A SHORT NOTE ON MATERIALS FROM THE CUMMINS QUARRY SITE (DcJi-1) NEAR THUNDER BAY, ONTARIO

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The primary purpose of this report is the publication of several superb artifact illustrations by Mr. John Love-Symonds of Winnipeg, Manitoba (Figures 2-4). These deserve better treatment than the collection of dust on a lab bulletin board, even though the occasional student may quite understandably be inspired by them. They are the work of a talented artist who devoted himself to the fullest representation of the stone objects before him, and to the exact will of the flint knappers who made or rejected them. While these objectives may be deemed impossible by many, the sensitivity expressed in Love-Symonds' drawings so exceeds the ordinary work of lithic illustrators, that it becomes appropriate to properly exhibit them.

I first became aware of the Cummins Quarry Site (DcJi-1) on July 3, 1970 during a brief visit with Professor K. C. A. Dawson, Chairman of the Department of Anthropology at Lake-head University. During that visit, Professor Dawson kindly showed me materials from the Cummins Site and gave me directions to it. The significance of the site was immediately evident. It showed absolutely clear relationships to the Brohm Site (MacNeish, 1952), the most ancient site in Northwestern Ontario. Not only were some of the styles of stone tools identical to those made by the Brohm Site occupants, but the material used (a deep, wine-colored jasper) was the same also. Moreover, the elevation above the present level of Lake Superior is shared by both prehistoric sites. This level (175-220 feet) is marked by a very ancient beach (called the Minong) which was formed by a massive lake of the same name after a glacial retreat. Radio-carbon dates on peat which developed just above the beach gravels point to a central date of about 10,000 years ago (Prest, 1970: 721). Artifacts on both the Brohm and Cummins sites show evidence of natural abrasion, and the stratigraphy at Brohm (MacNeish, 1952: 25, 27) shows the occupation to be clearly before any soil buildup on an abandonned beach. At Brohm, these ancient hunters made their camp on the beach overlooking Lake Minong. They made projectile points, knives, scrapers, choppers and other tools from the jasper which outcropped 28 miles to the west on the same beach elevation. They carried large chunks with them, and made the tools their economy required right on the occupation site. We infer that they were hunters from the presence of projectile points, and that they made skin clothing with the numerous scraping tools. They may have been exploiting the developing lakeshore forests since a number of chopping tools are present also.

The Cummins Site, however, is much different. It is a potentially tremendous site, covering (literally) miles of exposed jasper deposits along the Minong Beach. The jasper is highly distinctive and, to east, north, and west, the actual use of these quarries can be inferred from the stone found in prehistoric sites. To the south, of course, it is found in glacial deposits. Thus, along directions not traversed by glacial movement, we can infer human intervention in its transport. While the eastern distribution of the jasper has not been established, to the west it has been found to occur in ever-decreasing volume along the river system which terminates at Lake Winnipeg. The most distant western occurrences are in the vicinity of Pine Falls on the Winnipeg River.

In Ontario, this material has been called "oolitic jasper" by geologists. This term reflects the presence of small circular and overlapping spots in the structure of the stone. Despite these impurities, the general structure of the stone is very fine grained, almost vitreous at times, and

perfectly suited to the flint-knapping art. One hazard, not always overcome, is the presence of absolutely flat sheer planes of natural origin. Many of the discarded flakes and cores at the Cummins Site exhibit this feature, perhaps testifying to the reason for their being unused.

After looking at Professor Dawson's collection from the site, I travelled out to it for a first hand inspection. In about ten minutes (in a steady rain), I collected 53 retouched flakes, cores and discarded spalls—many of them reflecting classical forms in the lithic technology of early North American cultures. Some of them, in fact, bear strong resemblances to Old World techniques of the Paleolithic. Naturally we do not necessarily infer relationship. The same techniques can be invented by different peoples in different places at many points in time.

