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POINT PROFILES AS AN ARCHEOLOGICAL TOOL

LOUIS H. POWELL

The Science Museum, St. Paul

A number of years ago The Science Museum prepared a concave spherical map exhibit dealing with the coming of man to America. It was based on the hypothesis that fishing and hunting people moved down from the Arctic along the arc of glacial lakes and rivers from Great Bear and Great Slave to Lake Agassiz and thence east by way of the Great Lakes. From these ancient water ways man, we concluded, moved down the James to the Missouri and down those ancient spillways, the Minnesota, St. Croix, Chippewa and Illinois rivers to the Mississippi. Thus, by this interpretation, for thousands of years the ancient river routes to the northwest saw the passage of a succession of Indian cultures spreading south and east to the Mississippi Valley.

However axiomatic this hypothetical reconstruction of the first peopling of the Mississippi Valley by foraging people may seem to those of us in this area, the hypothesis does not have general acceptance among American anthropologists. As recently as December, 1954, a symposium on early man in the Great Lakes and Mississippi region at the Annual Meeting of the American Anthropological Association still heard much discussion of the peopling of the Mississippi Valley from the far west.

It seems that this alternate hypothesis for the peopling of the Mississippi Valley presents serious difficulties and may not be too well thought out. It derives, we feel, primarily from the priority assigned to peopling of the west by those glamorous but scattered nomadic elephant-hunting people who moved down the foothills of the Rockies. However, to disregard completely the ecologic "grain" of the country and bring early man across the plains from west to east seems a needless affront to our common sense.

Last fall brought dramatic confirmation of the long history of man in the Mississippi Valley with the announcement of the exploration of the deeply stratified Modoc Cave site by the Illinois State Museum.¹ This cave yielded the stratified refuse of foraging people in the Mississippi Valley who lived from 7,000 to 11,000 years ago. At last some true perspective for considering the place of the Mississippi Valley in the story of Early Man in America was achieved. We can now speculate that the far west with its scattered hunters was perhaps but a side show. The main attraction may well prove to be here in the great Mississippi drainage basin.

Of course, this did not come with total surprise, for we already were aware of the pertinent questions raised at Starved Rock.² Then, too, Wisconsin Old Copper had recently yielded

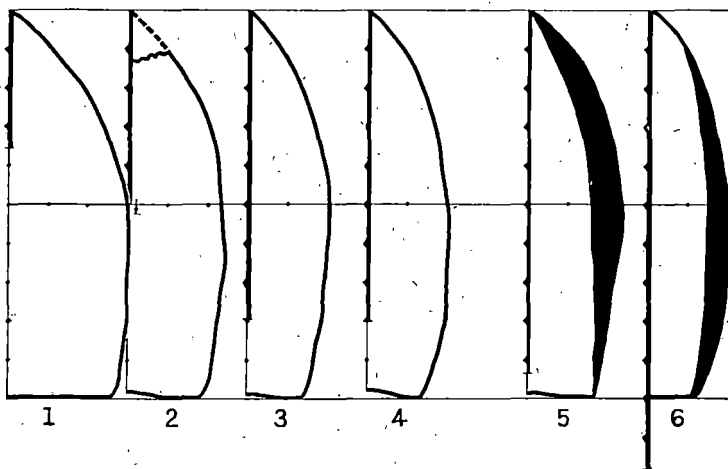
Carbon 14 dates of about 6,000 years ago.³ Before that we had our own Dr. Jenks prescient finds along the former periphery of Lake Agassiz.⁴ MacNeish had also found evidence of early man on the high beaches of Lake Supérieur in the Thunder Bay region of Ontario.⁵ The growing body of Carbon 14 data, suggesting that early man might well have known the great changes in drainage at the close of the Ice Age, added geological evidence to the body of information that might well be interpreted as supporting the museum's hypothetical reconstruction of the peopling of the Mississippi Valley.

However, it is one thing to devise a useful, working hypothesis, another to demonstrate its validity beyond question. The proof of the movements of people along the great arc of glacial lakes must inevitably rest on the demonstrations that can be wrung from the difficult study of point typologies—that evidence is likely to remain the chief source of information about early man in America.

I have elsewhere suggested the validity of point profiles as an archeological tool.⁶ I would like here to show how they work out in some preliminary studies focused on the hypothetical problem of the shorelines of Lake Agassiz as a home for early man. Certainly Dr. Jenks^{4b} was on that trail when he sought an explanation of bone harpoon users on the prairies of North Dakota and Minnesota.

