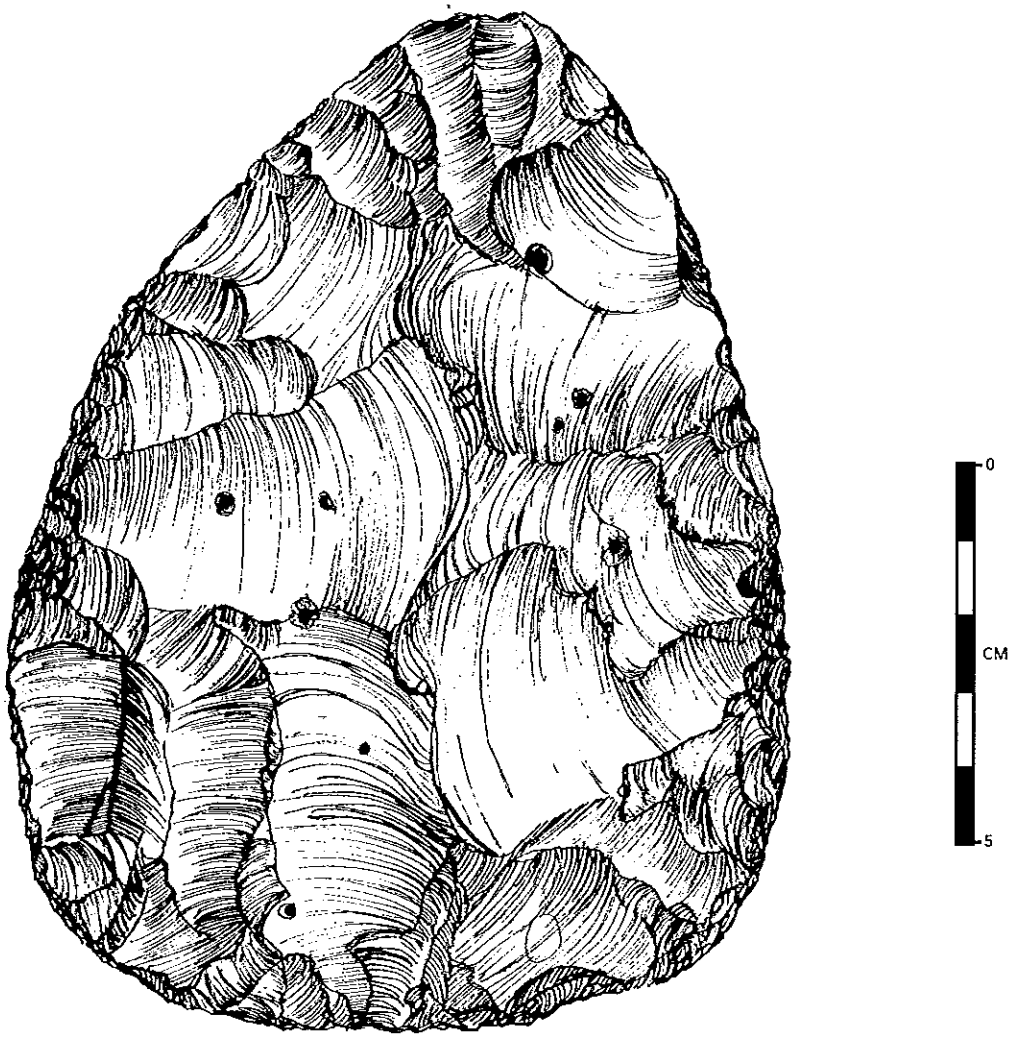
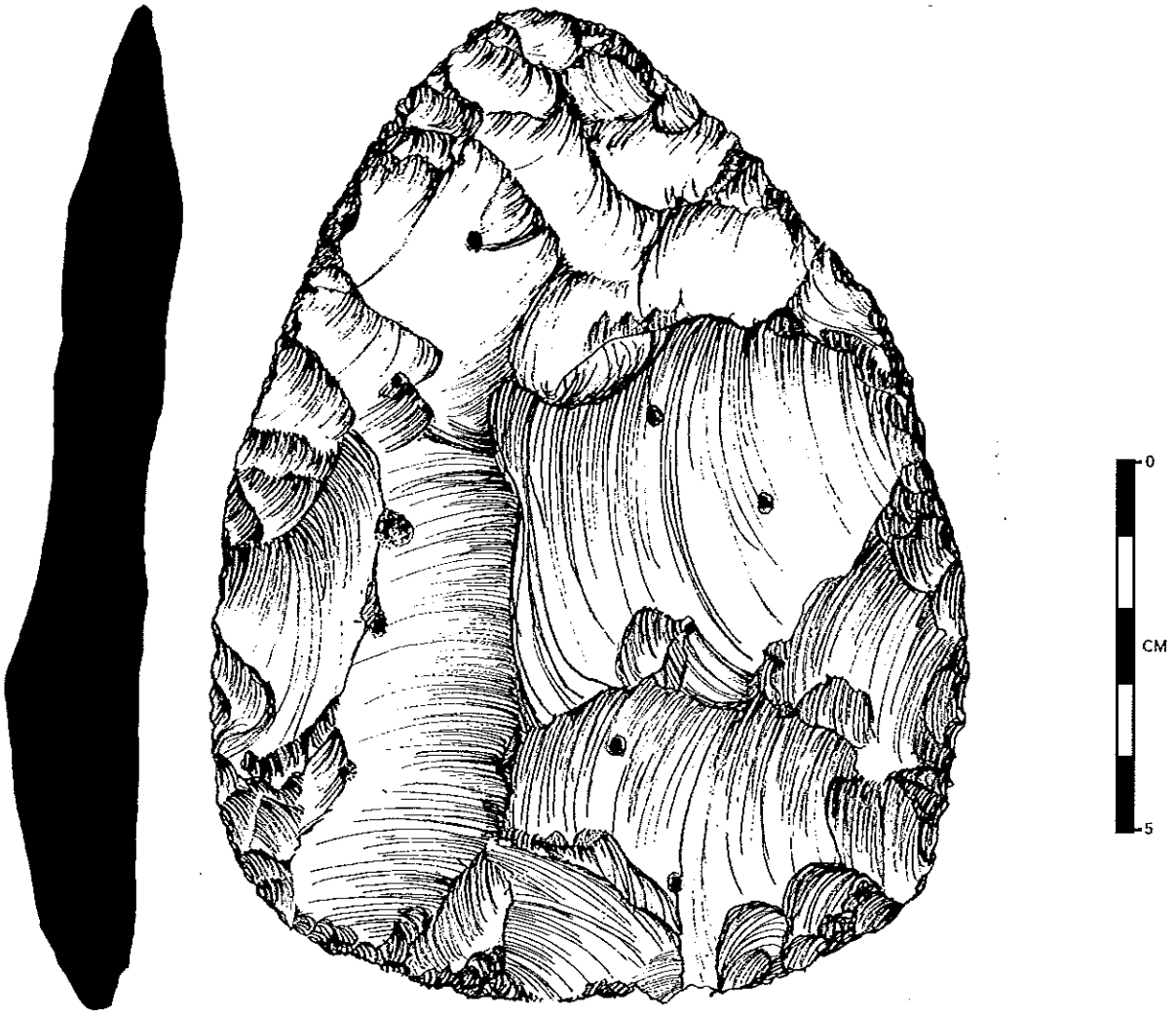


Figure 83. Specimen 40. Both sides, actual size.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Specimen #41 (Figures 84-85) This specimen is ovate in outline and convex in profile. Some cortex remains on both faces, indicating that this specimen is the same thinness as the originally collected nodule. It is of a high quality homogenous Edwards chert that is very consistent with the majority of this cache both in quality and cortex characteristics. Negative bulbs of percussion are shallow and narrow. Flake scar ridges are pronounced. Flaking is random, well-spaced, and overlapping. Large thinning flakes were only taken from the base on side B. The basal edge of side A has been lowered and possibly abraded in preparation for removal of thinning flakes from side B. Some flake scars extend well past the biface midpoint.

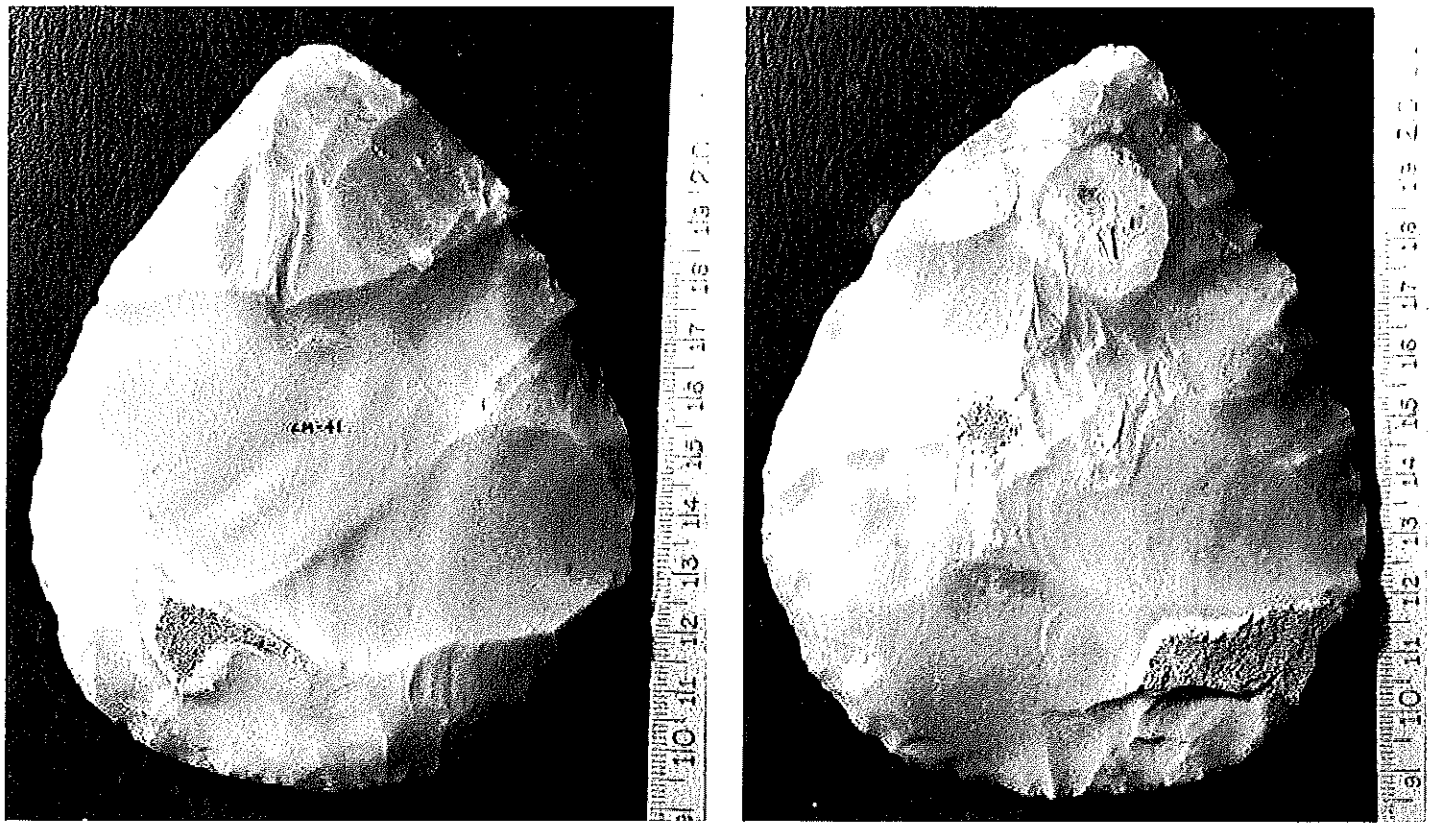

Figure 84. Specimen 41. Left, side A; right, side B.

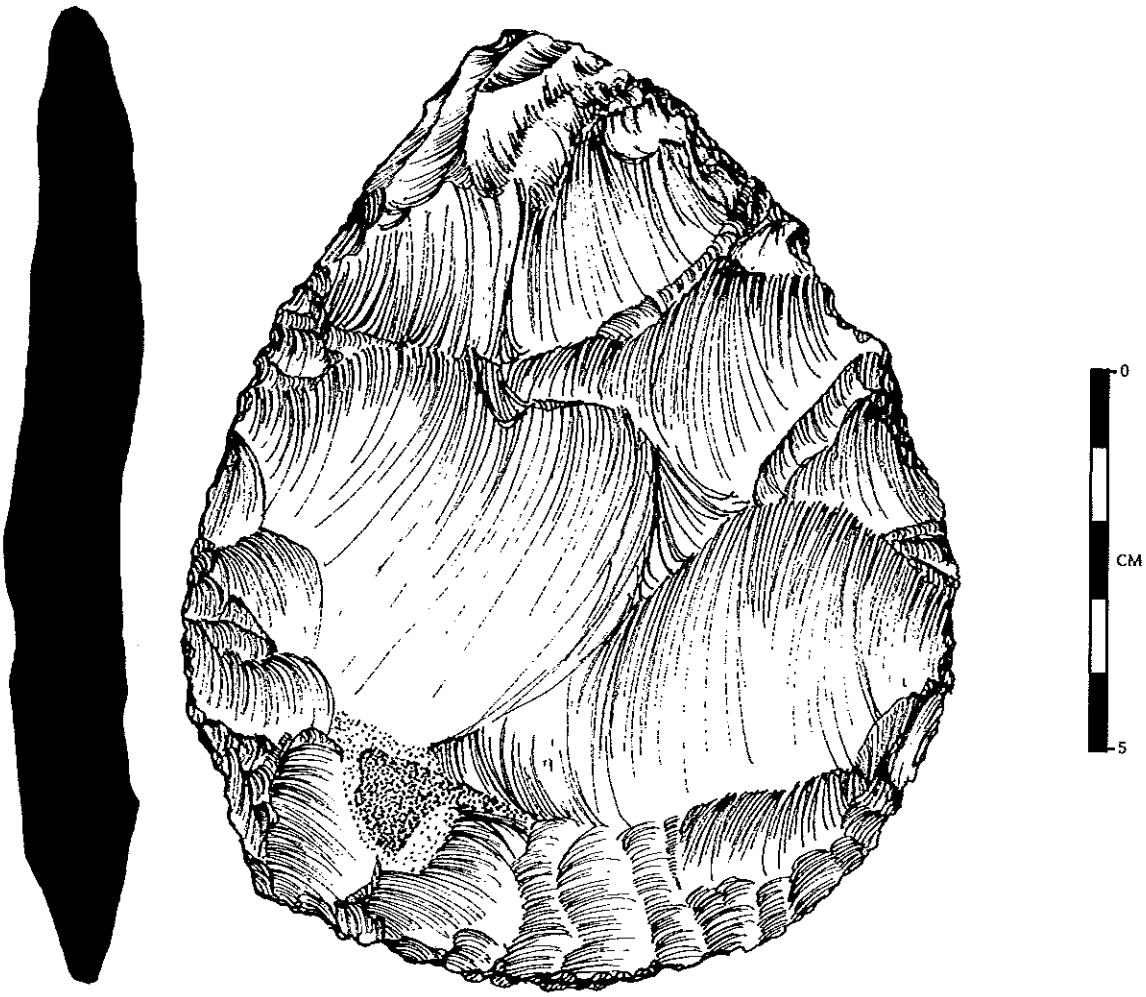

Figure 85. Specimen 41. Both sides, actual size.


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Specimen #42 (Figures 86-87) The specimen has a very distinctive crescent shape in outline. Some cortex remains on both faces, and thus this specimen is the same thinness as the originally collected nodule. The piece exhibits a scattering of small pin holes, very similar to Specimen #40, and the material is very consistent with the majority of this cache in both quality and cortex characteristics. The basal end of this specimen appears to have been prepared by thinning and rounding, with a constriction notched at 46 mm from the base, but it is more likely that this is caused simply by the shape of the originally collected nodule. Flaking is random and well-spaced and flake scar ridges are pronounced. Negative bulbs of percussion are shallow and narrow and some flake scars extend well past the biface midpoint. Many flake scars overlap.

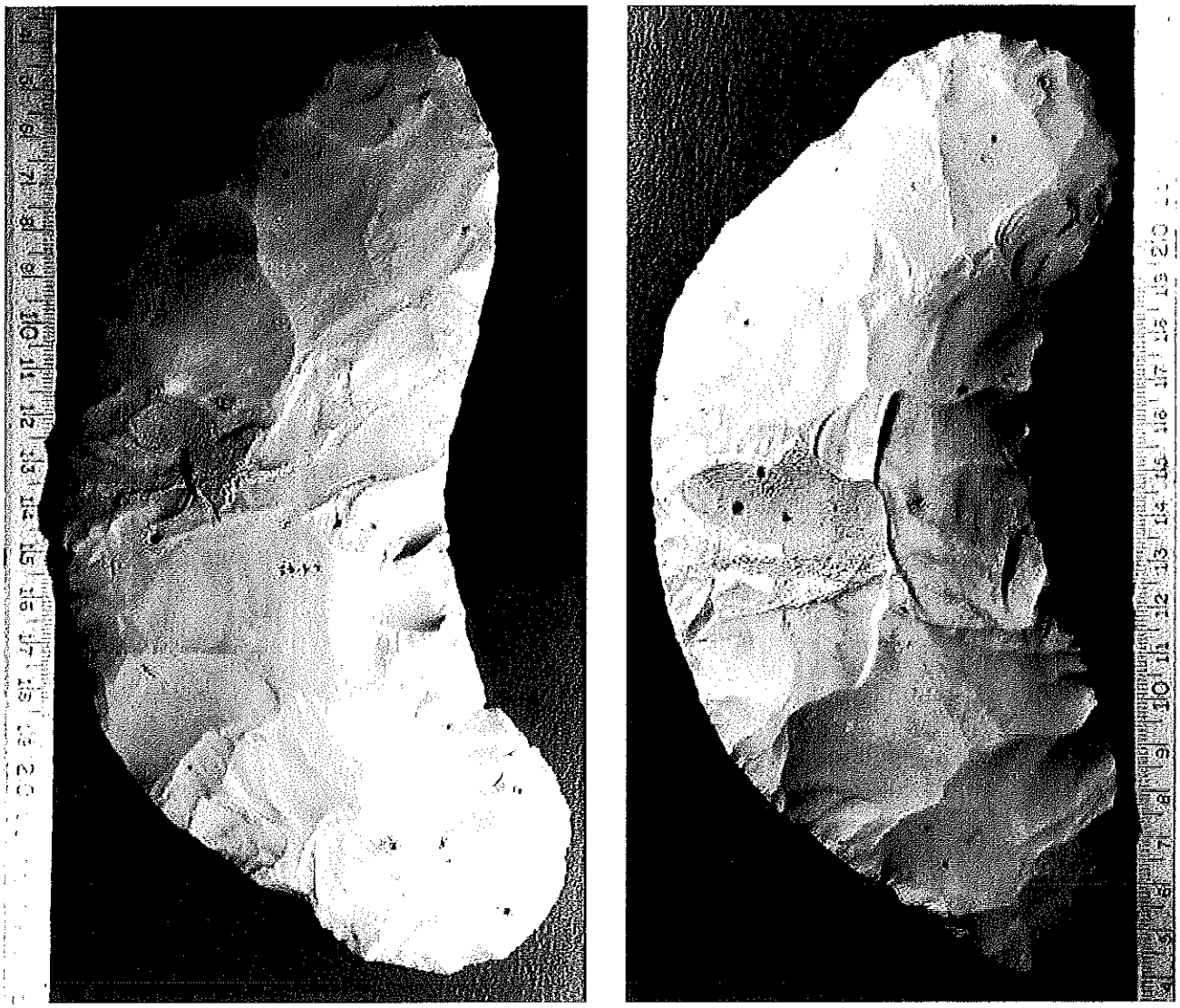


Figure 86. Specimen 42. Left, side A; right, side B.