The presence of notches along the lower sides of projectile points at the Cummins Site, and their absence at the Brohm Site, suggests at least one additional cultural component at Cummins. This technique is known to be later than the plain, lanceolate styles at Brohm and Cummins which have been classed as Plainview in type (MacNeish, 1952: 28). Plainview culture elsewhere is dated at about 9,000 years ago, and side-notched points are commonly thought to begin a few thousand years later. There are other stone forms collected at Cummins which would suggest that even later cultures made limited use of the quarry. William Fox, an archaeologist with the Ontario Ministry of Resources, is presently undertaking a comprehensive investigation of the Cummins Site, and has succeeded in persuading the government to protect it. He indicates that glacial drift inclusions and some natural outcropping of the "oolitic jasper" are present at much lower (and, of course, more recent) beach levels than that of Cummins. These were probably exploited in later prehistoric times. It appears safe to say that a great deal of the Cummins quarry activity can be assigned to what appear to be the earliest human occupations of the Lake Superior region.

The detachment of bold prismatic flakes (Figure 2, a,b) from large polyhedral cores (Figure 2, c,d) is reflected in the majority of specimens which remain in the University of Winnipeg collections. They would be seen as products of an ancient lithic technology well suited in time to the early and middle periods of Lake Minong Beach formation. The retouching of flakes to produce chisel (Figure 4, a), graving (Figure 4, a, Fig. 3, a) and scraping (Figure 3, b,d) edges is also consistent with this technology. Dr. Alan Bryan of the University of Alberta has published an excellent theoretical paper on the history of these techniques both before and after the close of Wisconsin glaciation (1969). Bifaces, or large oval-shaped blades which are flaked on both faces, are a consistent element in this history of stone working. The Cummins Site yields them. Perhaps they function secondarily as "blanks" of raw material. This would reinforce Bryan's view that quarry stations are of great importance in studying the origins of New World lithic technology. Too often they are overlooked, mainly because the overwhelming quantities of material make analytical costs phenomenally high.

The work of William Fox, and others who are becoming interested in these early Midcontinental occupations, will probably soon clarify the precise characteristics of this industry and assign it to its appropriate place in regional culture history. My prediction is that the earliest and most active exploiters of the Cummins Quarry Site shared in one of North America's most ancient traditions in stone-working—a complex often called "Early Lithic," or "the Pre-Projectile Point Stage" (Krieger, 1964: 30, 42; Willey, 1966: 36). Large choppers, blades, and bifaces of the types found at both Brohm and Cummins characterize this industry.

All around the west end of Lake Superior a complex, now named the Reservoir Lakes Phase (Steinbring, 1974), finds these tools associated with non-fluted projectile points which appear to be crude variants of "Plano" types (like Plainview). The general lithic assemblage of

this complex is well suited to J. V. Wright's Shield Archaic (1972: 33). Wright believes the Shield Archaic begins somewhere in the Northwest Territories around 5,000 B.C., but the Brohm Site seems legitimately assignable to it and should be a fair bit older. The Reservoir Lakes Phase, to which I assign both the Brohm and Cummins sites, is, to my thinking, the earliest expression of the Shield Archaic tradition. I am confident that the earliest occupation of the Shequiandah Site on Manitoulin Island (Lee, 1957) would also line up with this, as would the George Lake sites just north of Lake Huron (Greenman, 1943: 260). Both these are regarded by most as being very early.

Alan Bryan has argued that the fluted point tradition, characterized by such well-known styles as Folsom and Clovis, is restricted in time, and that it was by-passed by non-fluted point styles which had emerged earlier than the 12,000 year date commonly attributed to the beginning of fluted types. He believes that a parallel-flaked type, with "spatulate" chips removed from a bevel along the straight sides, antedates fluting. This type is well known in the Duluth area sites of the Reservoir Lakes Phase (Figure 5), and is also apparent on the Brohm Site points (Figure 6). We should not ignore the possibility that the prehistory of Midcontinental North America may commence with the cultural representations Bryan postulates, and not the corn paratively late cultures which are most often suggested. If my prediction is correct, the Cummins Site will certainly take its place as as least part of the forge upon which a truly ancient, and ultimately florescent, lithic industry of the deep continental interior was formed. And, from there, it spread.