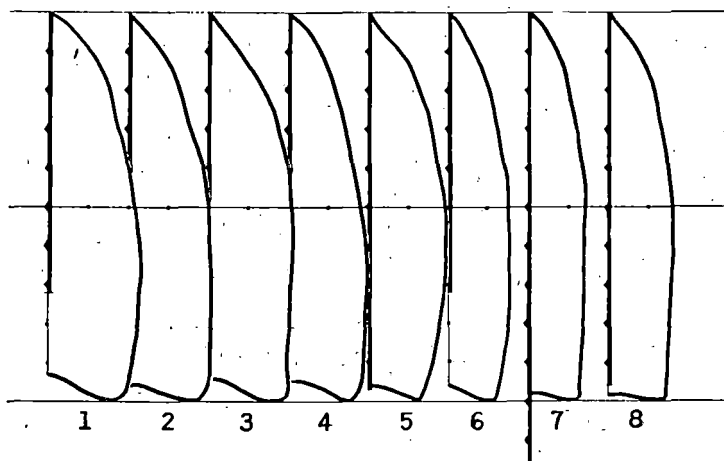
One of the first studies we made using the point profile technique⁵ was to review a few early man sites where there is no evidence of temporal or areal mixing.

Do the points from such sites display a uniformity of point profiles indicating a strong tendency to use a common pattern of points? The evidence here seems conclusive that they do.