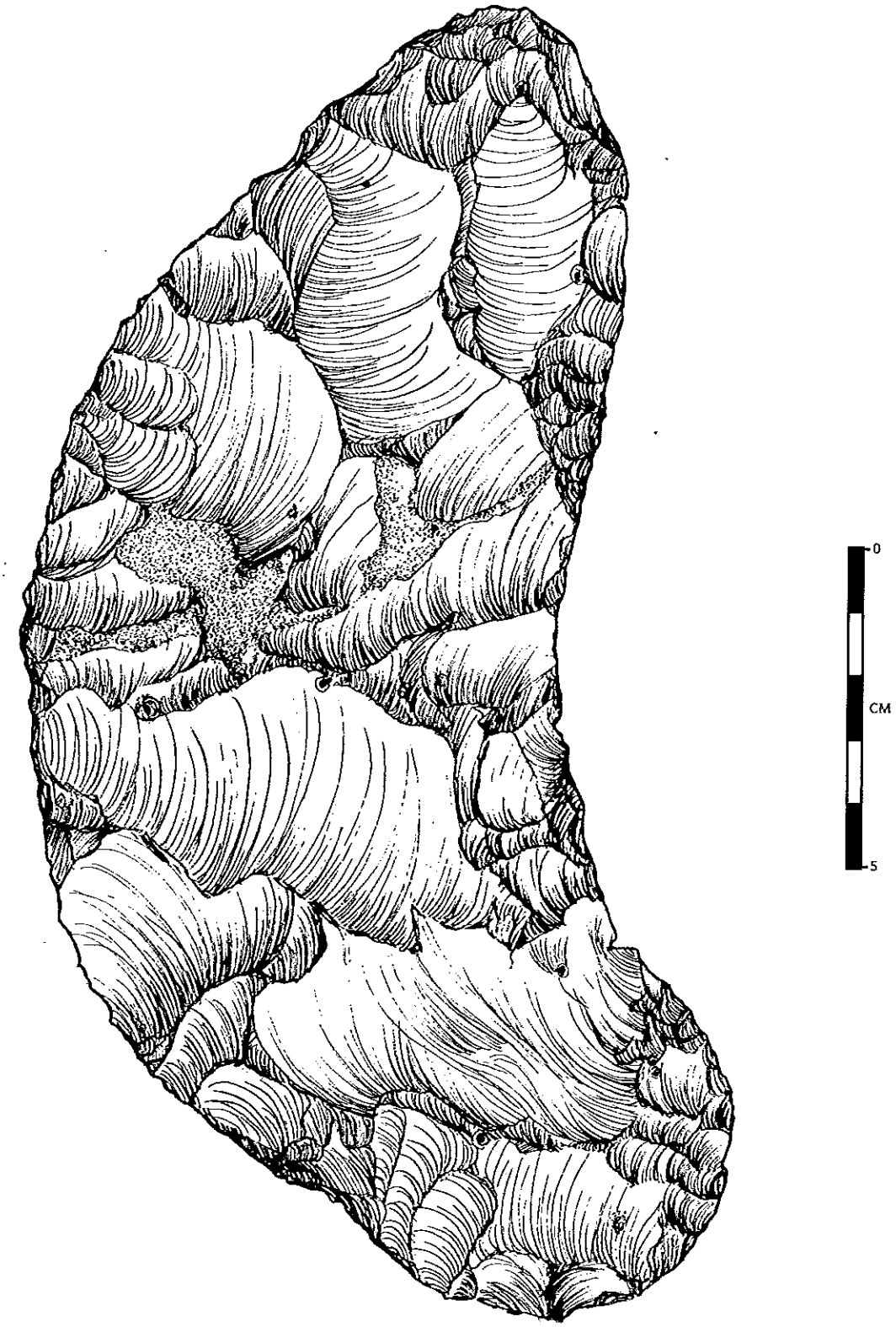
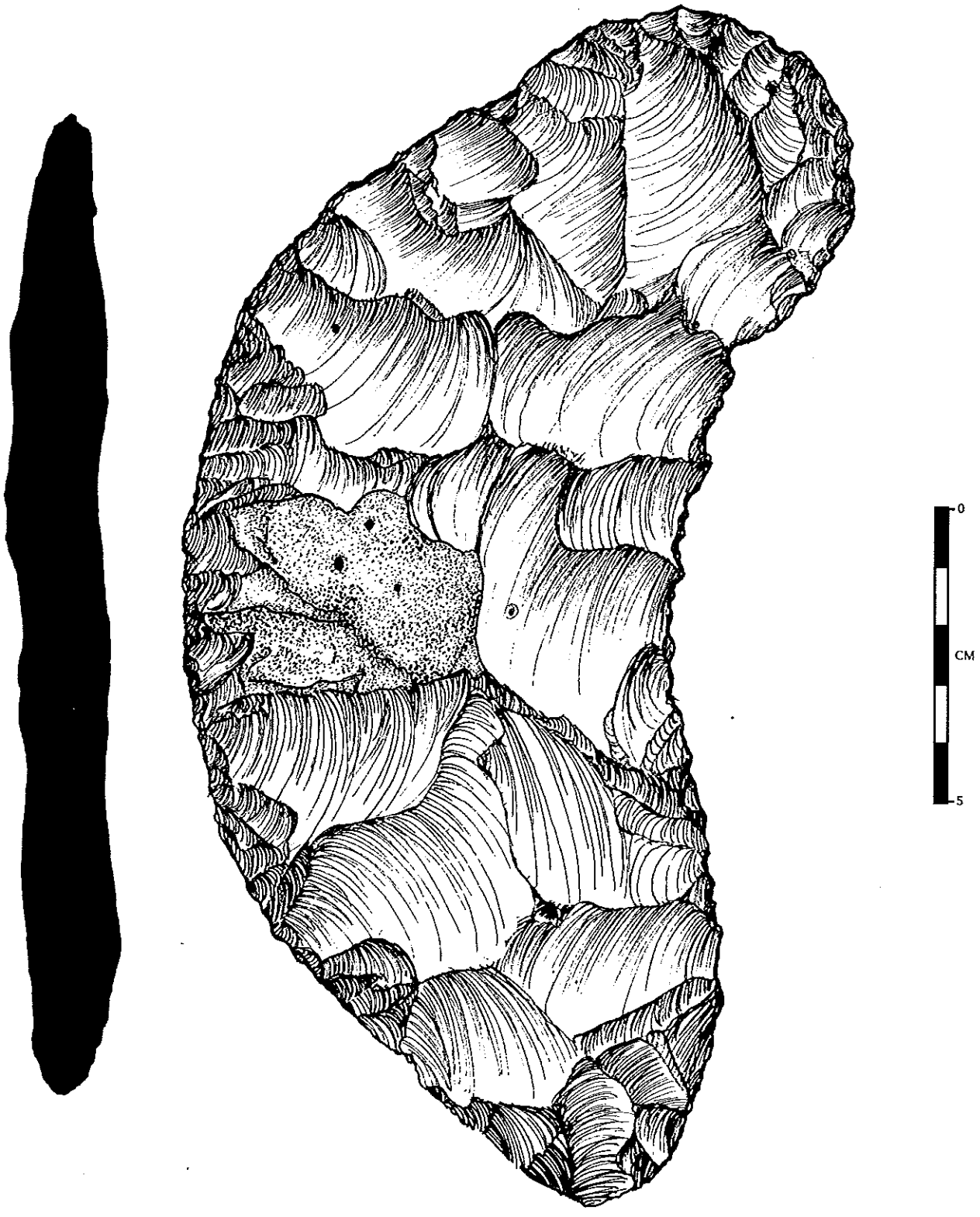


Figure 87. Specimen 42. Both sides, actual size.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Specimen #43 (Figures 88-89) – The artifact is ovate in outline and convex in profile. Some cortex remains on both faces, indicating that this specimen is the same thinness as the originally collected nodule. It is made from a dark gray, high quality, Edwards chert, and is very consistent with the majority of this cache both in quality and cortex characteristics. Flaking is random, well-spaced, and overlapping. Few large thinning flakes are struck from the base on either face. Flake scar ridges are pronounced. Negative bulbs of percussion are shallow and narrow. Side B exhibits unstruck platforms for removing flakes from side A. No abrading is apparent on this specimen, but some edge trimming has occurred.

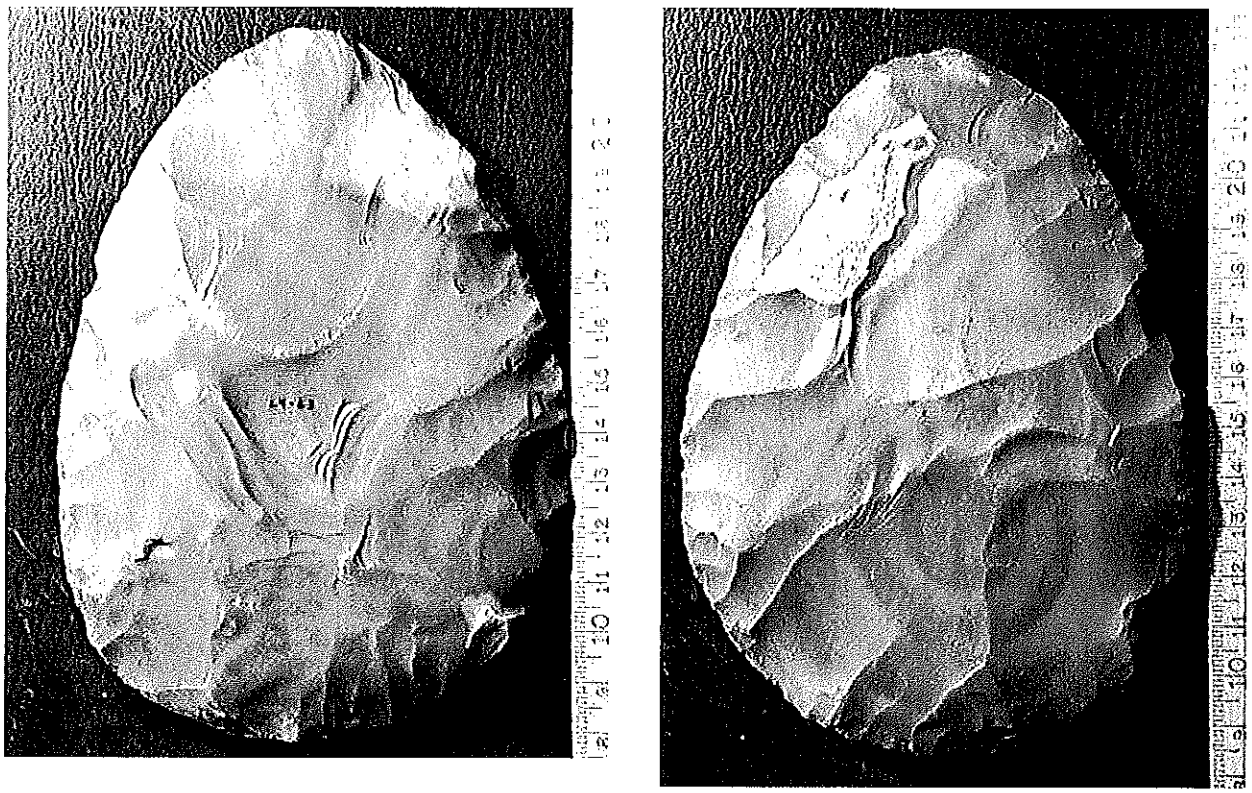


Figure 88. Specimen 43. Left, side A; right, side B.

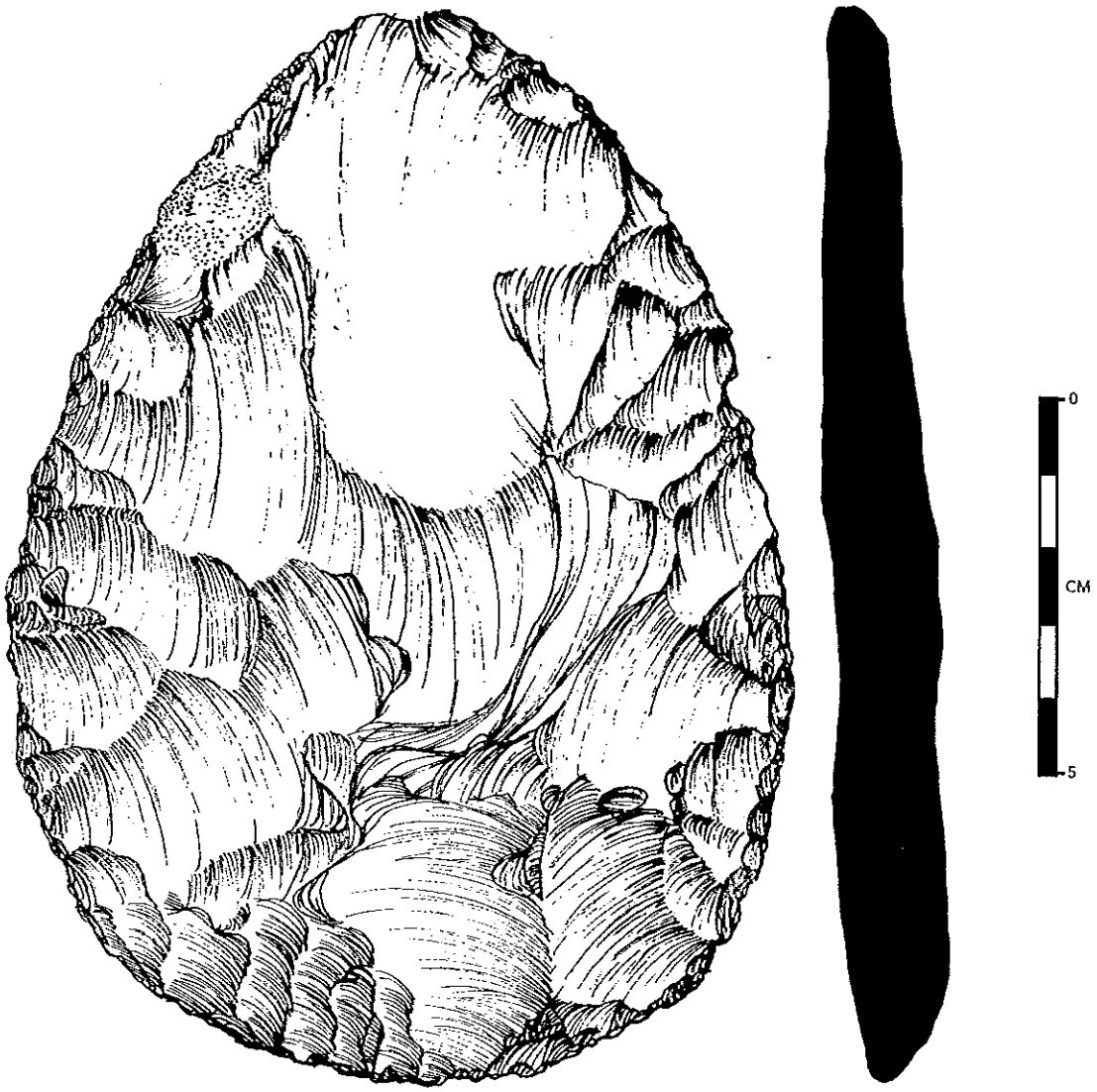
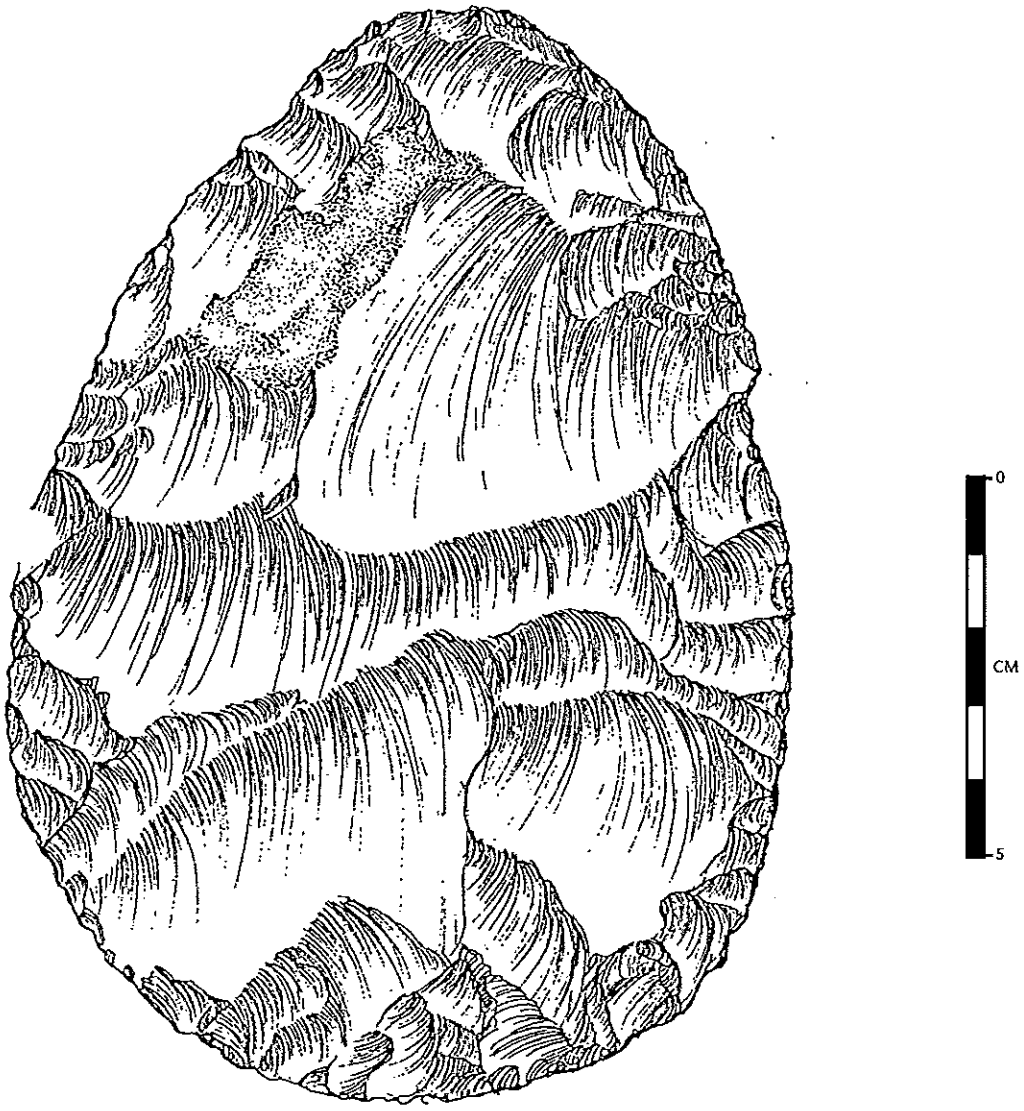


Figure 89. Specimen 43. Both sides, actual size.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Specimen #44 (Figures 90-91) This specimen is lanceolate in outline and convex in profile. Some cortex remains on both faces. The piece is very consistent with the majority of this cache in both material quality and cortex characteristics. Side A exhibits large, very organized, evenly spaced, percussion flaking, some of which came very close to overshooting, while side B appears very unorganized in its flaking patterns. Large thinning flakes were struck from the base on both faces. Some unstruck platforms remain for both faces. Flake scar ridges are pronounced and many flake scars extend well pat the biface midpoint. Some edges have been trimmed, but no abrading is evident.

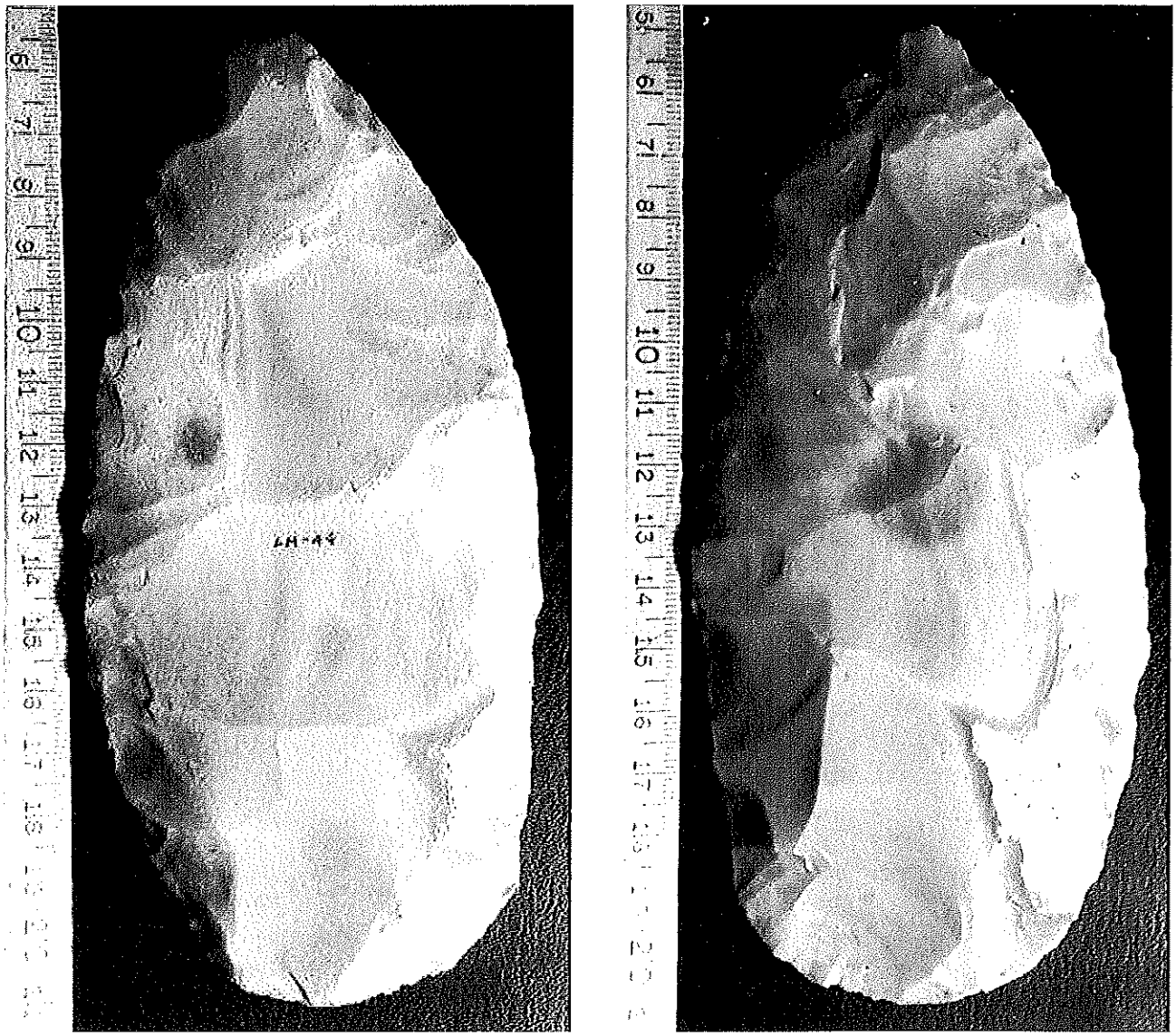


Figure 90. Specimen 44. Left, side A; right, side B.