ACKNOWLEDGEMENTS

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REFERENCES CITED

Bryan, Alan Lyle
1969 "Early Man in America and The Late Pleistocene Chronology of Western Canada and Alaska." *Current Anthropology* 10, No. 4: 339-363.

Greenman, E. F.
1943 "An early industry near Killarney, Ontario." *American Antiquity,* Volume VIII, No. 3, Menasha, Wisconsin.

Krieger, Alex
1964 "Early Man in the New World," in *Prehistoric Man in the New World,* edited by J. D. Jennings and E. Norbeck. Chicago: University of Chicago Press. Pp. 28-81. Lee, Thomas E.
1957 "The Antiquity of The Sheguiandah Site." *Canadian Field Naturalist* 71, No. 3: 117-137.

MacNeish, Richard S.
1952 "A possible early site in the Thunder Bay district, Ontario." Annual Report of The National Museum of Canada for the Fiscal Year 1950-51, *National Museum of Canada Bulletin* No. 126, pp. 25, 27-28.

Prest, V. K.
1970 "Quaternary Geology," in *Geology and Economic Minerals of Canada,* edited by R. J. W. Douglas. Ottawa. Chapter XII, p. 721.

Steinbring, J. H.
1974 "The Preceramic Archaeology of Northern Minnesota." *Aspects of Upper Great Lakes Anthropology,* edited by Elden Johnson. St. Paul: Minnesota Historical Society.

Willey, Gordon R.
1966 *An Introduction to American Archaeology,* Volume I. Englewood Cliffs: Prentice-Hall.

Wright, J. V.
1972 "The Shield Archaic." *National Museum of Man, Publications in Archaeology,* No. 3. Ottawa: National Museums of Canada.