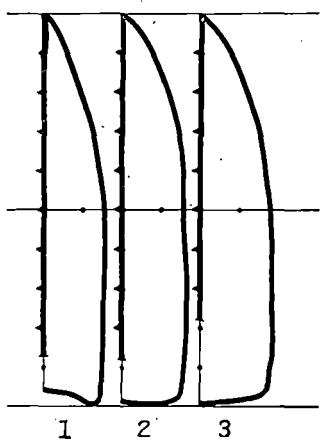
A-1 BROWNS VALLEY

MINNESOTA

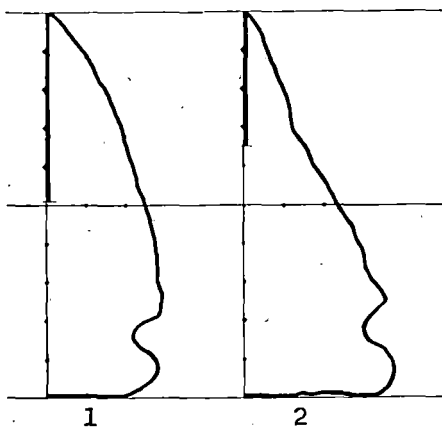


A-2 NACO MAMMOTH SITE

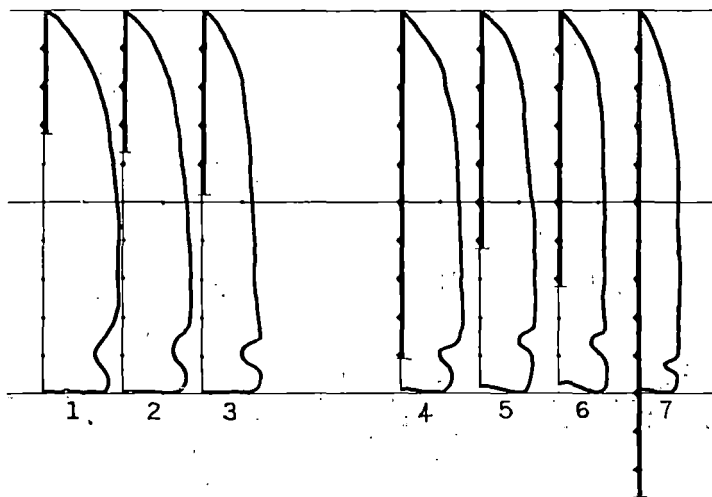
ARIZONA



B-1 BROHM SITE
ONTARIO

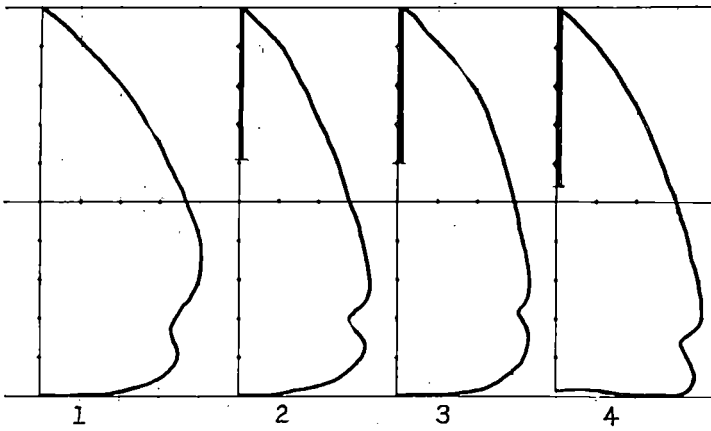


B-2 OCONTO SITE WISCONSIN



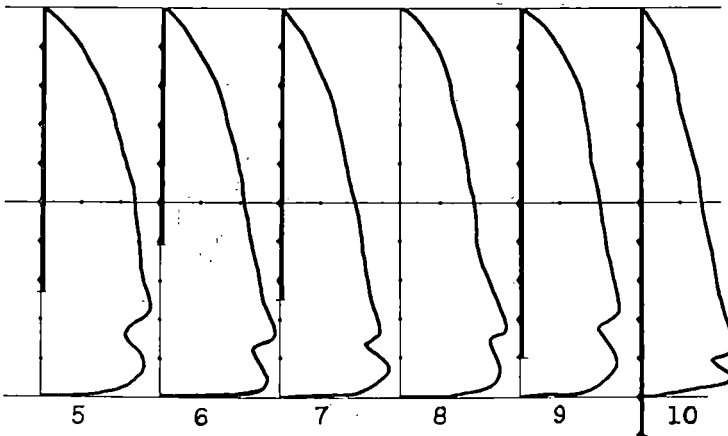
B-3 OSCEOLA SITE

DRAWN FROM B-A
WISCONSIN



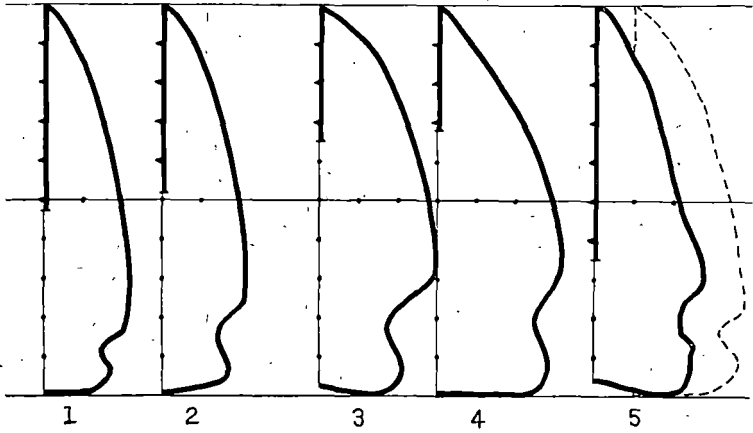