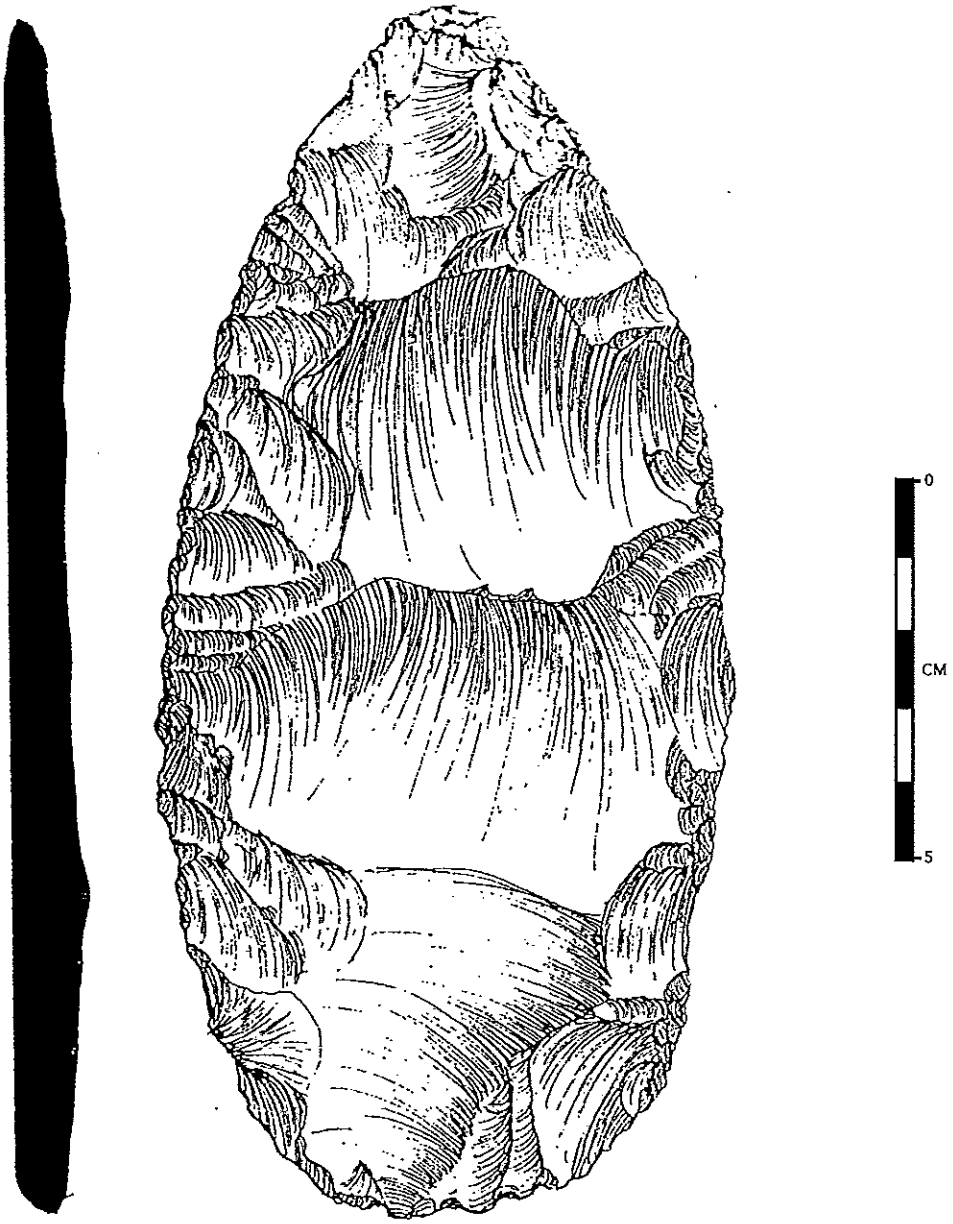
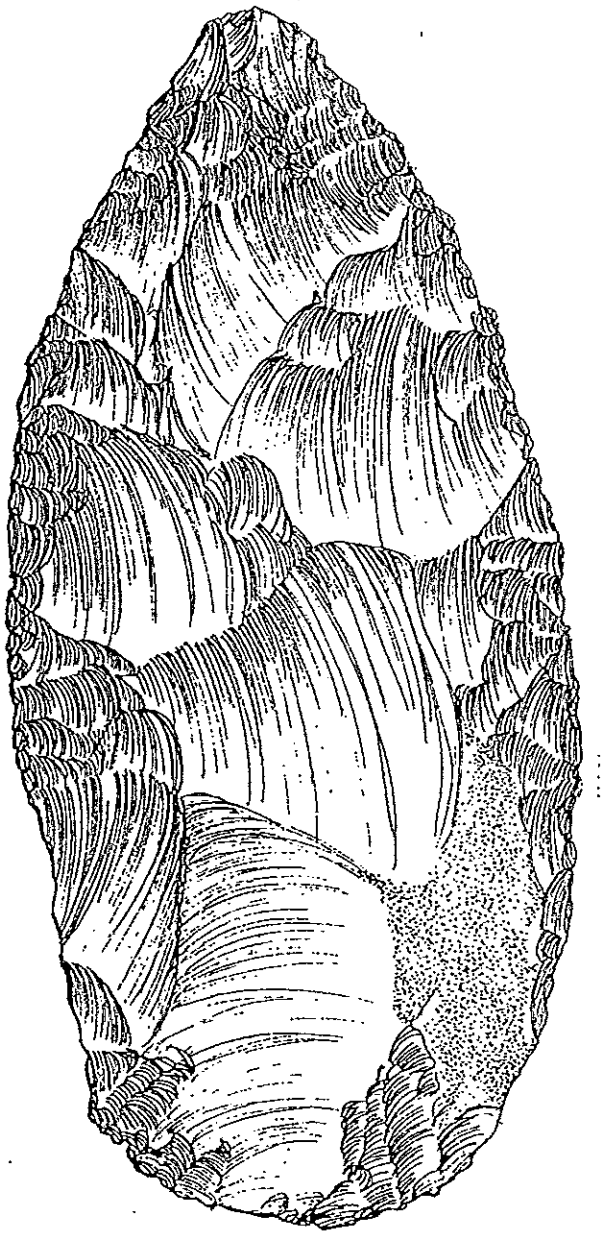


Figure 91. Specimen 44. Both sides, actual size.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Specimen #45 (Figures 92-93) The specimen is sub-triangular in outline and convex to plano-convex in profile. Cortex remains only on side B. This specimen is not consistent with the majority of this cache in cortex characteristics in that the cortex is thin and hard, as if stream-rolled. The raw material is a dark brown Edwards chert, with white speckles scattered across the biface, and is generally of a higher grade chert than the majority of this cache. It is doubtful that this material is from the same source as the majority of this cache, because most of the specimens have a thick chalky cortex. This specimen is the smallest specimen in the cache, and was probably made on a large flake spall. Flaking is random. Several large flakes have been taken from the base on both faces. Flake scar ridges are pronounced and some flake scars extend past the biface midpoint and are overlapping. It is likely this specimen came from a Medina River raw material source below the cache site.

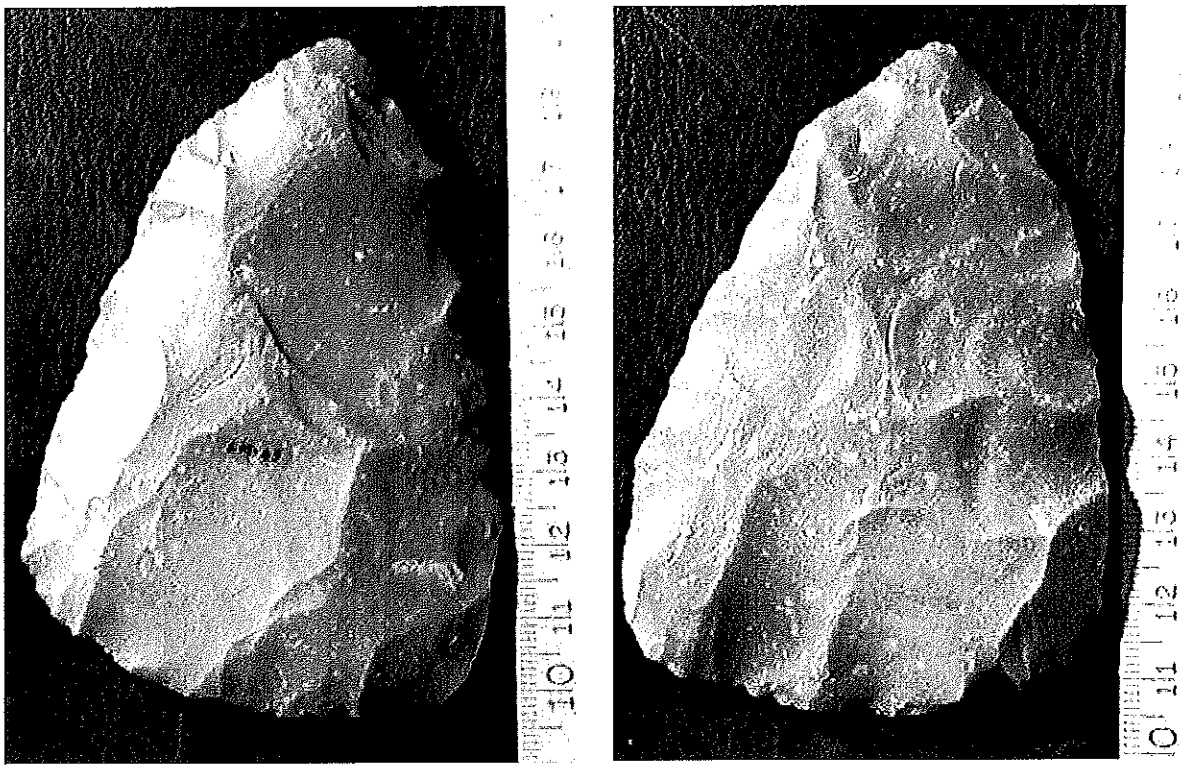


Figure 92. Specimen 45. Left, side A; right, Side B.

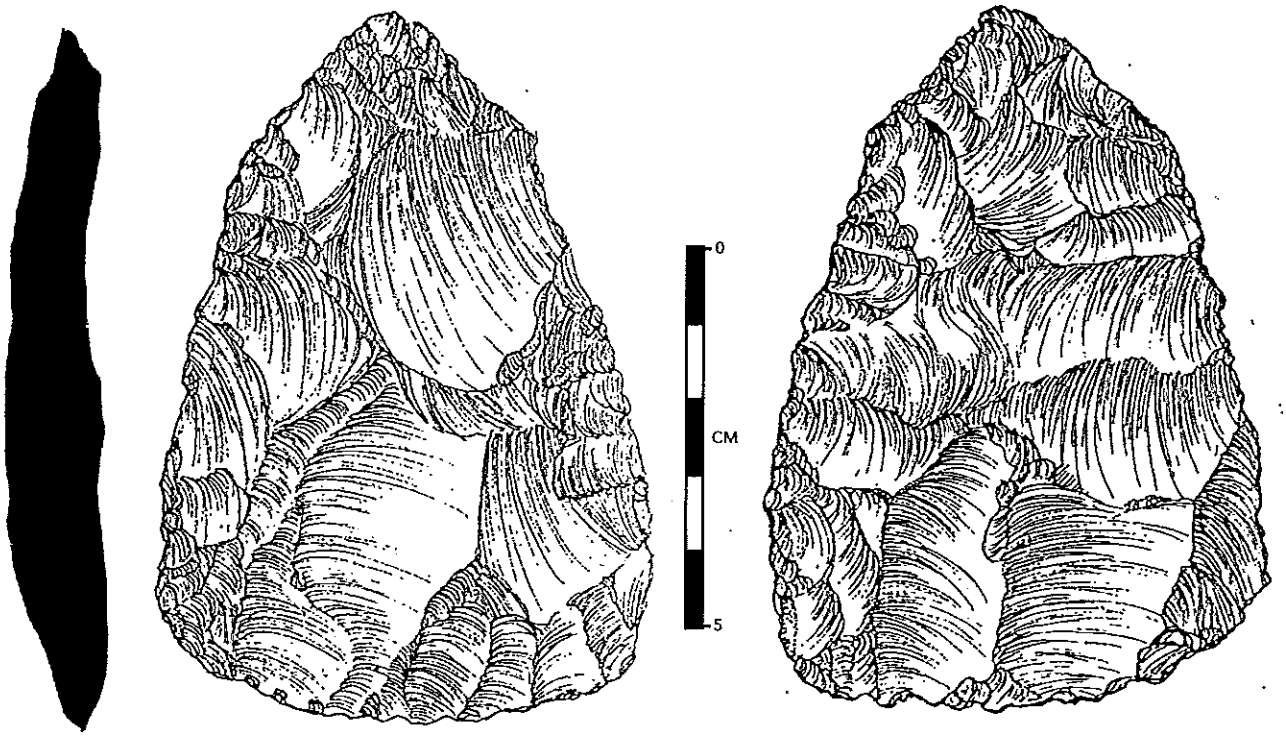


Figure 93. Specimen 45. Both sides, actual size.

Specimen #46 (Figures 94-95) The specimen is a very large thin biface with an irregular sub-triangular outline. Some cortex remains on side A, while side B has cortex barely trimmed only around the edges. This specimen is very consistent with the majority of this cache in material quality and cortex characteristics. Its shape was mainly influenced by the originally collected nodule's shape and is very near its original thinness as well. Flaking consists of random, well-spaced percussion flakes, with some flake scars extending well past the biface midpoint and they are overlapping. Large thinning flakes were struck from the base on both faces. Flake scar ridges are very pronounced. Some platforms remain unstruck. Edge trimming has been done in some areas in preparation to remove cortex from side B.

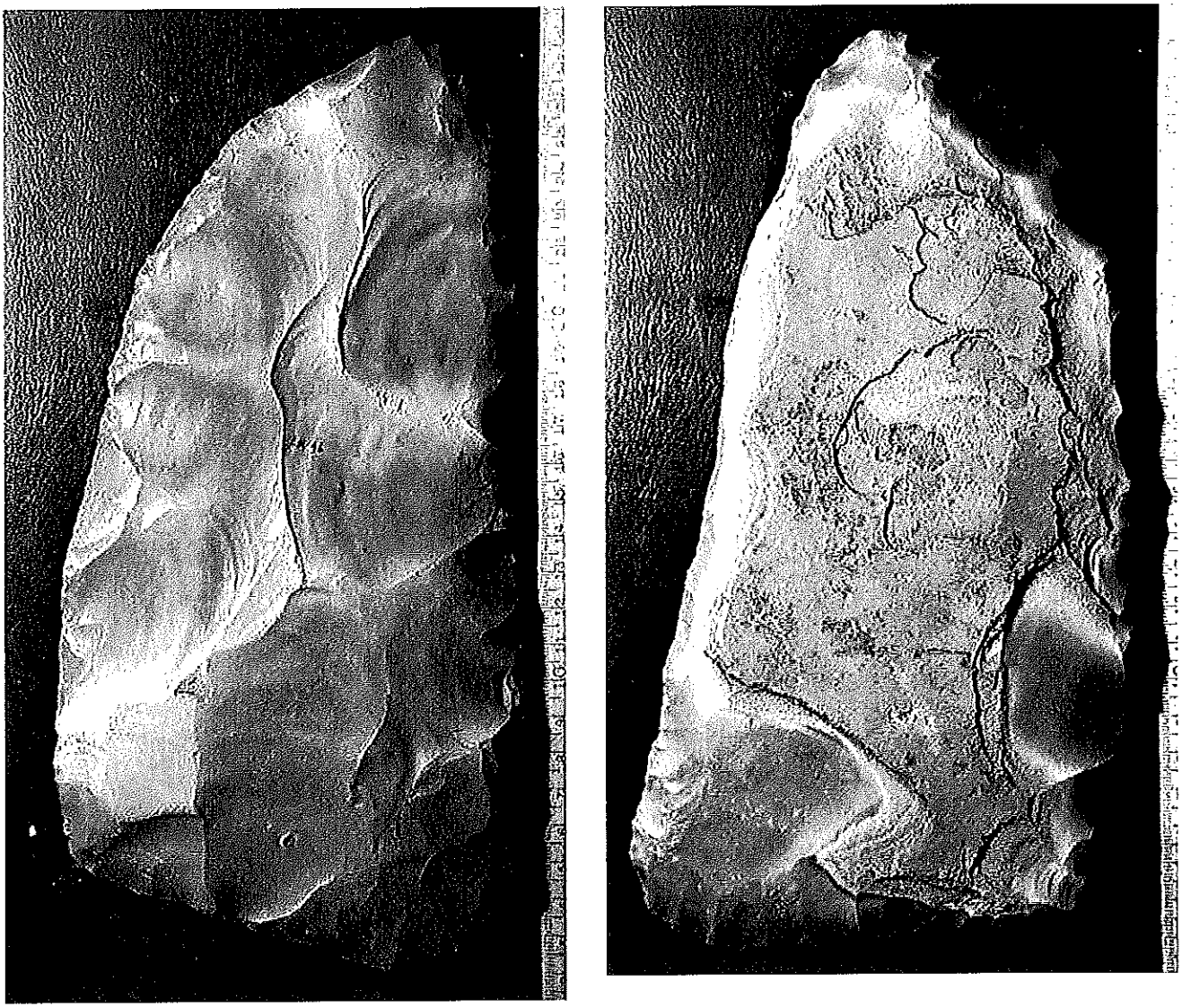


Figure 93. Specimen 46. Left, side A; right, side B.

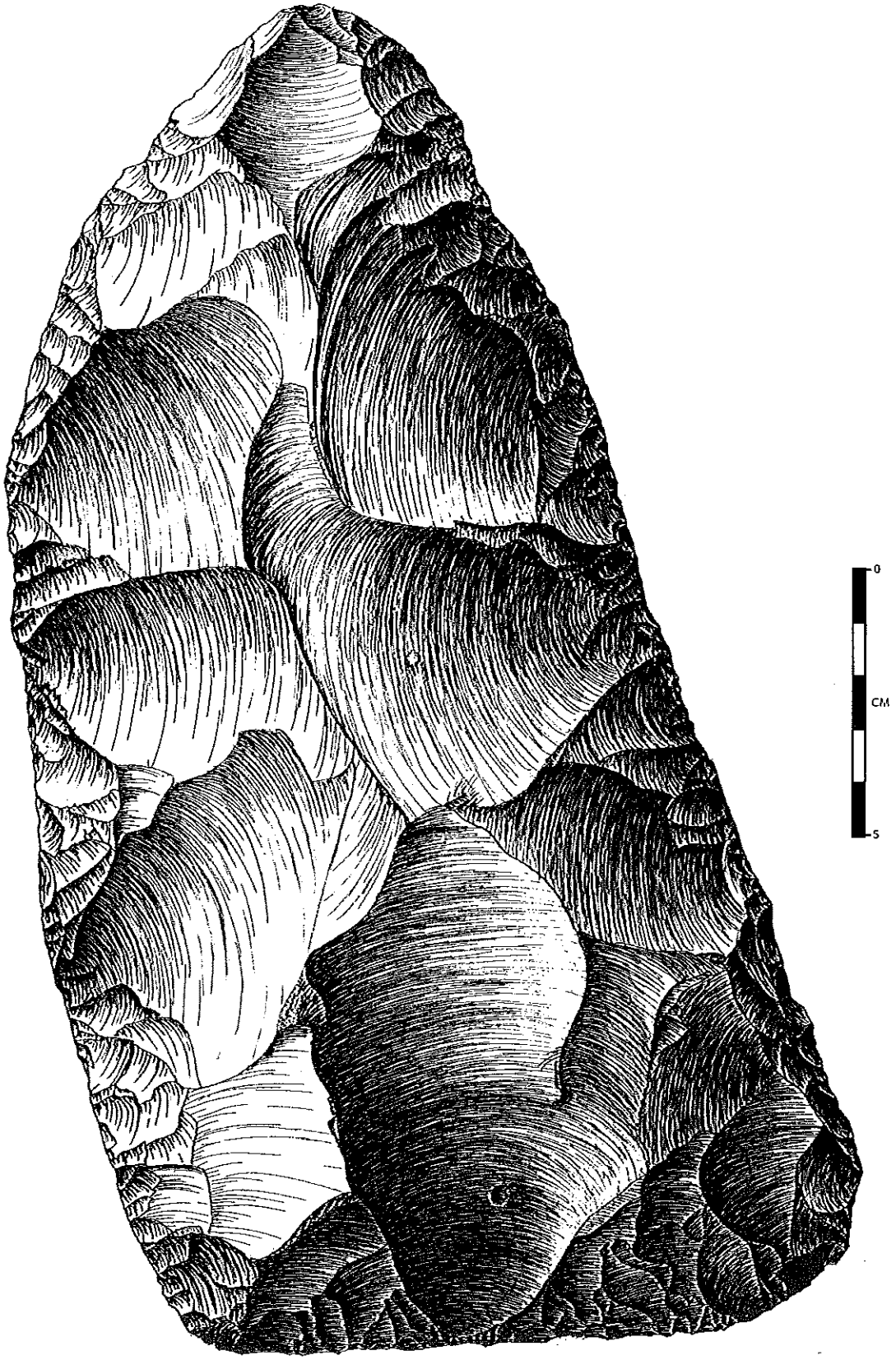
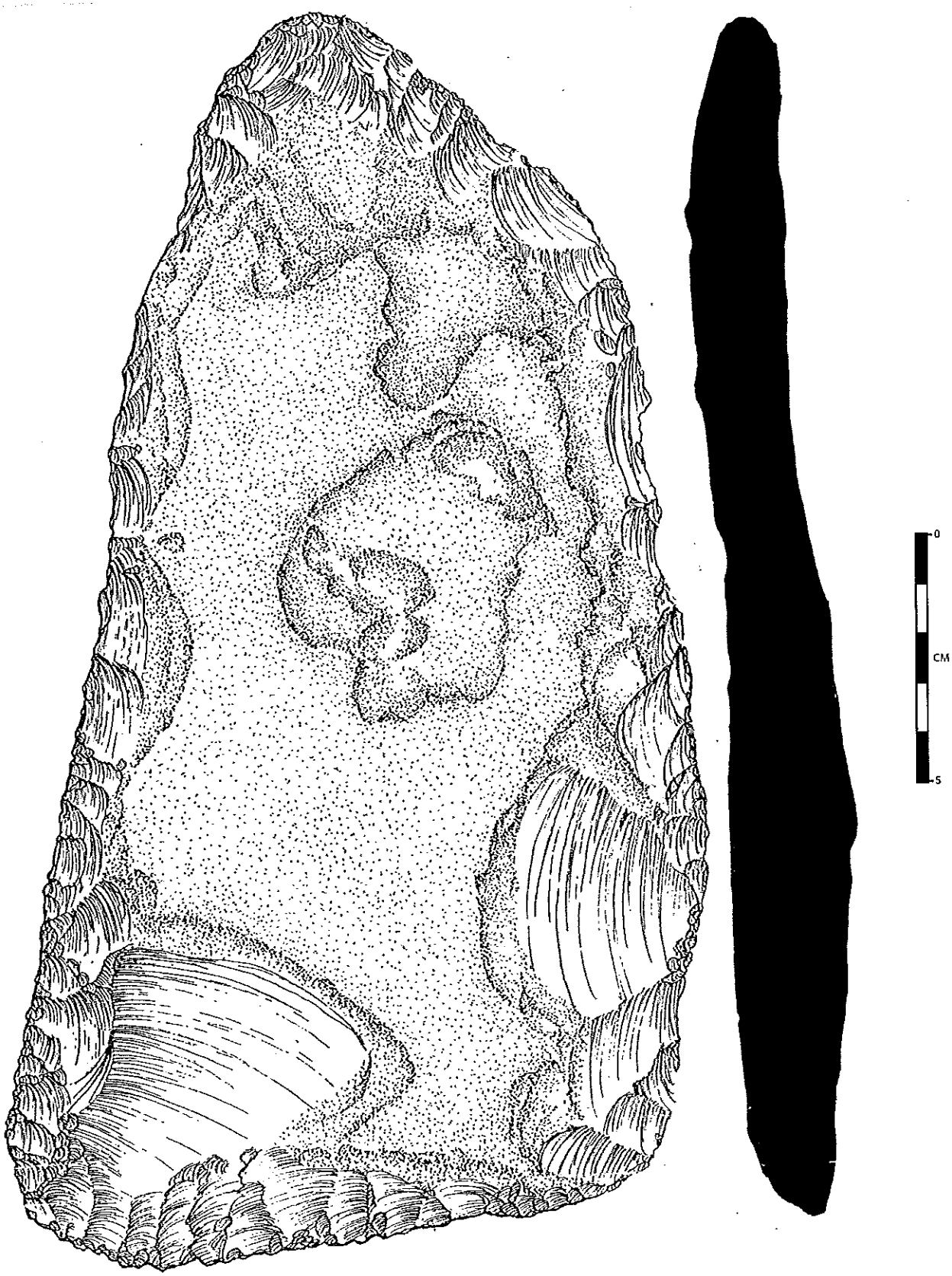


Figure 94. Specimen 46. Both sides, actual size.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Specimen #47 (Figures 95-96) This specimen is another very large and thin biface with an irregular ovate shape. Some cortex remains on side A while side B is only slightly trimmed of cortex. This material is very consistent with the majority of this cache. The specimen is very nearly the original shape and thickness of the collected nodule. Flaking on side A consists of very large and wide percussion flakes with pronounced flake scar ridges. Some flake scars extend well past the biface midpoint and are overlapping. The largest percussion flake scar, 13 cm in length, was struck off the base on side A at an angle to the longitudinal axis. The cortex on side B has some recent scratches on it, probably occurring during the cache discovery.