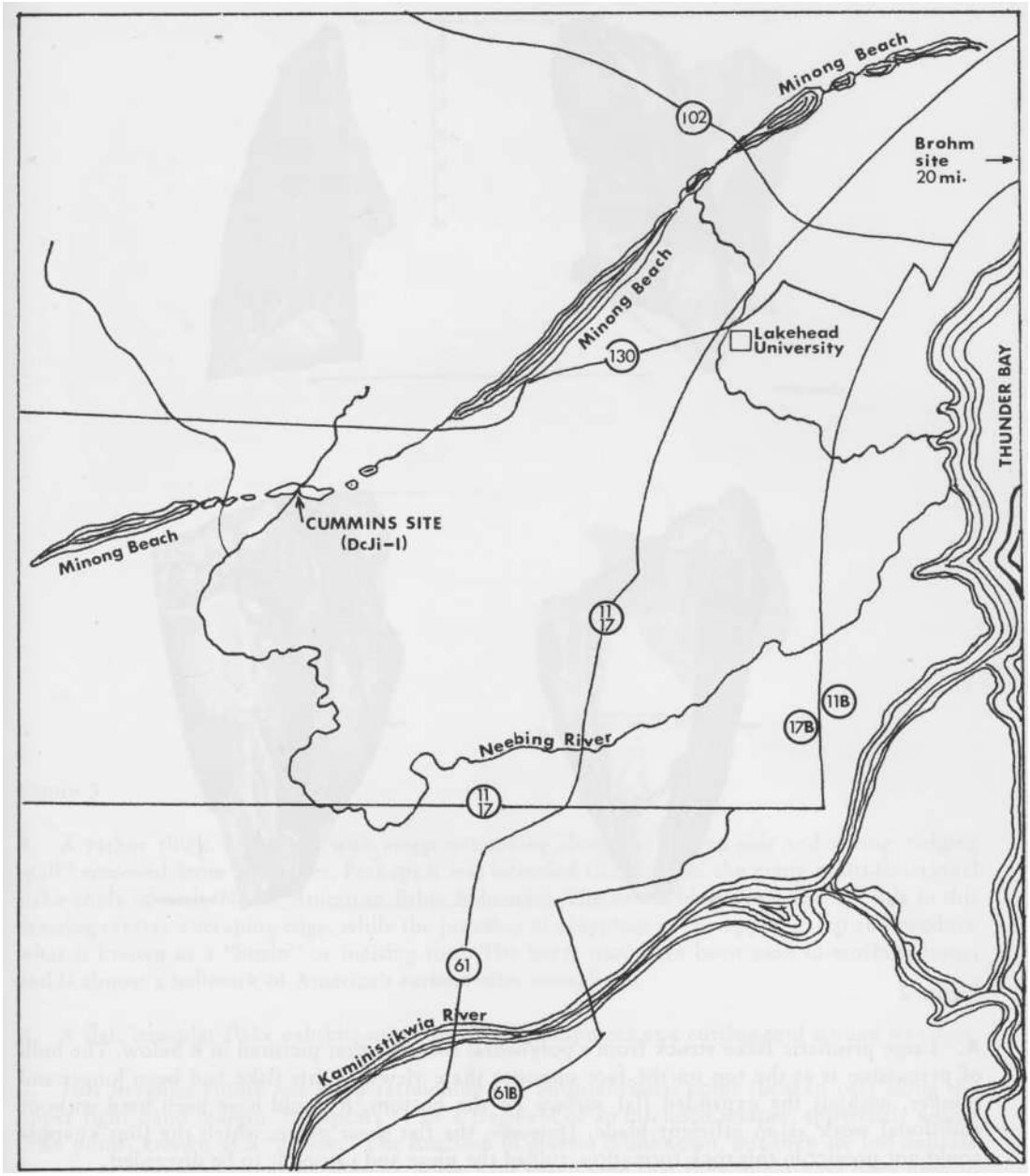

Figure 1
Cummins Site DcJi-1
Location of stone specimens illustrated by Love-Symonds
(map not to scale)