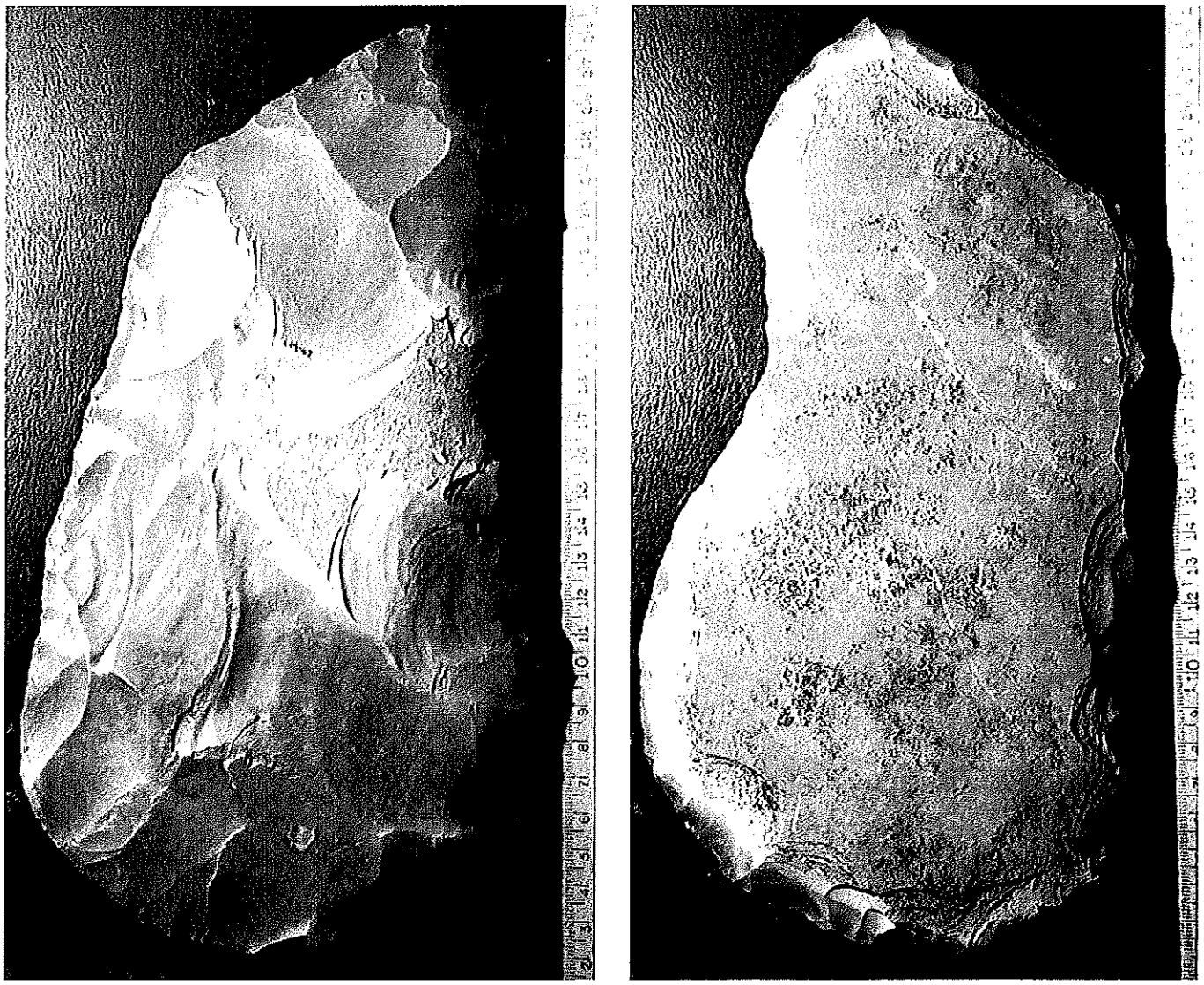


Figure 95. Specimen 47. Left, side A; right, side B.

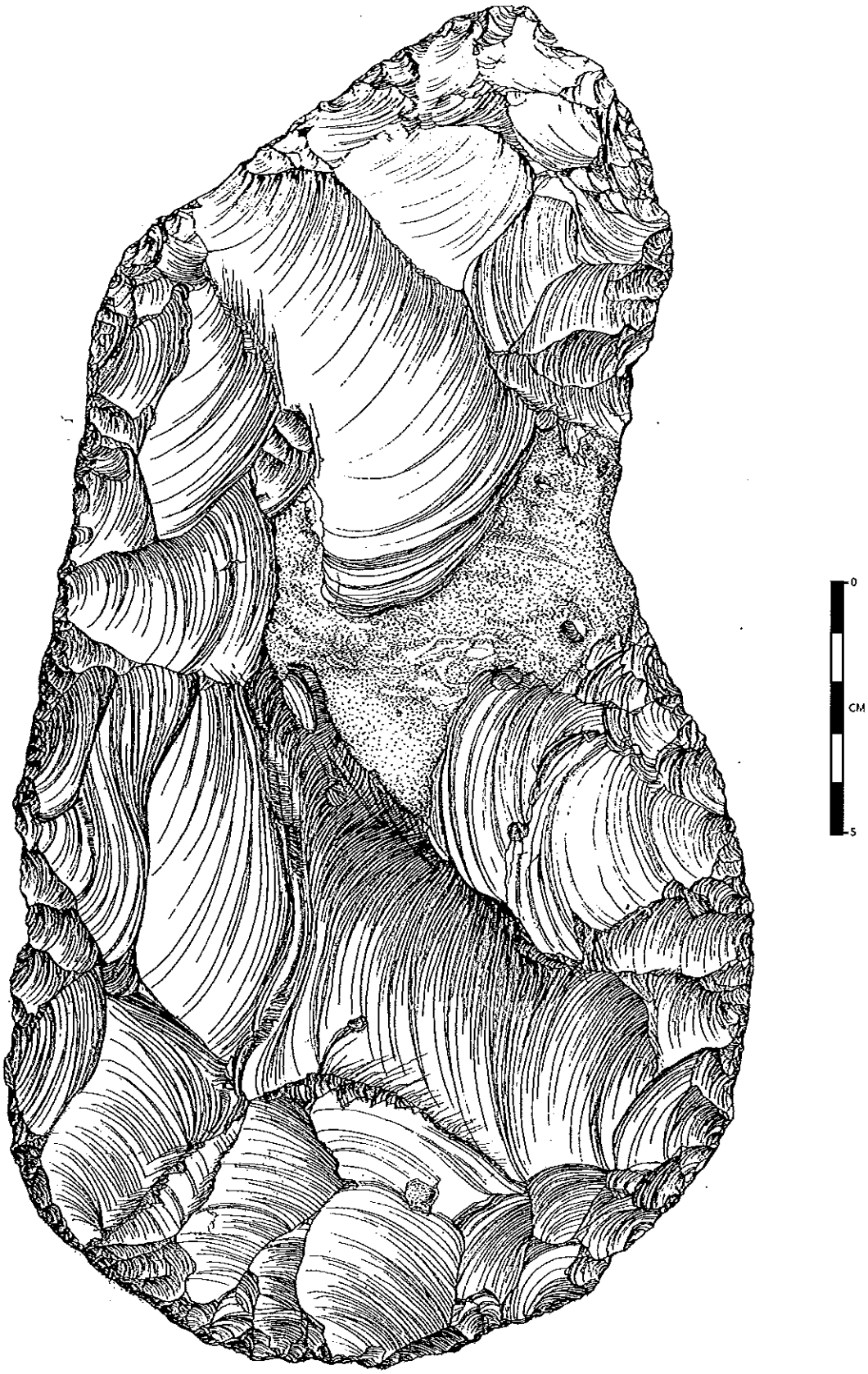
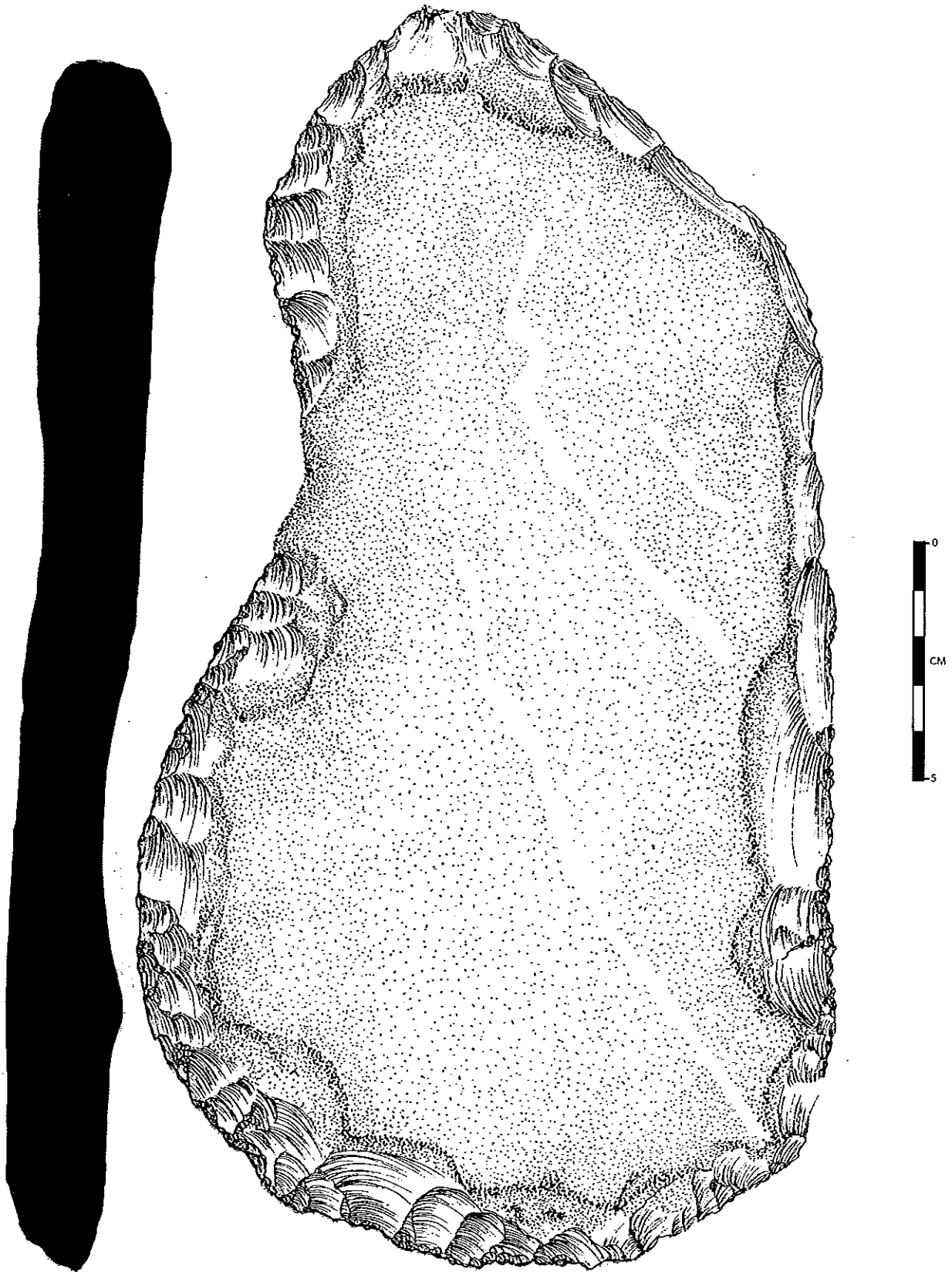


Figure 96. Specimen 47. Reduced; note scale.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Specimen #48 (Figures 97-98) The specimen is sub-triangular in outline and very thin. Some cortex remains on both faces. It is of a very high quality Edwards chert and very consistent with the majority of this cache in both material quality and cortex characteristics. Side A has most of its cortex removed and most deltas (unstruck areas between percussion flake scars) trimmed off. Side B retains most of its cortex, with the base and lateral edges being trimmed. The cortex on side B contains many striations generally parallel to the longitudinal axis. It appears that this specimen was severely damaged in discovery, as the distal one-third of this specimen is missing, and another fracture occurs about mid-biface. Flaking is wide percussion, random but well-spaced. Flake scar ridges are pronounced. At least three large thinning flakes were struck off the base on side A while the base on side B is only trimmed.

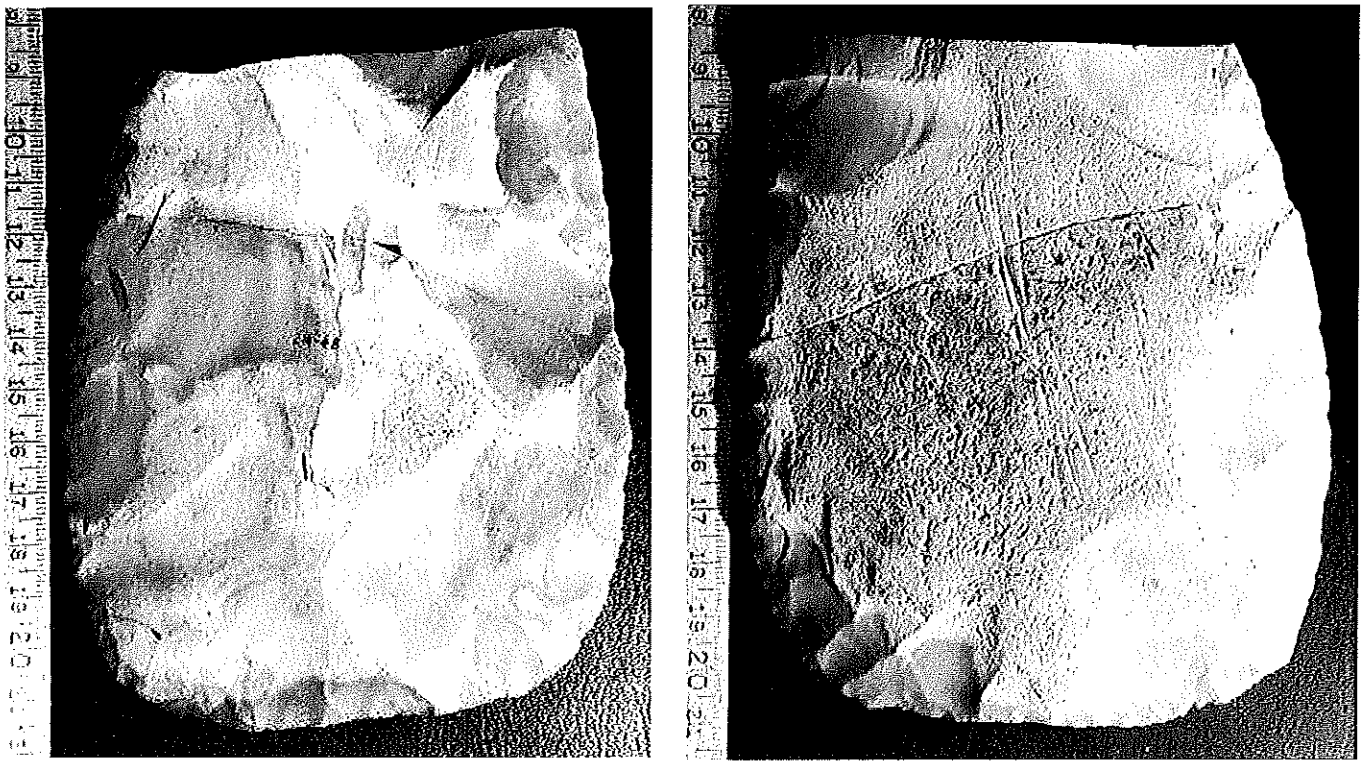


Figure 97. Specimen 48. Left, side A; right, side B.

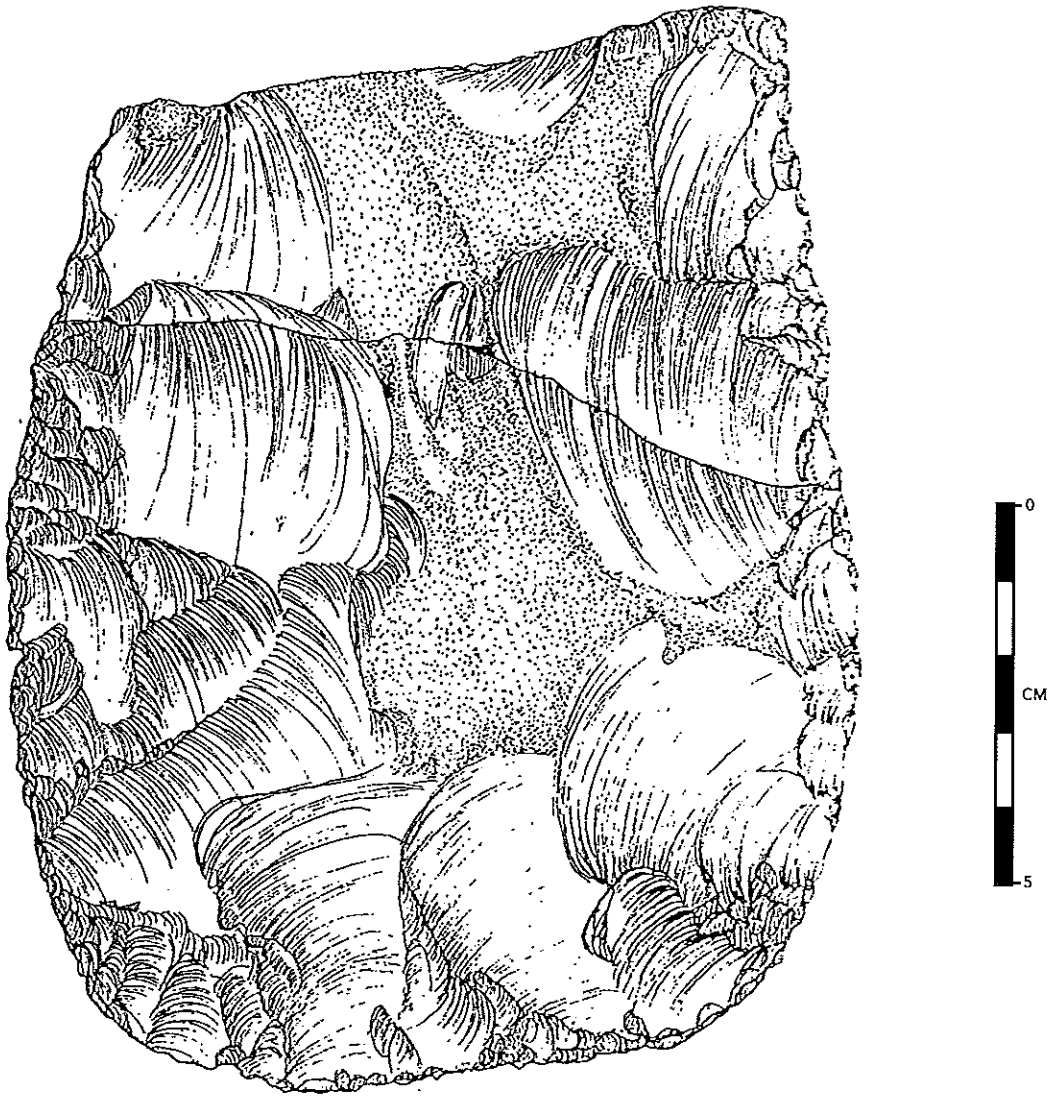
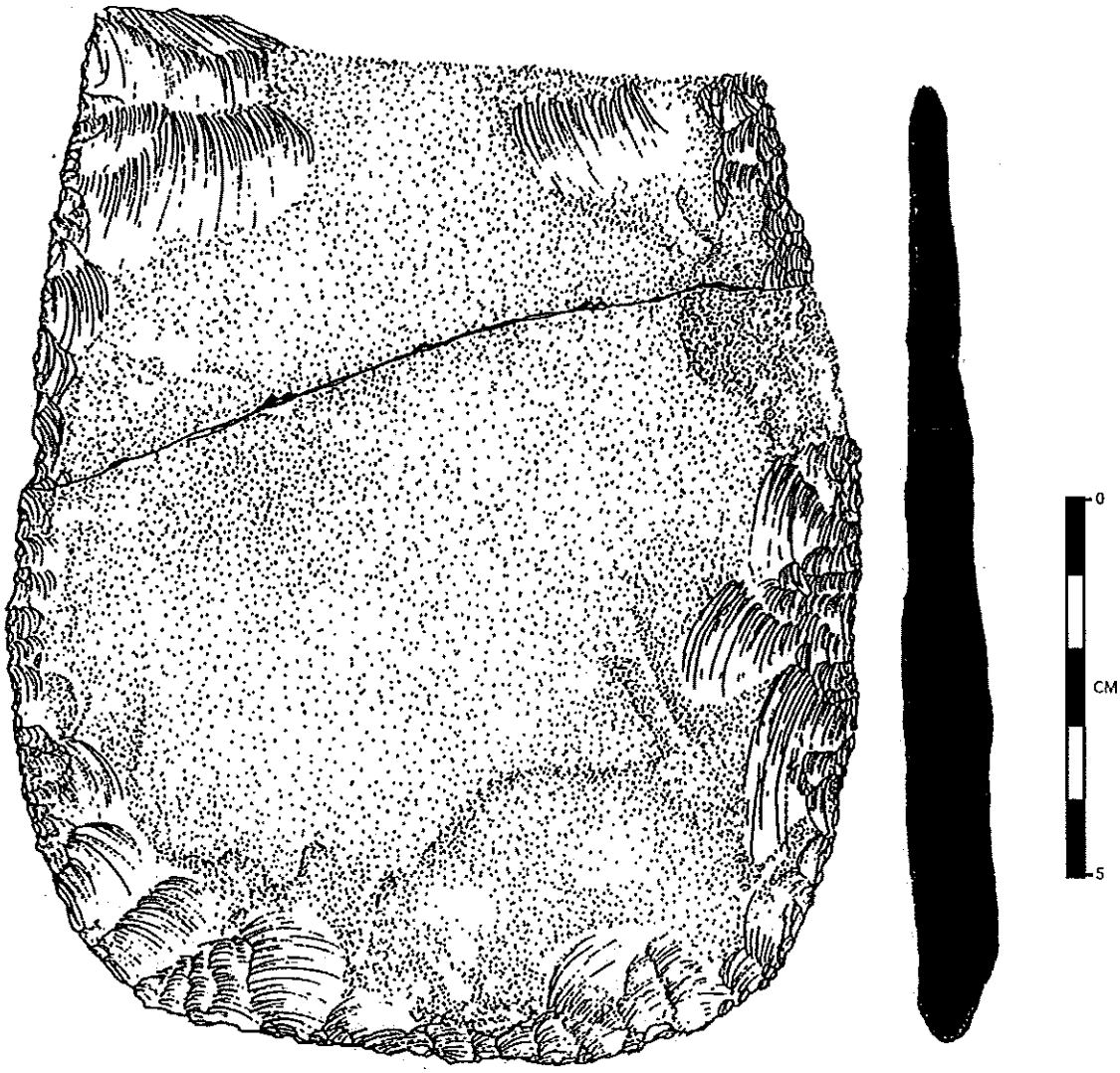


Figure 98. Specimen 48. Both faces, actual size.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Specimen #49 (Figures 99-100) This specimen is sub-triangular in outline and extremely thin, with cortex remaining on both faces. The biface was apparently damaged during cache discovery, as the distal one-third of biface is missing, and it has another large fracture, which practically split the biface in two, down the longitudinal axis. Side A is percussion-flaked and trimmed and also has some limited amount of pressure flaking around the convex base. Side B has been trimmed around the edges and retains most of its cortex. Percussion flaking is random and flake scar ridges are pronounced. This biface came from a thin nodule that probably did not require the removal of all cortex to become a very usable tool. The specimen is very consistent with the majority of this cache in material quality and cortex characteristics.

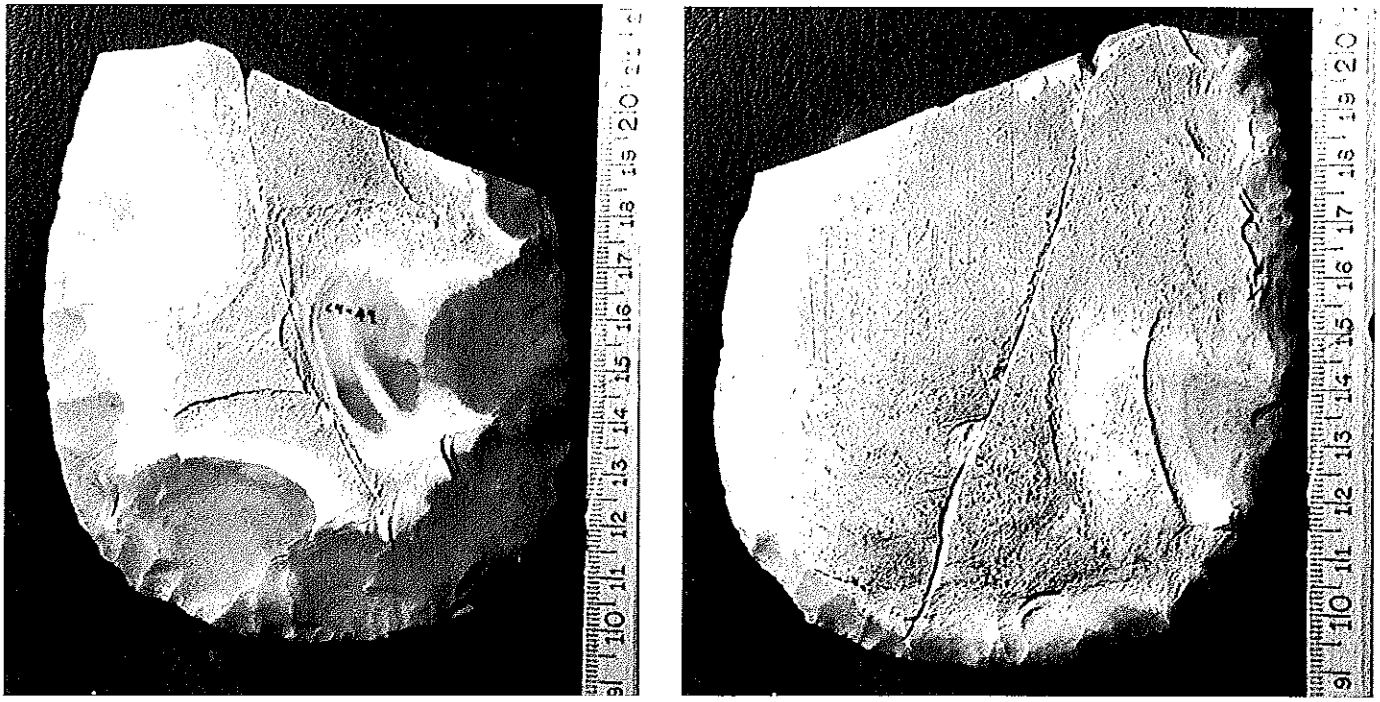
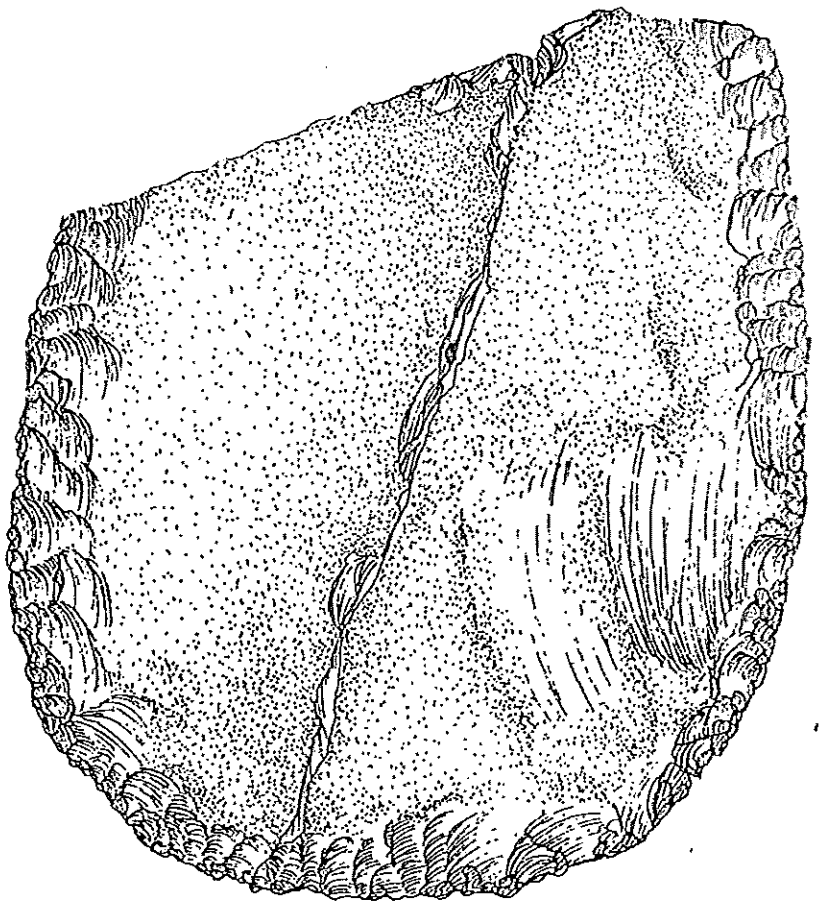


Figure 99. Specimen 49. Left, side A, right, side B.

Figure 100. Specimen 49. Both sides, actual size.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Specimen #50 (Figures 101-102) This specimen is sub-triangular in outline, although perhaps only 50 percent of the basal portion of the biface remains. It was probably damaged in the cache discovery. Both faces retain cortex; however, side A retains only a slight amount of cortex while side B has fully half of its cortex removed. This biface exhibits wide, percussion flaking, with pronounce flake scar ridges. The base of this biface has been thinned on side A and appears to have been slightly abraded. The specimen is very consistent with the majority of this cache in both material quality and cortex characteristics.

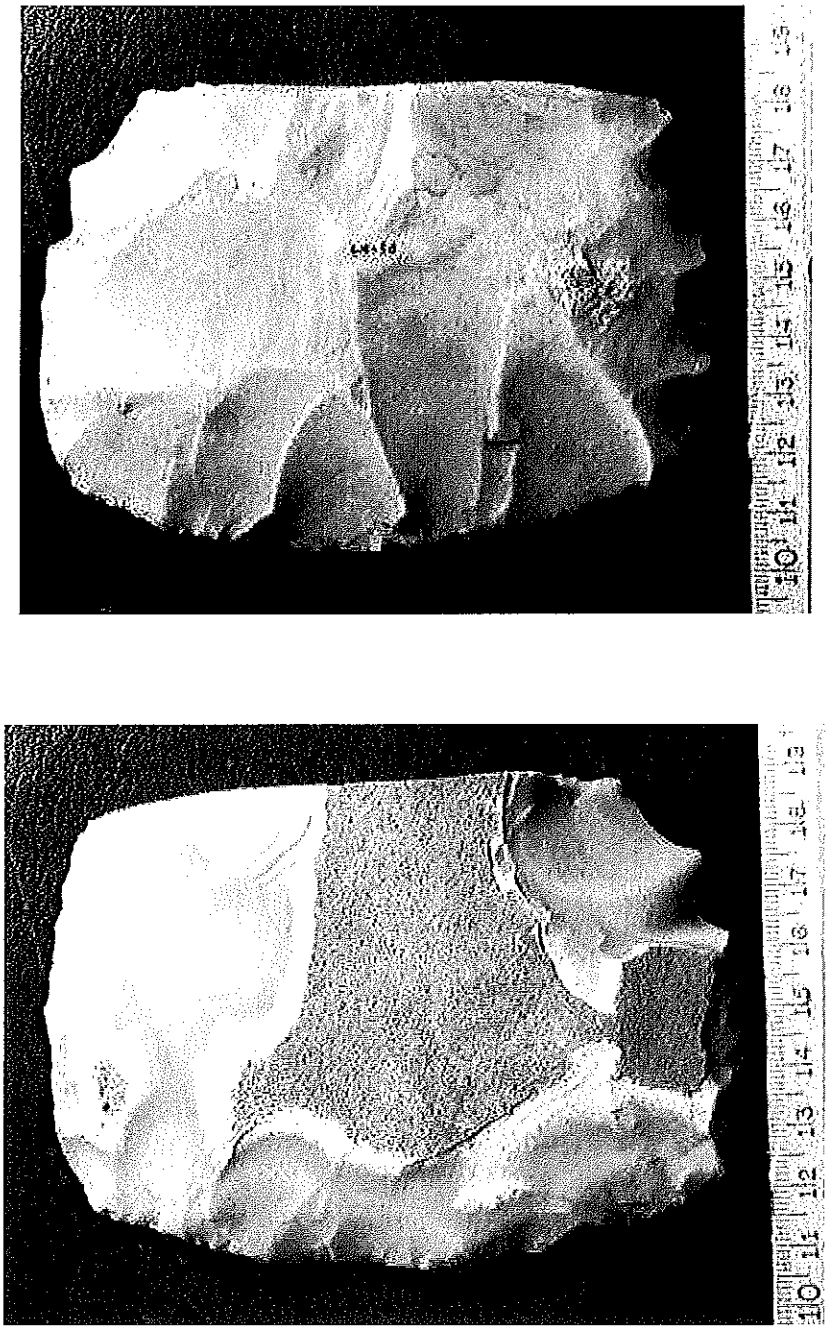


Figure 101. Specimen 50. Above, side A; below, side B.

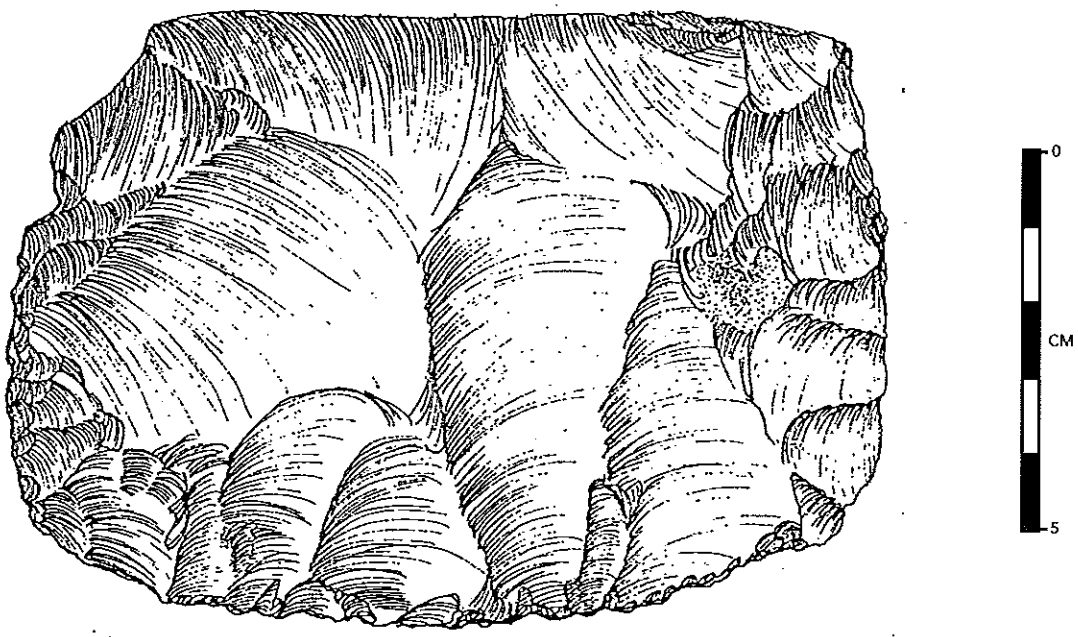
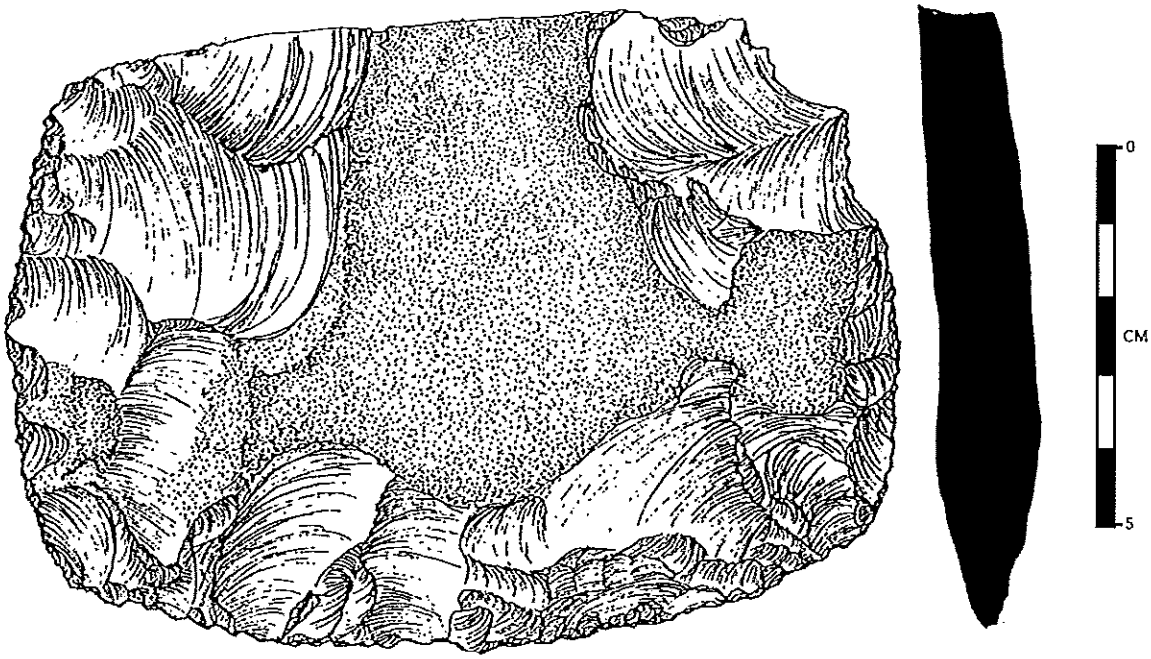


Figure 102. Specimen 50. Both sides, actual size.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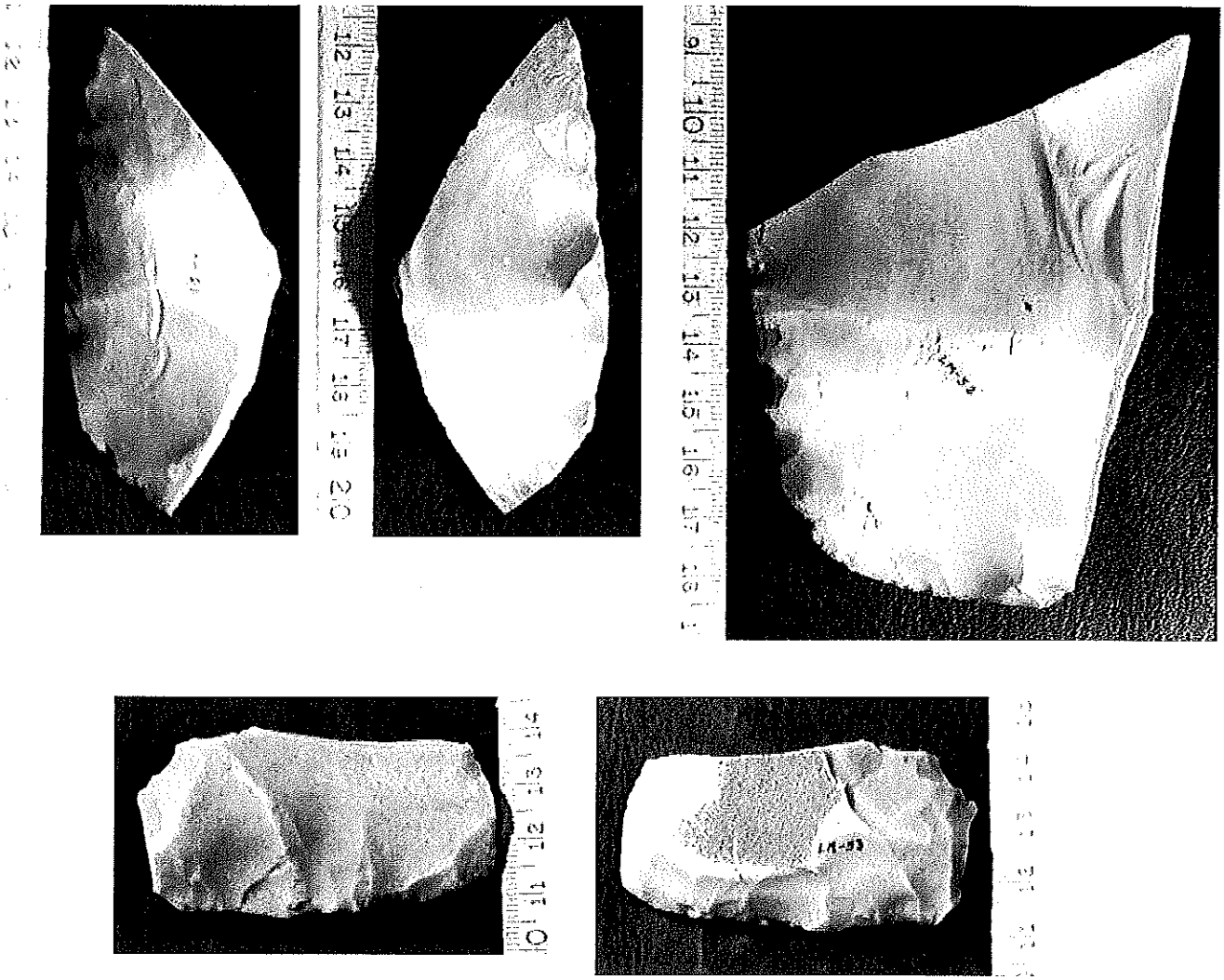
Specimen #51 (Figure 103) The artifact is probably a remnant of cache discovery damage. The specimen is very consistent with the majority of this cache in material quality. This piece is also very similar to Specimen #52 and may well have been part of the same biface; however, it could not be conjoined in any recognizable way.

Specimen #52 (Figure 103) The specimen is also a large biface fragment. This fragment does not match up with any other pieces, however, the raw material is very consistent to Specimen # 51 and to the other bifaces in the cache in general. It has large wide percussion flaking. Flake scar ridges are pronounced.

Specimen #53 (Figure 103) This specimen is a fragment of a smaller biface. It does not match up with any other pieces in this cache, but it is very consistent with the majority of this cache in material quality.



Figures 103. Specimens 51, 52, 53. Upper left, both sides of #51; upper right, one side of #52; lower, both sides of #53.