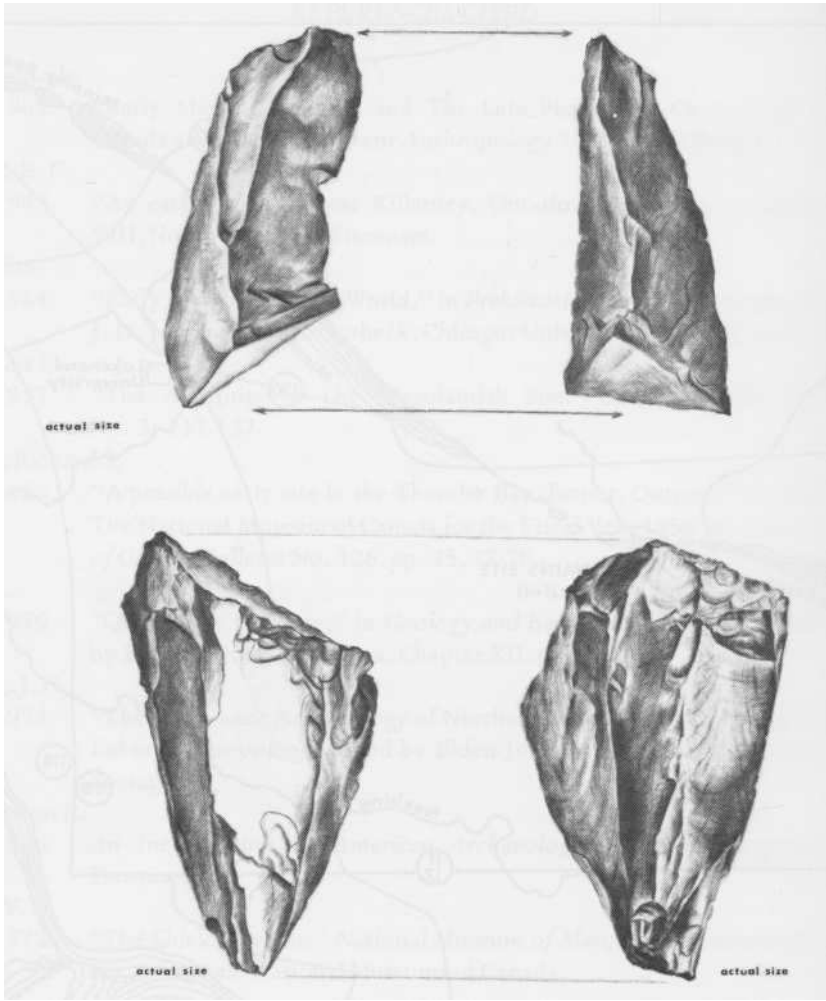

Figure 2

A. Large prismatic flake struck from a polyhedral core like that pictured in B below. The bulb of percussion is at the top on the face opposite these views. If this flake had been longer and thinner, without the expanded flat surface on the bottom, it could have been used without additional work as an efficient blade. However, the flat sheer plane, which the flint knapper could not predict in this rock formation, ruined the piece and caused it to be discarded.

B. A longitudinally oriented polyhedral core. The nicks at the top were caused by efforts to sheer off the top surface perpendicular to the long axis. This surface is the "striking platform" from which direct blows detach the long flakes like that in A above. Several North American archaeologists who have come across early cultures using these cores have compared them with certain phases of the Mousterian Industry of Eurasia—that employed by Neanderthal Man. Midcontinental cultures, especially around the Great Lakes would appear to be much too late for any kind of direct relationship to Mousterian culture which ended about 40,000 years ago.

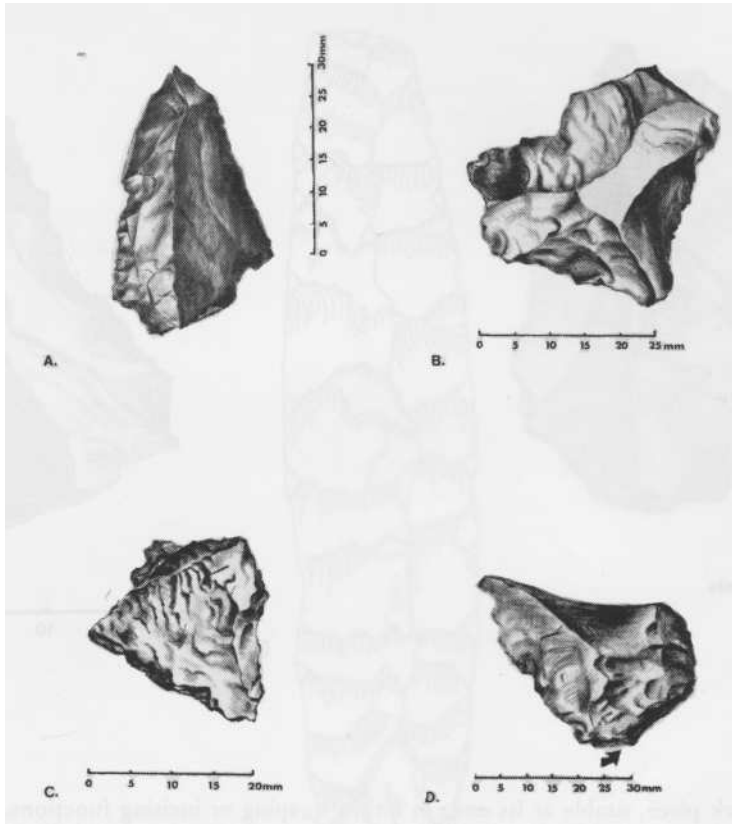

Figure 3

A. A rather thick, flat flake with steep retouching along the curved side and a long "edging spall" removed from the other. Perhaps it was intended to be one of the many multi-functional flake tools of early North American lithic industries. The retouching along the left side in this drawing creates a scraping edge, while the junction of chippings at the upper, sharp end produce what is known as a "burin" or incising tool. The latter may have been used in working bone, and is almost a hallmark of America's earliest lithic complexes.
B. A flat, irregular flake exhibits many signs of employment as a cutting tool around its edges.