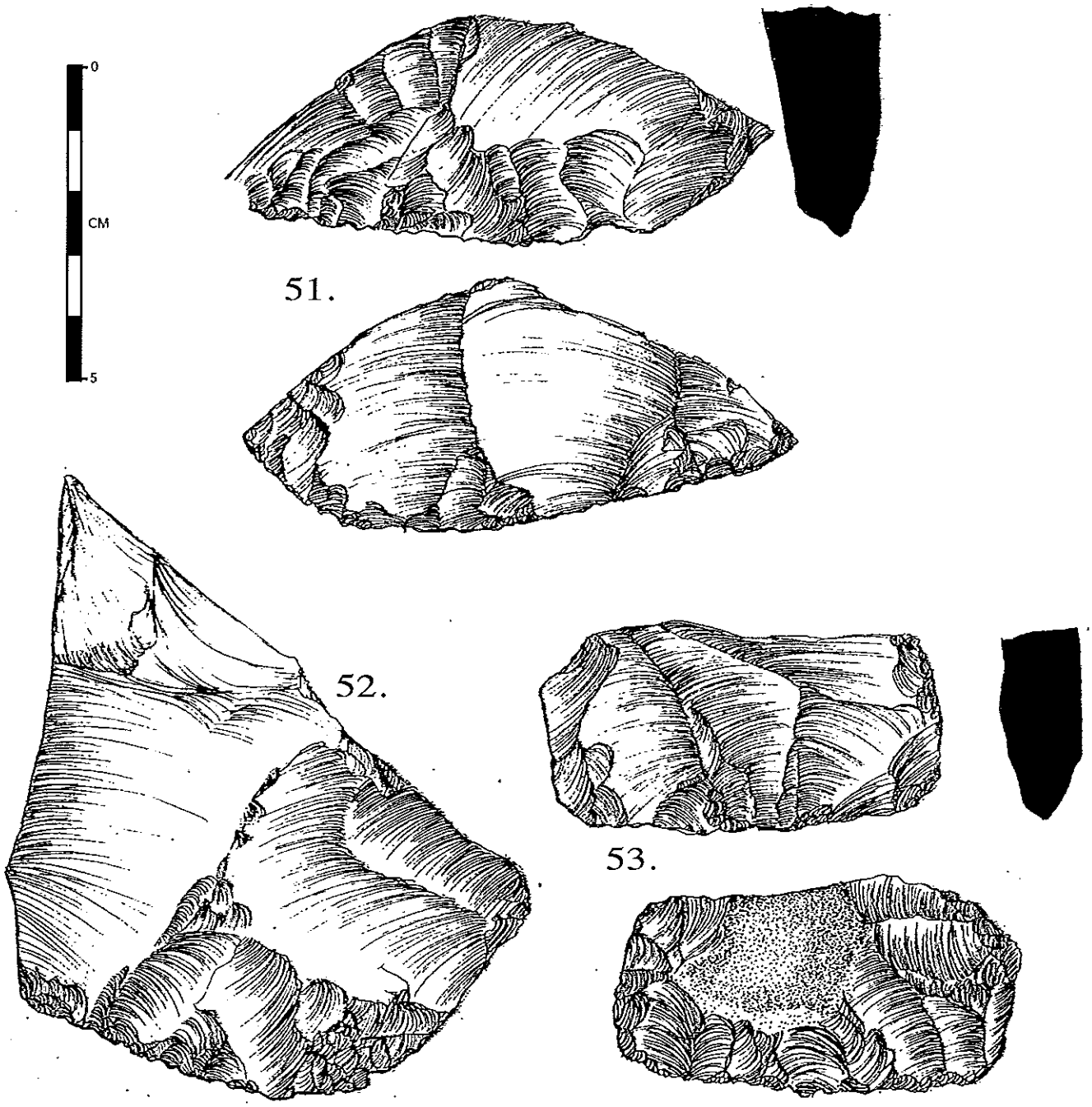


Figure 104. Specimen 51, 52, 53. All illustrated actual size.
See Figure 103 for specimen numbers.

Specimen #54 (Figures 105-106) This specimen is a very large, thin, trimmed nodule with a generally ovate outline. It was apparently shattered during discovery of the cache and the distal left quarter is missing. Remaining pieces had been glued back together at some point before Calame examined the cache.. Cortex remains on both faces, and thus the specimen is nearly the original size and shape of the collected nodule. Side A exhibits very large hard hammer percussion flake scars that extend well past the biface midpoint and some flake scars are overlapping. The specimen is very consistent with the majority of this cache in both, material quality and cortex characteristics. The raw material is of a high quality, yellowish-tan Edwards chert, with occasional pin holes that apparently pass through the biface. The largest percussion flake scar is 91 mm in length. Flake scar ridges are very pronounced.

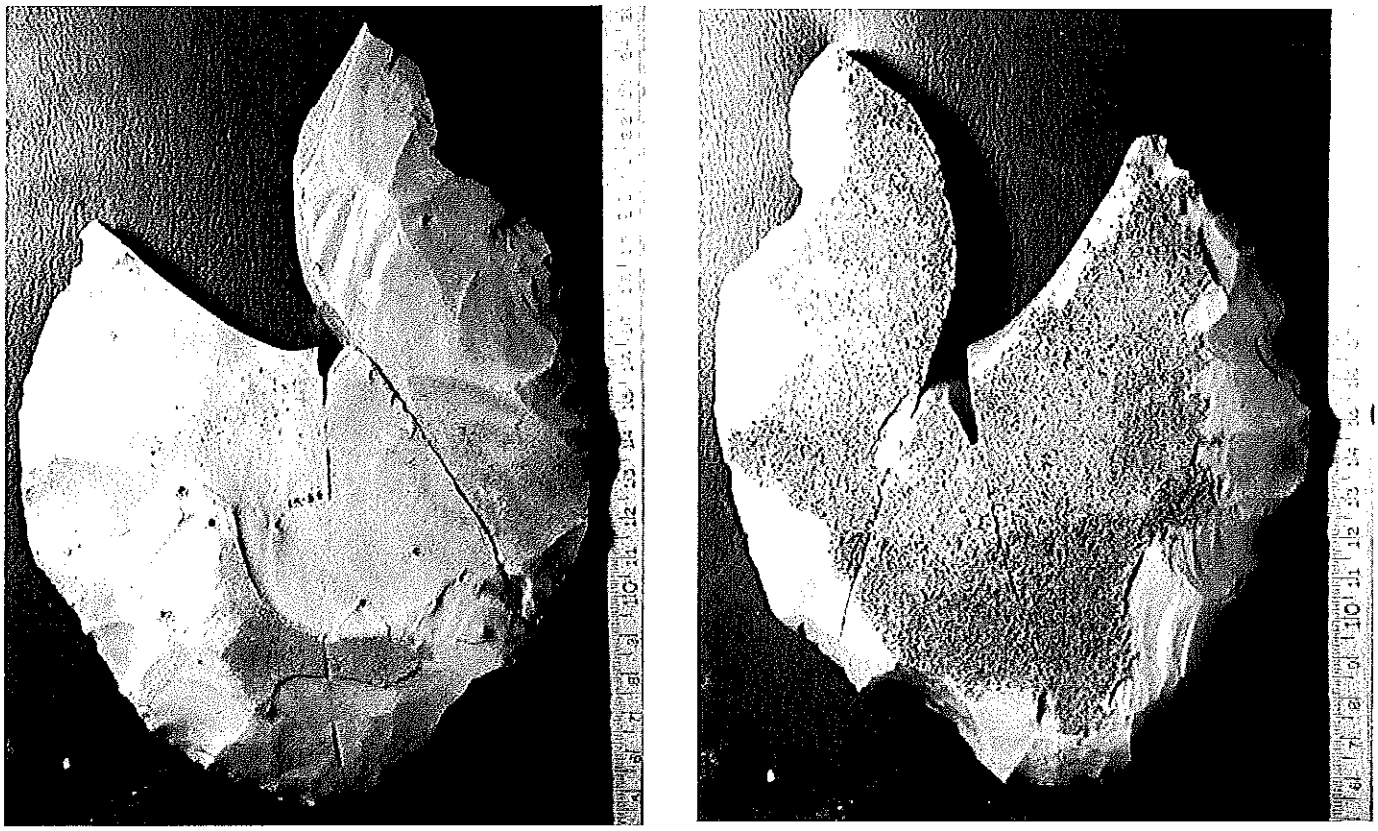
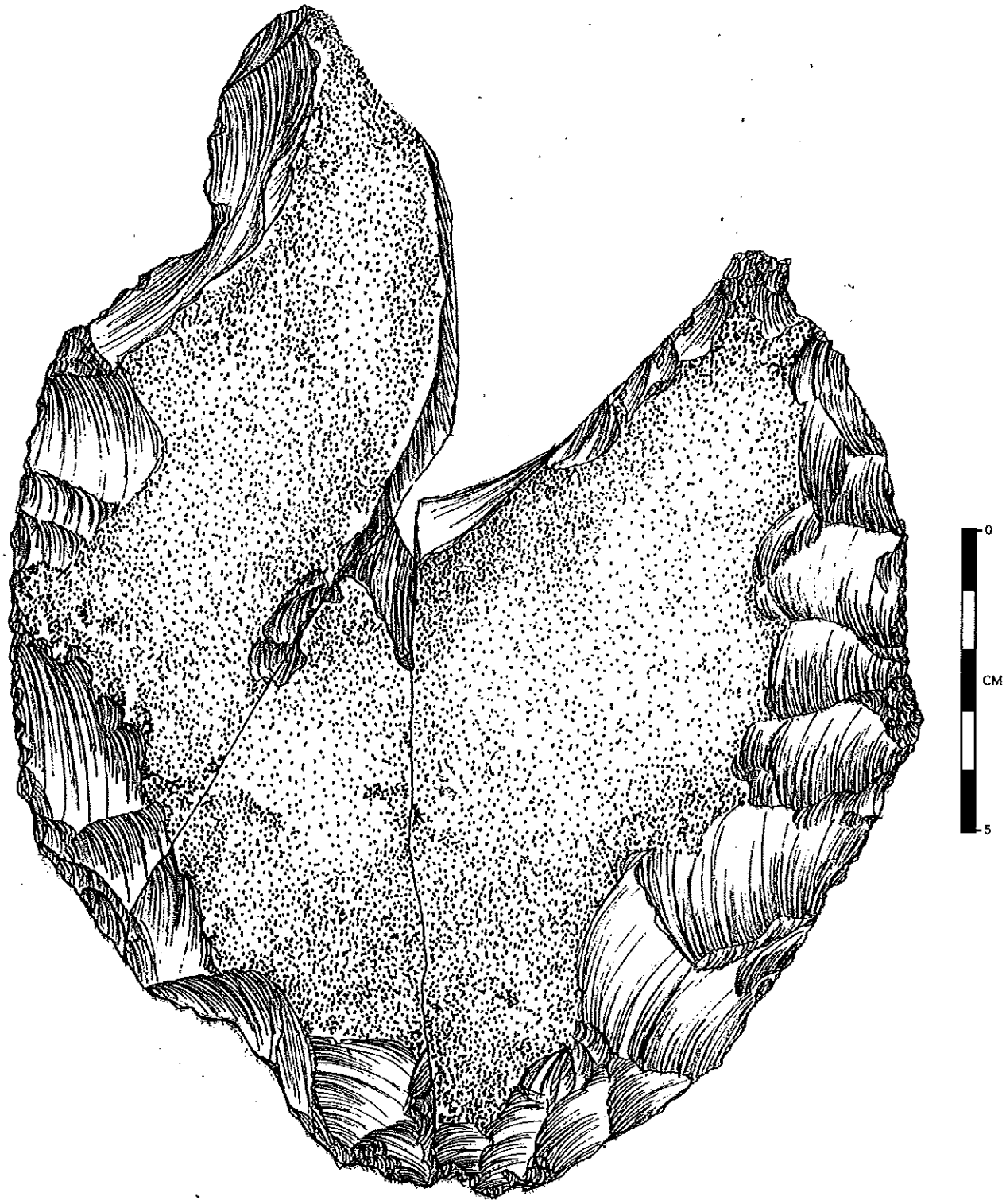


Figure 105. Specimen 54. Left, side A; right, side B.

Figure 106. Specimen 54. Both sides, actual site.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Specimen #55 (Figures 107-108) The specimen is a very large trimmed nodule, with most cortex remaining on both faces. Again, this specimen was damaged during discovery, apparently, and it was cleaved in half down the longitudinal axis. This nodule is very nearly the shape and size as originally collected by the prehistoric knapper. The specimen is very consistent with the majority of this cache in both material quality and cortex characteristics. Side B was only trimmed around the edges, which helped build convexity on this very flat nodule. Side A exhibits the initial series of percussion flakes to begin removing cortex on the nodule.

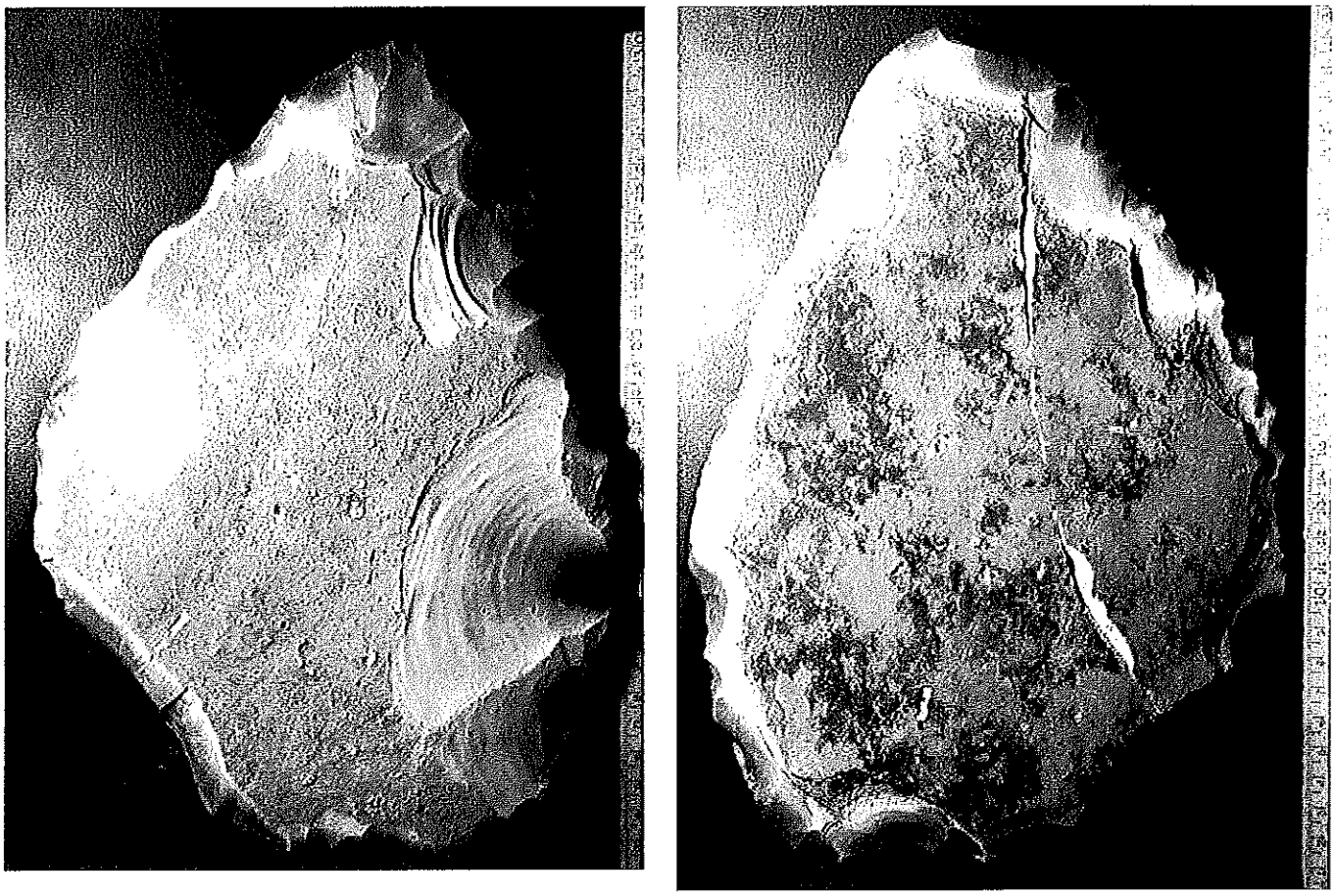


Figure 107. Specimen 55. Left, side A; right side B.

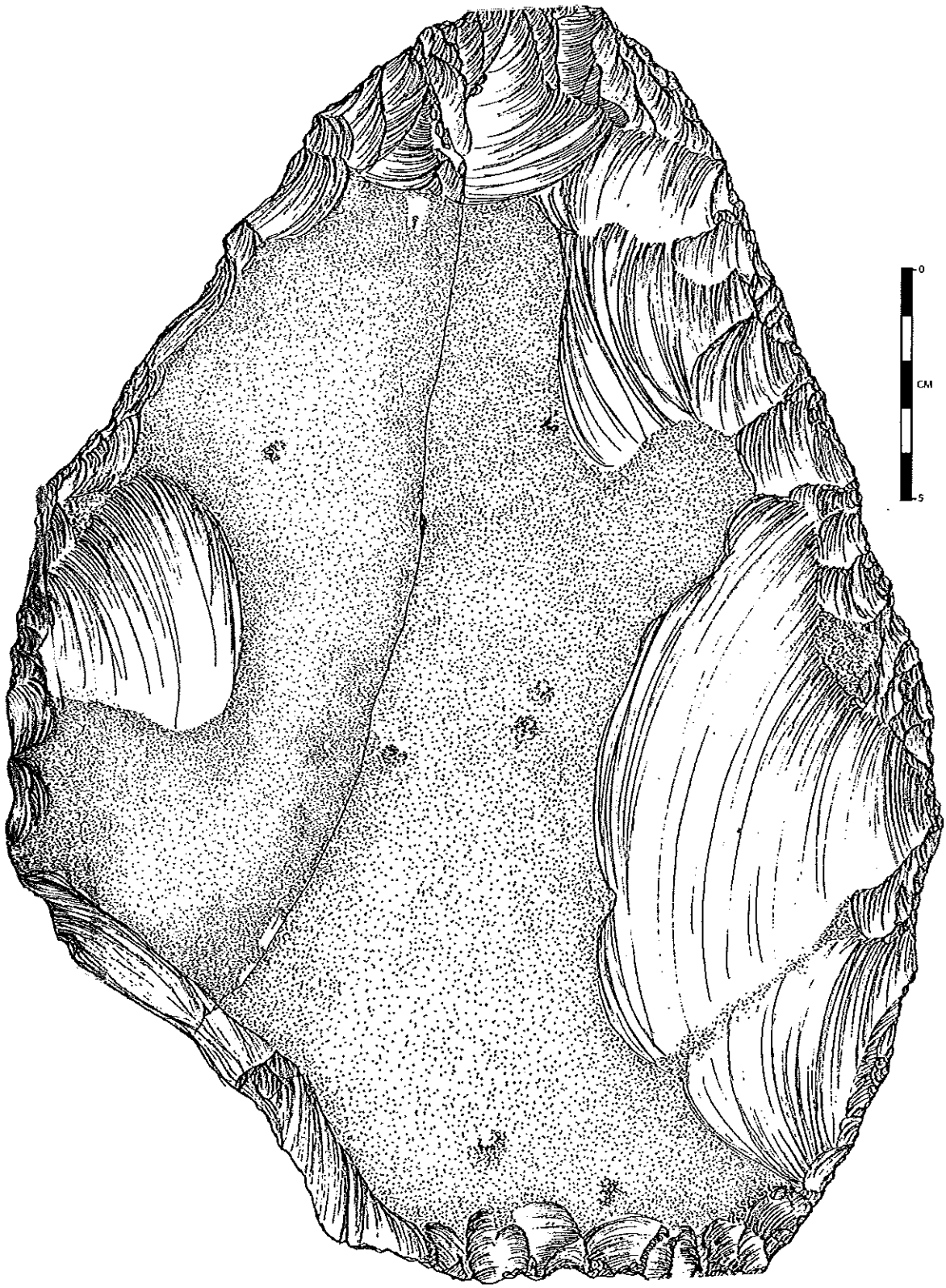
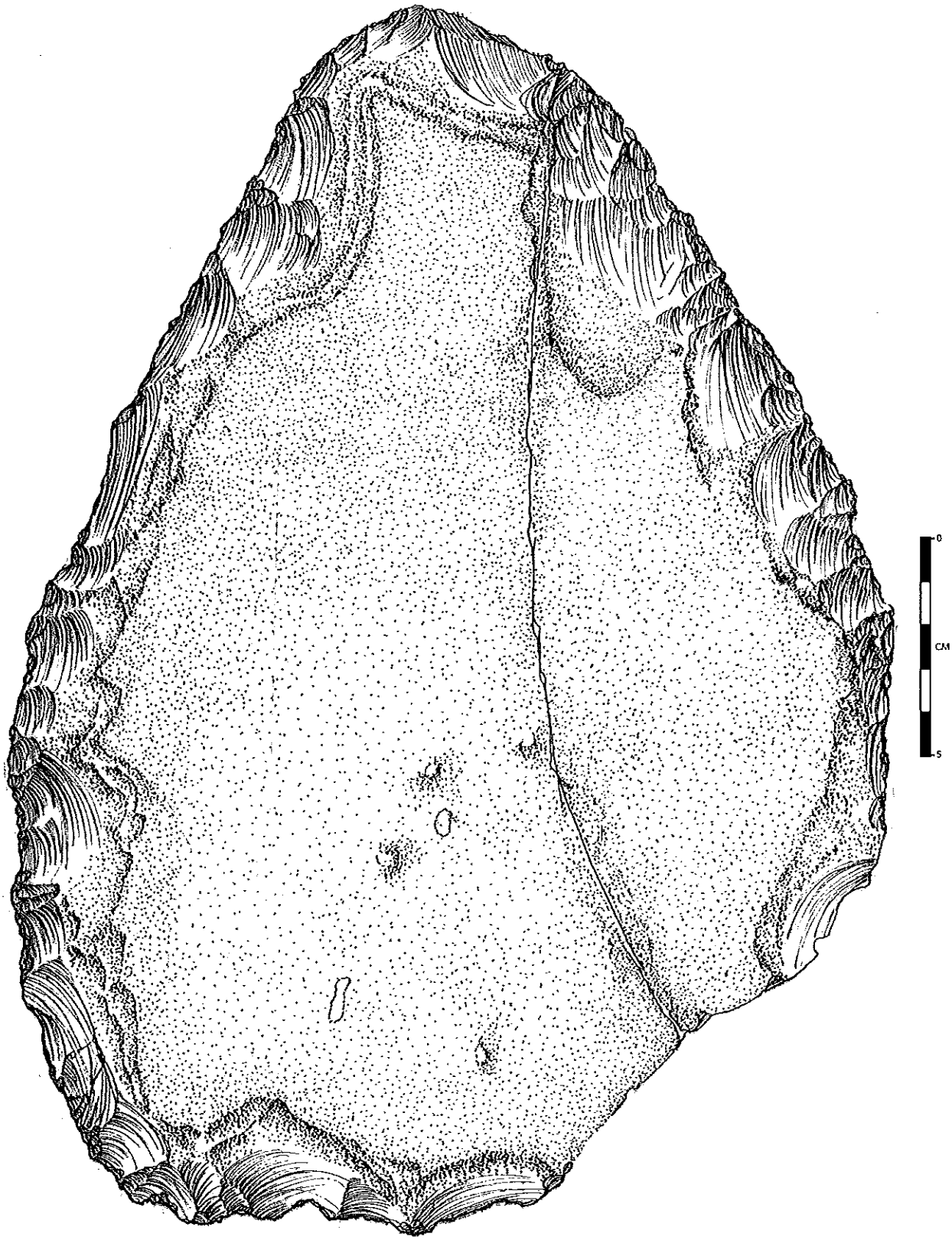


Figure 108. Specimen 55. Both sides are shown. Reduced; see scale.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Specimen #56 (Figures 109-110) The specimen is a large trimmed nodule that was apparently shattered during discovery of the cache. The specimen is very consistent with the majority of this cache in both material quality and cortex characteristics. The majority of its cortex remains on both faces, with very few large percussion flakes having been removed. Side B, the face that was obviously struck by whatever shattered the specimen, has some recent scratches in the cortex, presumably created during preparation of the finder's flower bed. Some pieces of this specimen are missing, but it is apparent that this specimen is very nearly the shape and size of the originally collected nodule. Side B was only trimmed, while it appears the knapper had started taking initial decortification flakes off side A.

Fig. 109. Specimen 56. Left, side A; right, side B.

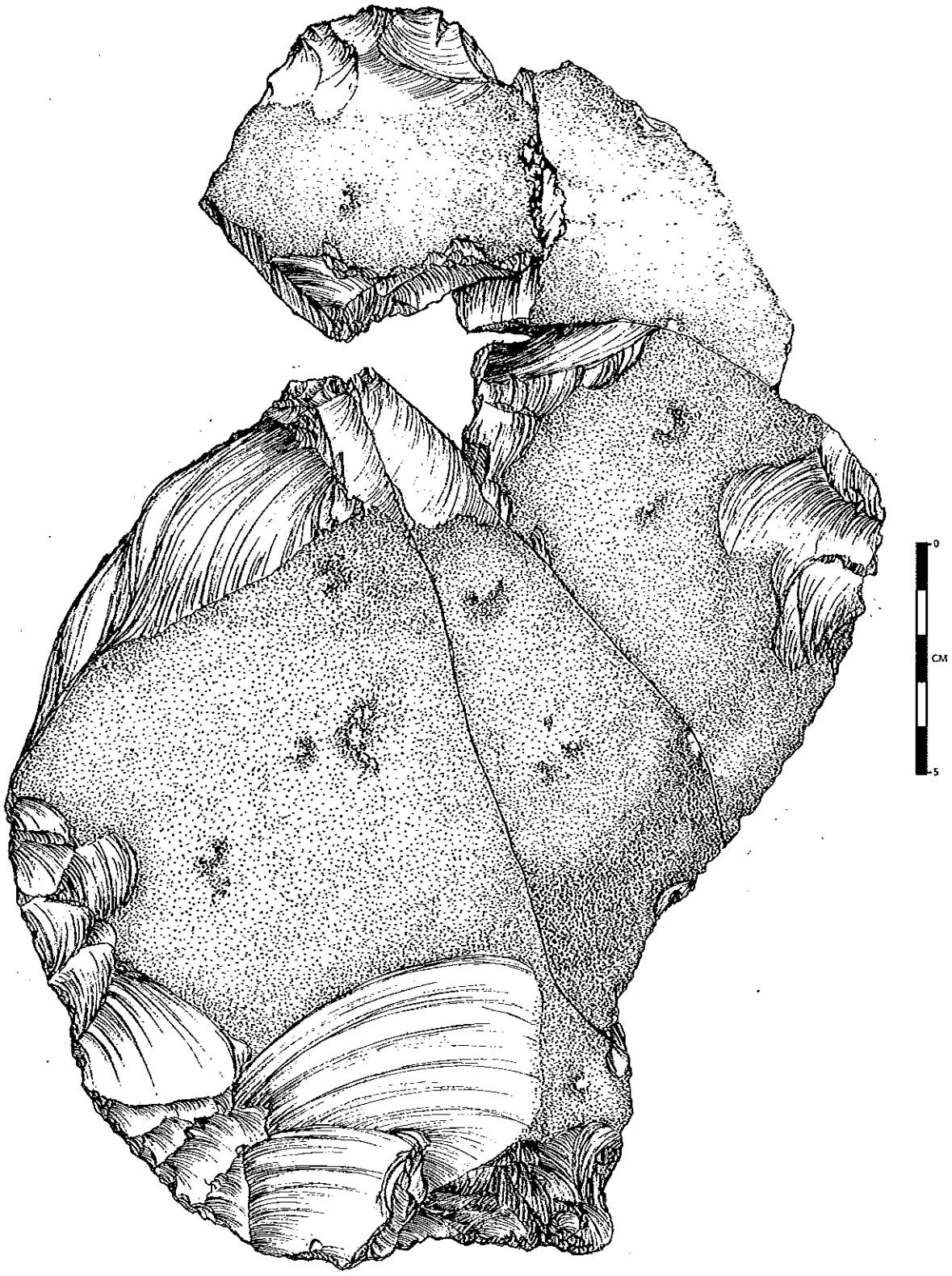
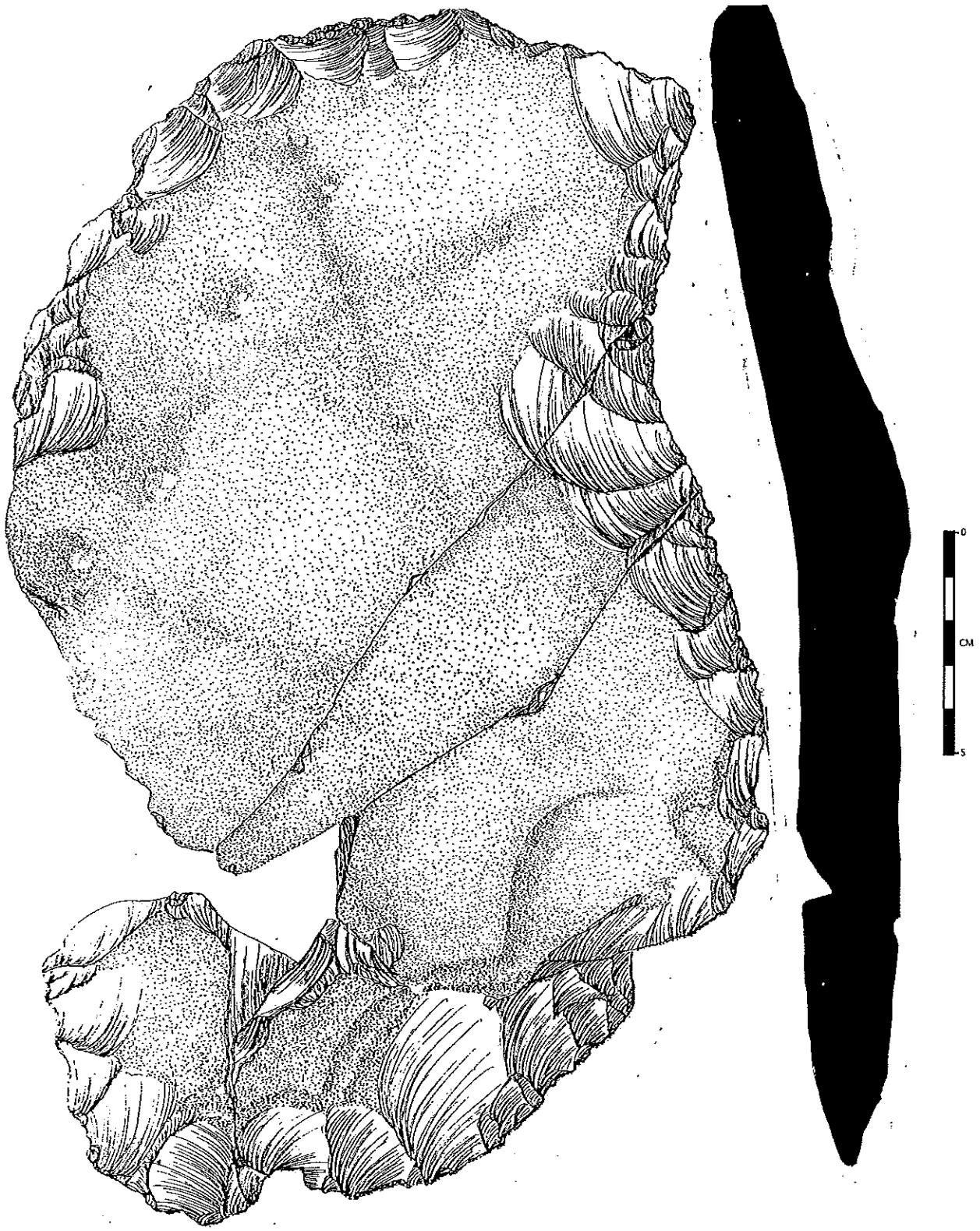


Figure 110. Specimen 56. Both sides are shown. Reduced; see scale.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Specimen #57 (Figures 111-112) This specimen is a large trimmed nodule of high grade Edwards chert, very consistent with the majority of this cache in both material quality and cortex characteristics. Side A has a few very large hard hammer flake scars, while side B has been barely trimmed to remove edge cortex and build convexity. Cortex remains on both faces. Side B has recent scratch marks on it, and is obviously the side contacted first during cache discovery. This nodule remains nearly the shape and size as originally collected by the prehistoric knapper.

Figure 111. Specimen 57. Left, side A; right, side B.

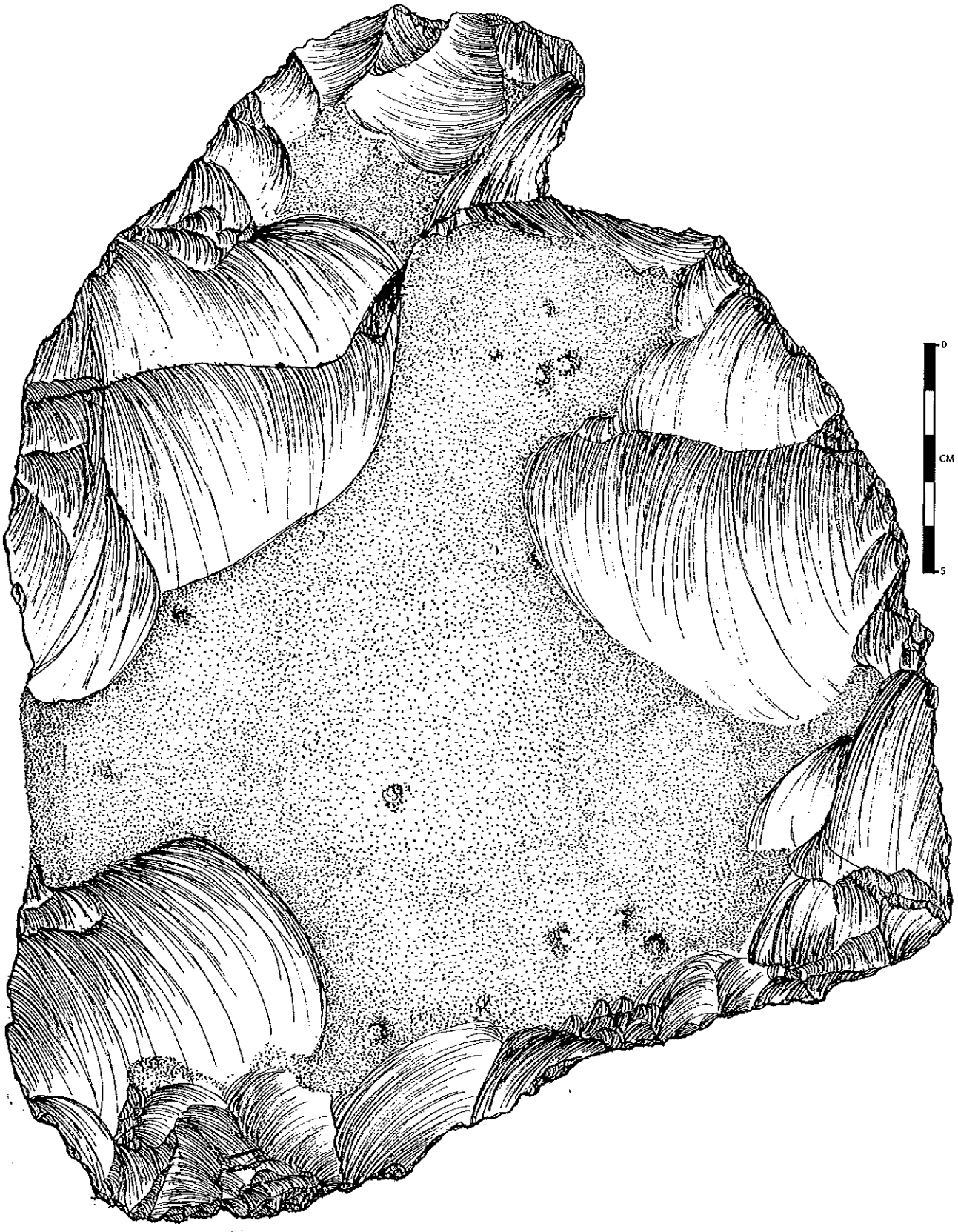
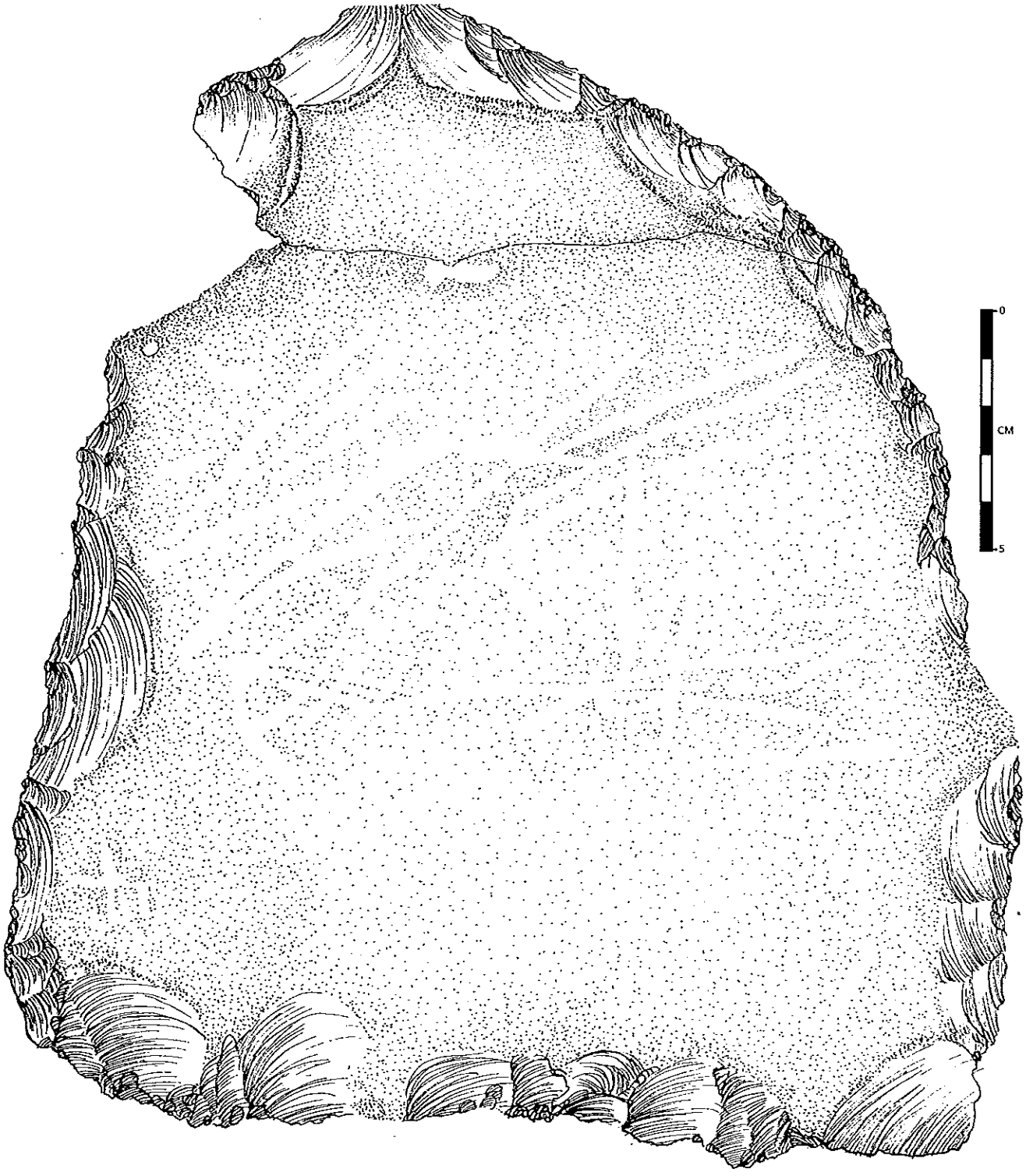


Figure 112. Specimen 57. Both sides are shown. Reduced; see scale.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Specimen #58 (Figures 113-114) This specimen is a very large trimmed nodule of high grade Edwards chert, very consistent with the majority of this cache in both material quality and cortex characteristics. Side A, barely trimmed around the edges, has some scratch marks probably caused during the discovery of the cache. Side B has some percussion flakes removed, but still retains the vast majority of its cortex. The percussion flaking on side B consists of small percussion flakes designed to obtain convexity, which would have been required to drive large decortification flakes across the flat surface of this specimen. This specimen is also very nearly its originally collected size and shape.

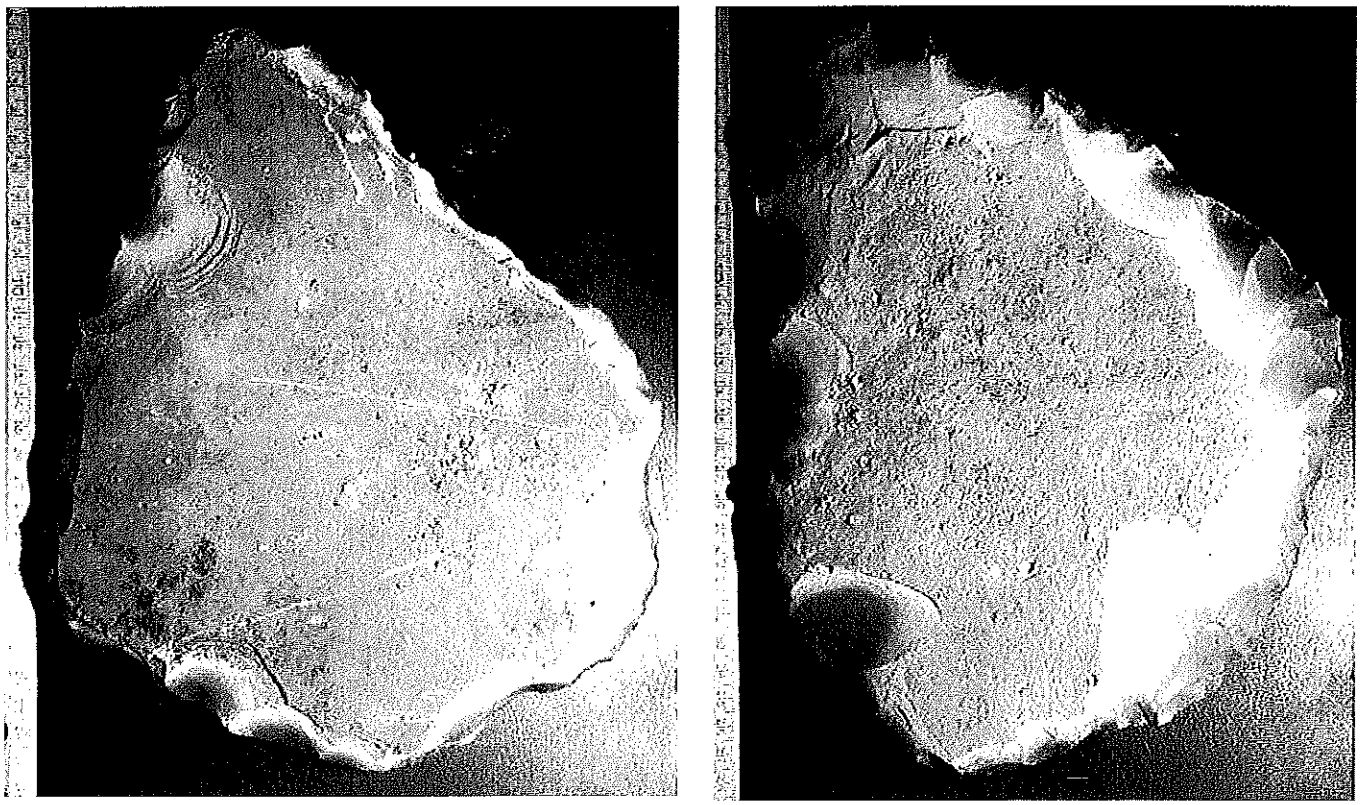


Figure 113. Specimen 58. Left, side A; right, side B.