C. This irregular chunk has steep retouching and an intentional point (broken off) along the upper right hand margin. It appears to be a fragment of an intended scraper, apparently with a little point, known as a "graver." The function of gravers is unknown, but they are too delicate for use as a bone working instrument. Some have speculated that they might have been used to incise softer materials like hide, or even human human skin in the common aboriginal act of tatooing.

D. A blade fragment exhibiting the proximal end of a long flake scar which remains from the production of a flake blade just before this one. Arrow points to core surface from which the blade was removed. Bulb of percussion is on the opposite face. All objects in this figure are unmodified on the face opposite the view. They are termed "unifacial" by archaeologists.

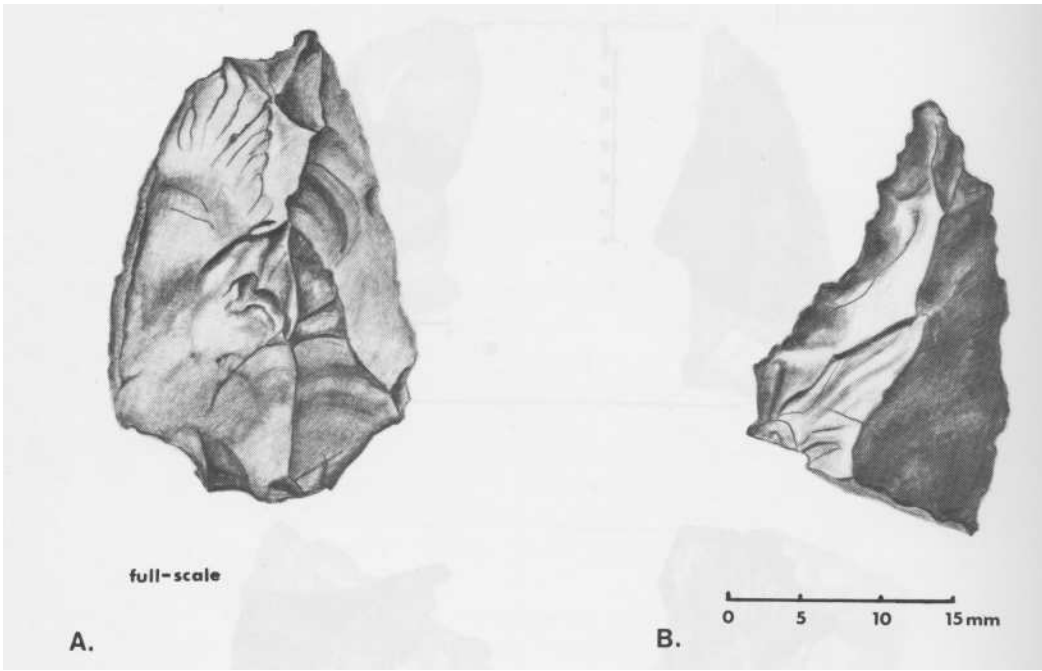

Figure 4

A. A large, thick piece, usable at its ends in either scraping or incising functions. The reverse face is unmodified.

B. This artifact fragment is also unifacial, and exhibits steep and very precise retouching along both sides. The sides may have been intended for scraping use, and the point for incising.