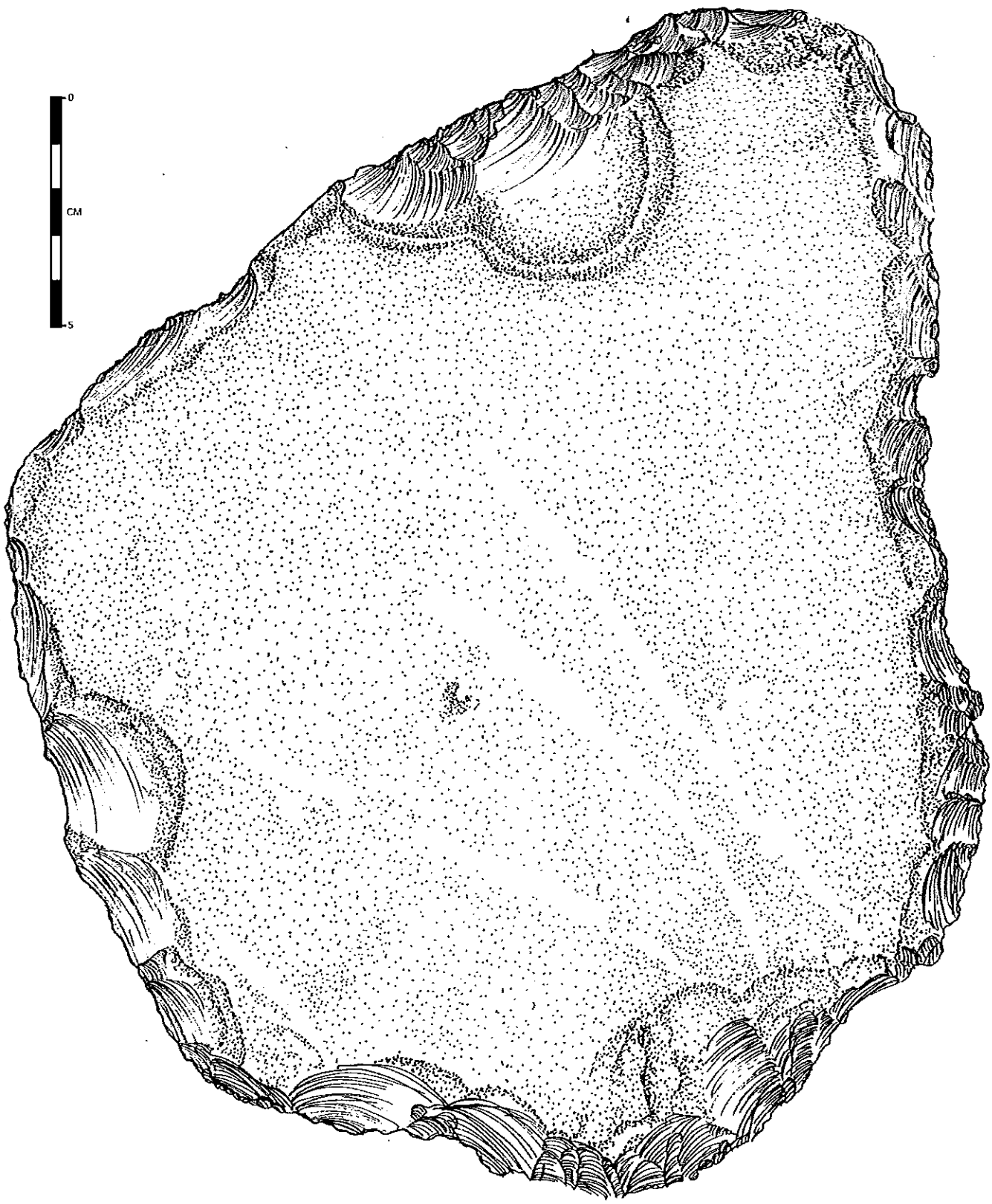
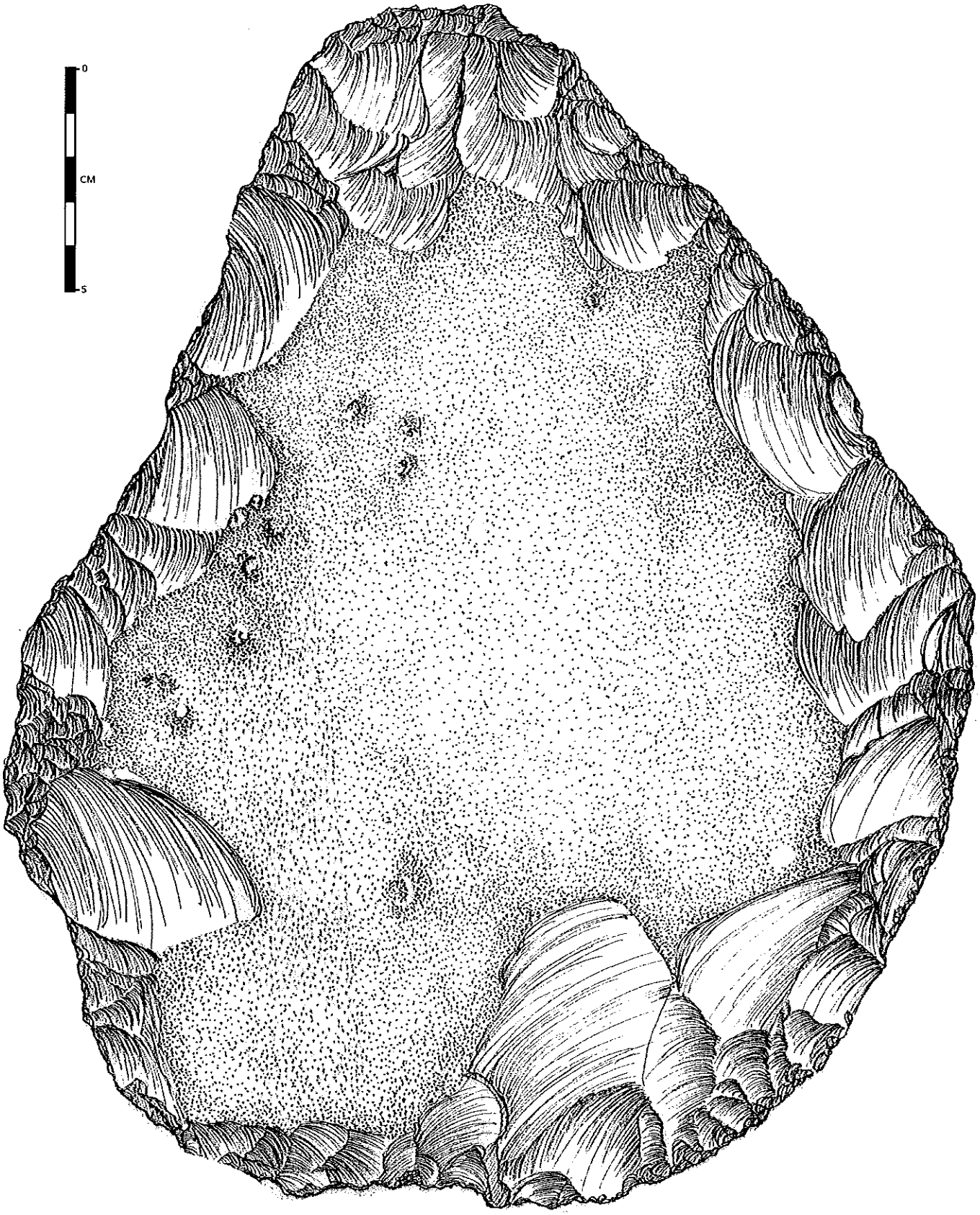


Figure 114. Specimen 58. Both sides are shown. Reduced; see scale.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Specimen #59 (Figures 115-116) This final specimen is a nearly untouched nodule that was broken in antiquity and re-patinated on two separate ancient fractures. Side B has only one small flake removed, which was probably removed to check the quality of the nodule's material. The specimen is very consistent with the majority of the specimens in this cache in both material quality and cortex characteristics. The nodule is thin and has a very irregular shape.

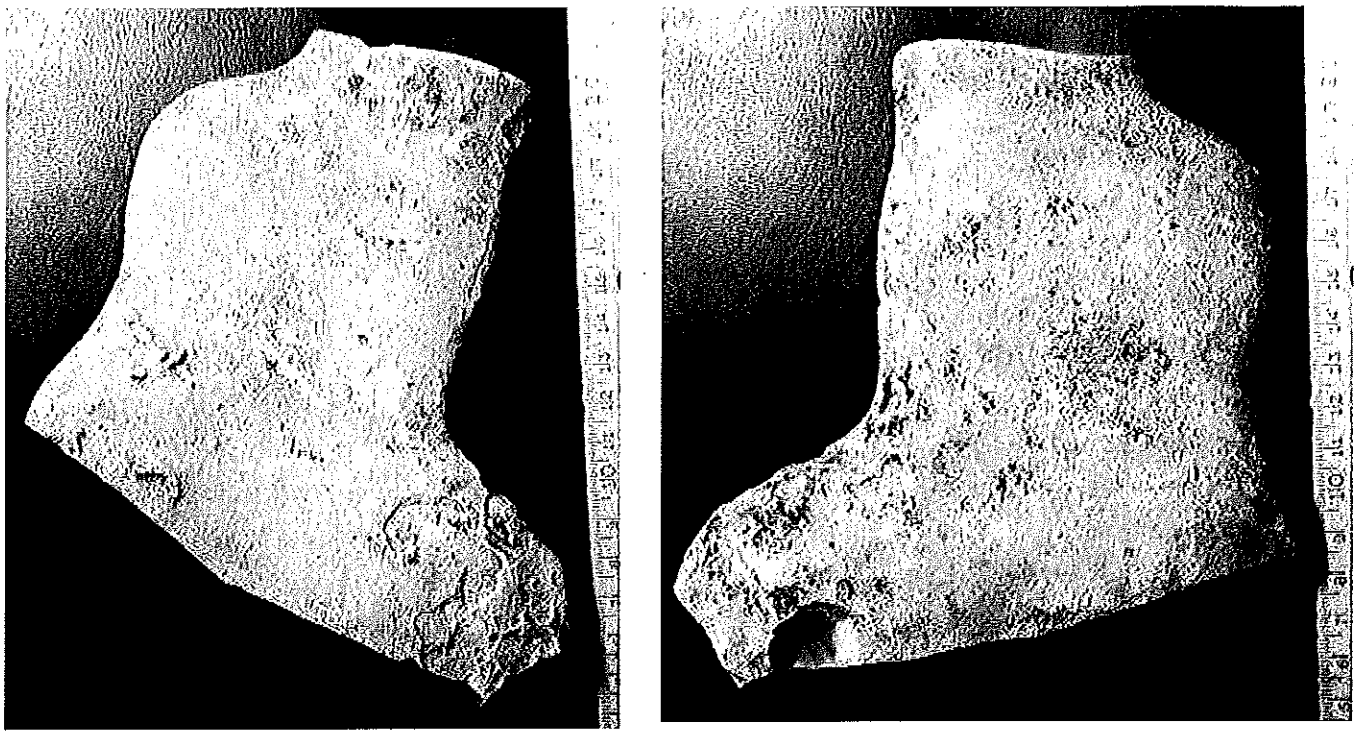


Figure 115. Specimen 59. Left, side A; right, side B.

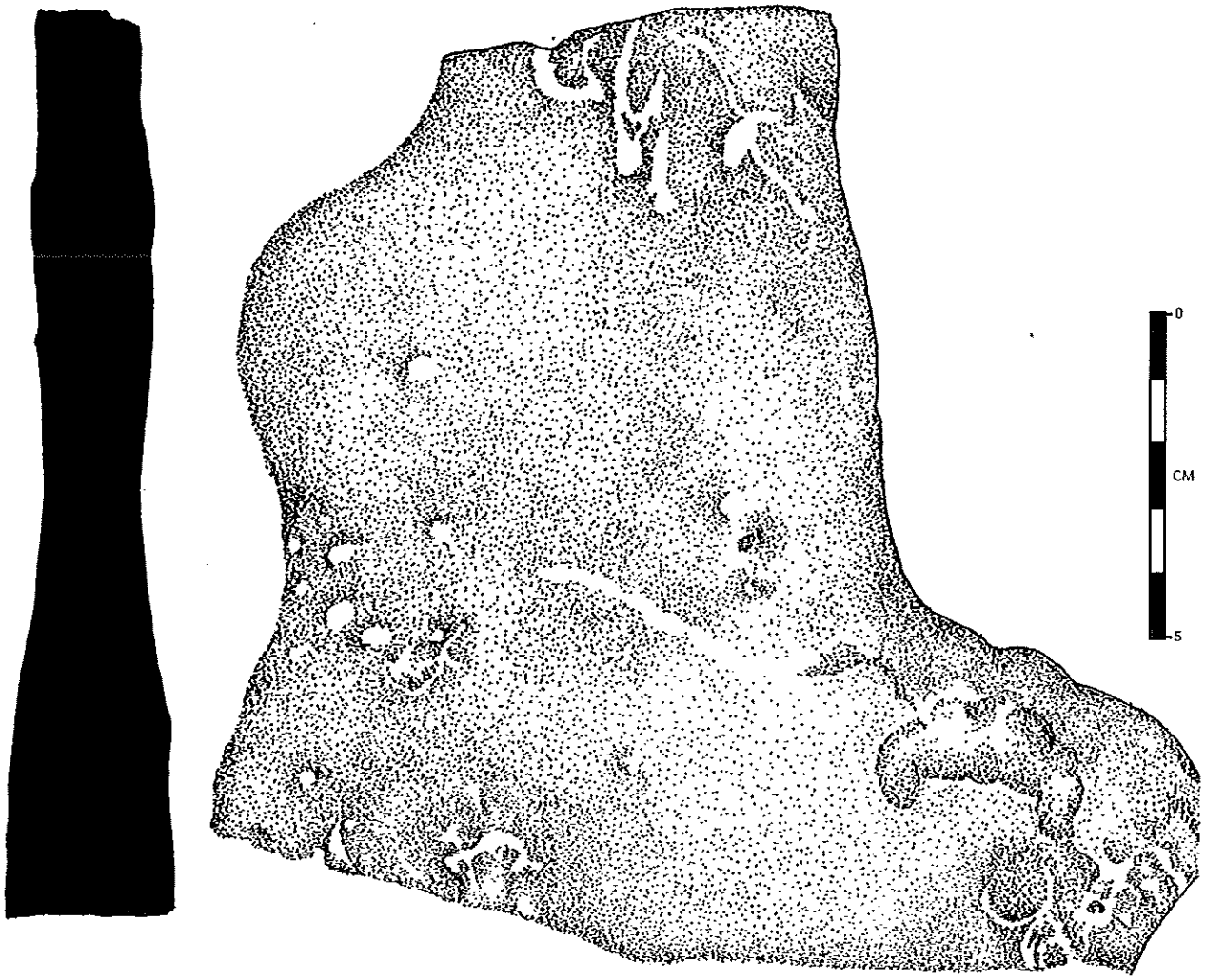
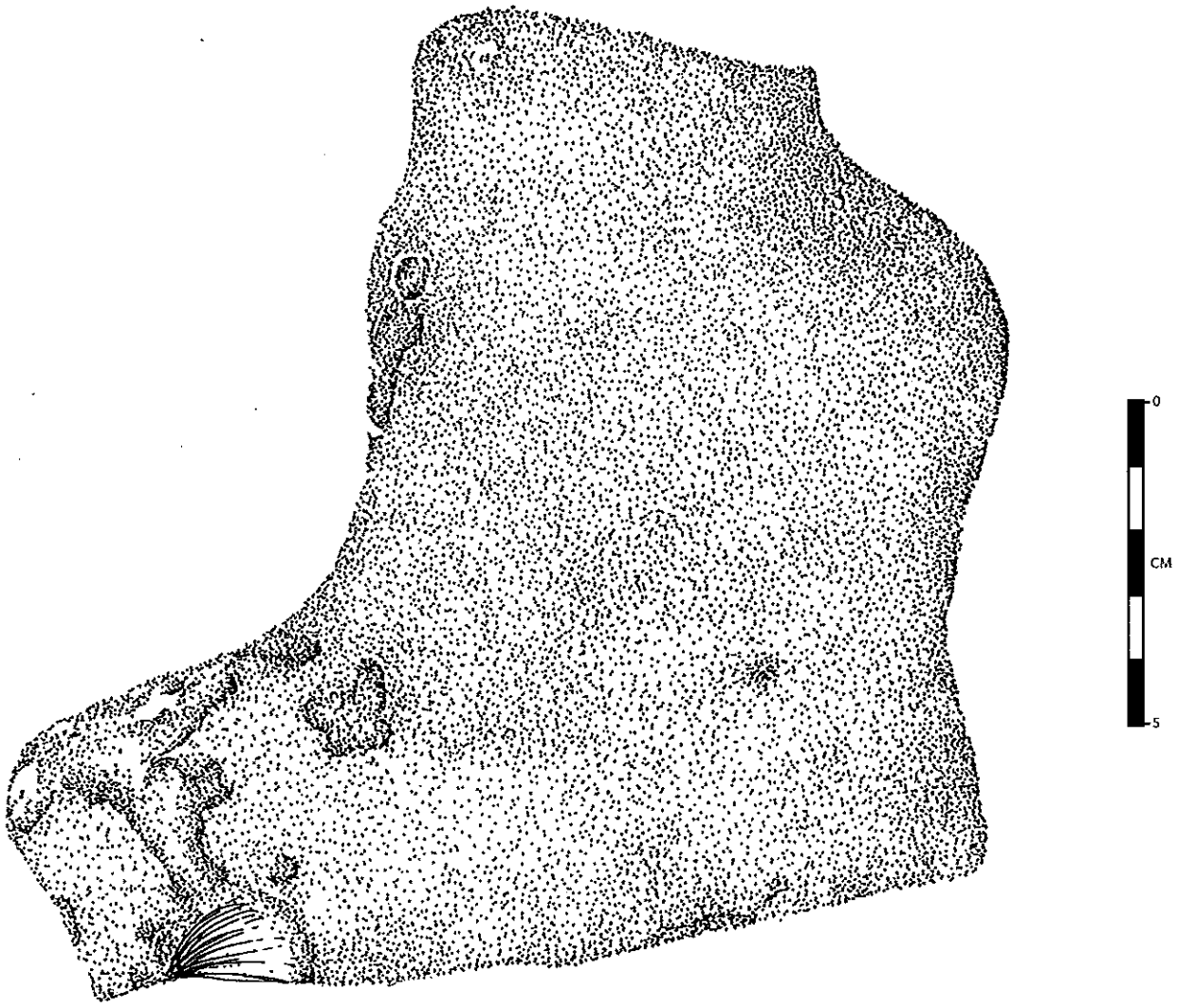


Figure 116. Specimen 59. Both sides, actual size.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SUMMARY

This study documents a cache of 59 large bifaces found buried in 1981, on a high bluff overlooking Medina Lake, in southeastern Bandera County, Texas. These artifacts were cached in an area of abundant lithic resources, so it is unlikely the cache was buried for future seasonal needs, as would likely have been done in a lithic-poor area. The placement of the cache was in the form of bifaces "stacked' in a cist lined with large thin, trimmed flint nodules. The cache is unlikely to have been a funerary offering, as there is no mention of any skeletal material in the record associated with the discovery of the cache. Most likely, these artifacts were cached very near the procurement area, with it being the intention of a person or a group to retrieve them at a later date for further reduction and for transport into another region. Many biface caches in central Texas represent much more "finished' or reduced specimens, perhaps of better "carrying weight" for trade (e.g. Creel and Collins 2005).

Miller's (2007) review of Texas biface caches indicate the directions in which trade and transport were directed. One region was the south Texas coastal plain, where a number of biface caches, or trade blanks related to caches, have been documented (Hester 2006). Such caches of Edwards chert, and usually of bifaces much more finished and refined than those in the Medina Lake cache are also known from the lower Rio Grande, in both Texas and Tamaulipas (Chandler and Kumpe 1996; Hester and Wilson 1994).

The time period these specimens were cached in is most likely the Late to Middle Archaic. The presence of engraved cortex on one specimen (specimen #8) and the partial trimming of cortex along edges are two characteristics in common with the Veltmann Cache (Hester and Calame 2003) , but that cache is also of unknown age.

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REFERENCES CITED

Bement, L. C.
1991 The Thunder Valley Burial Cache: Group Investment in a Central Texas Sinkhole Cemetery. *Plains Anthropologist* 36(135):97-109

Brown,K. M.
1985 Three Caches of Guadalupe Tools from South Texas. *Bulletin of The Texas Archeological Society* 56:75-125.

Brown, K.M., D. R. Potter, G. D. Hall, and S. L. Black
1982 *Excavations at 41LK 67: A Prehistoric Site in the Choke Canyon Reservoir, South Texas*. Choke Canyon Series, Volume 7. Center for Archaeological Research, The University of Texas atSan Antonio.

Chandler, C. K. and D. Kumpe
1996 Lithic Caches from the Lower Rio Grande. *La Tierra* 23(4):37-41.

Collins, M. B.
1990 Ultraviolet Fluorescence in Chert Identification. Paper presented at the 48th Plains Conference, Oklahoma City.

1999 *Clovis Blade Technology: A Comparative Study of the Kevin Davis Cache*. University of Texas Press, Austin.

Creel, D. and M. B. Collins
2005 An "Apparent" Early Biface Cache from Gillespie County. *Newsletter*, Friends of the Texas Archeological Research Laboratory, February: 5-7.

Flaigg, N. G. and O. B. Reed
1996 A Comanche County Cache. *The Cache, Collected Papers on Texas Archeology* 3: 3-12. Texas Archeological Stewardship Network, Office of the State Archeologist, Texas Historical Commission, Austin.

Hester, T. R.
2006 Biface Caches. South Texas Plains. *Texas Beyond History*, Texas Archeological Research Laboratory, The University of Texas at Austin. www.texasbeyondhistory.net

Hester, T. R. and D.L. Calame, Sr.
2003 Variability Among Bifaces Caches from Southern and South Central Texas . *La Tierra* 30(3&4):25-36.

Hester, T. R. and W. Wilson
2004 Notes on South Texas Archaeology 2004-1: A Trade Blank From The Lower Rio Grande: Further Observations on Large Biface Exchange in Southern Texas. *La Tierra* 31(1):1-4.

Hillsman, M.
1992 Evaluation of Visible and Ultraviolet-Excited Attributes of Some Texas and Macroscopically Similar New Mexico Cherts. Master's Thesis, Department of Anthropology, Eastern New Mexico University, Portales

Hofman, J. L., L. Todd, and M B. Collins
1991 Identification of Central Texas Edwards Chert at the Folsom and Lindenmeier Sites. *Plains Anthropologist* 36(137):297-308

Lintz, C. and B. Saner Jr.
2002 Hoerster Site Cache, 41MS67, Mason County, Texas. *La Tierra* 29(1):12-47.

Lovata, T. R.
1997 Archeological Investigations at the Silo Site (41KA102), a Prehistoric Cemetery in Karnes County, Texas. Unpublished master's thesis, Department of Anthropology, The University of Texas at Austin.

Mallouf, R J.
1988 Livermore Cache. In *Historical Dictionary of North American Archaeology,* ed. by E. B. and J. C. Jelks. Greenwood Press, New York.

Mitchell, J., L., C. K. Chandler, and T. C. Kelly
1984 The Rudy Haiduk Site (41KA23),A Late Archaic Burial in Karnes County, Texas. *La Tierra* 11(2):12-39.

Miller, K. A..
2007 Study of Prehistoric Biface Caches from Texas. *La Tierra* 34 (1-2):1-88 (whole volume).

Munsell
2000 *Munsell Soil Color Chart*. GretagMacbeth, New Windsor, New York (formerly McBeth Division of Kollmoregen Corporation, Baltimore).

Pearce J. E.
1919 Unpublished Manuscript on the Fairview Cache, on file at the Texas Archeological Research Laboratory, The University of Texas at Austin.

Ricklis, R, A., R. A. Weinstein, and D, C. Wells, editors
2012 *Archaeology and Bioarchaeology of the Buckeye Knoll Site (41VT98), Victoria County, Texas.* 3 Vols. Coastal Environments, Inc., Corpus Christi, Texas.

Taylor, A. J. and C. L. Highley
1995 *Archeological Investigations at the Loma Sandia Site (41LK28).* Studies in Archeology 20. 2 Vols. Texas Archeological Research Laboratory, The University of Texas at Austin.

Tunnell, C.
1978 *The Gibson Lithic Cache from West Texas*. Office of the State Archeologist Report 30. Texas Historical Commission, Austin.

Turner, E. S., T. R. Hester and R. L. McReynolds
2011 *Stone Artifacts of Texas Indians*. 3rd revised edition. Taylor Trade Publishing, Rowman and Littlefield, Lanham, Maryland.

Waters, M. R. and T. A. Jennings
2015 *The Hogeye Clovis Cache*. Texas A&M University Press, College Station.