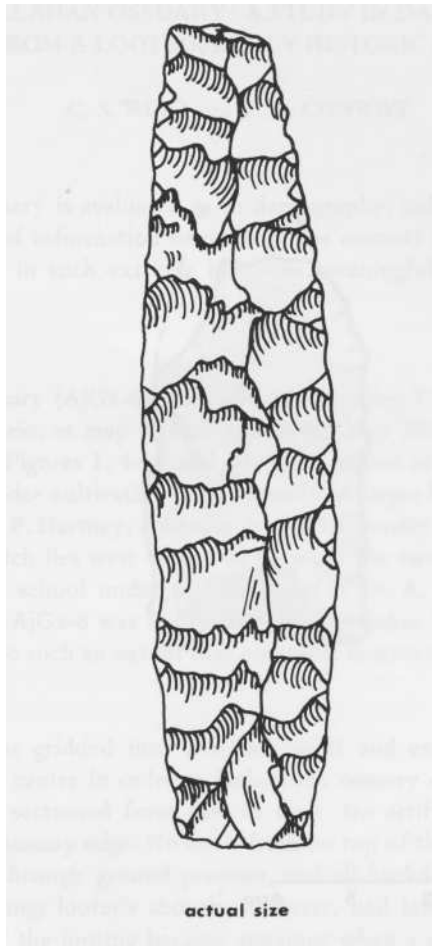

Figure 5

Lanceolate, bifacial projectile point from Island Lake in the Reservoir Lake area northwest of Duluth. Tiny triangles along edges represent beveled surface from which collateral flakes of spatulate shape were detached.

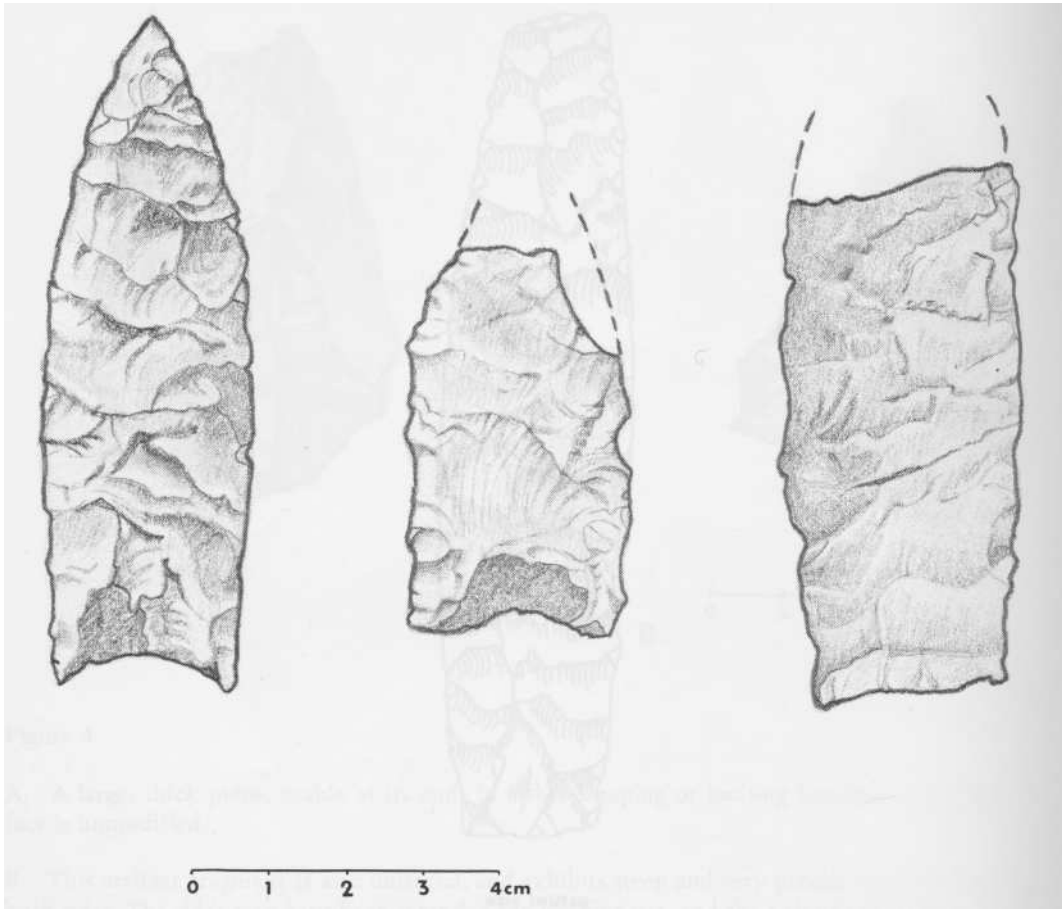

Figure 6

"Plainview" projectile points from the Brohm Site.
Redrawn from MacNeish 1952. Actual size.