C-1 REIGH SITE

WISCONSIN



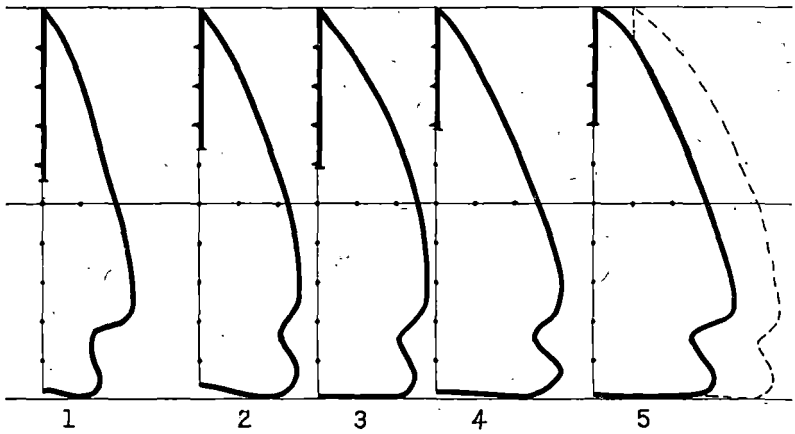
C-2 REIGH SITE

WISCONSIN



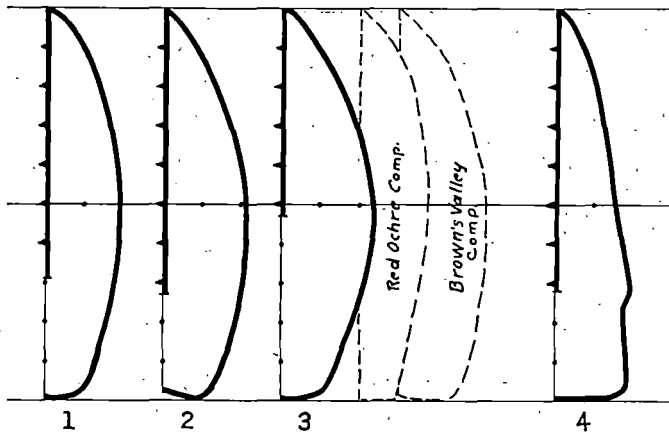
D-1 CROOKSTON OLD COPPER AREA

MINNESOTA



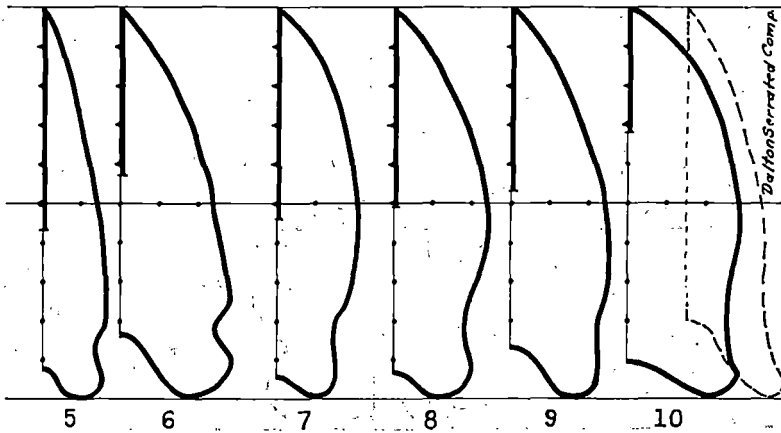
D-2 SAND RIVER DELTA AT FERTILE

MINNESOTA



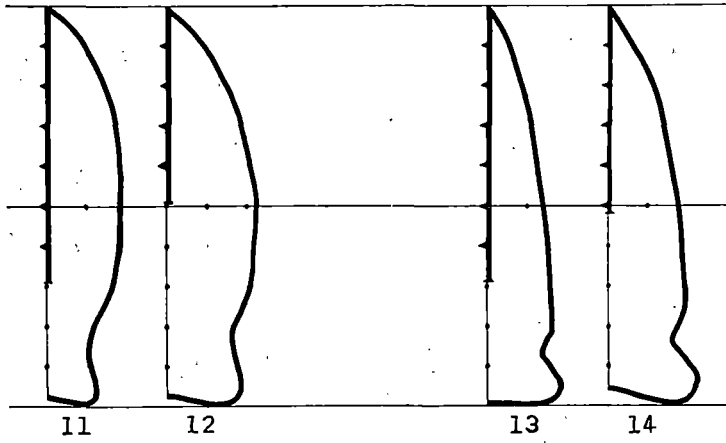
E-1 SOURIS ARCHAIC COMPLEX

NORTH DAKOTA



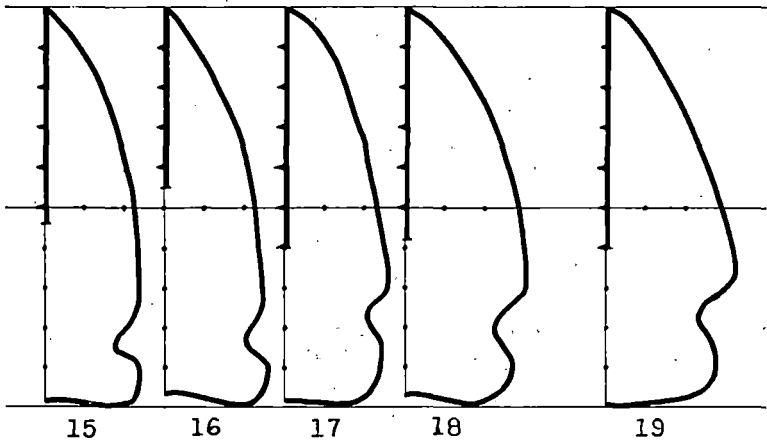
E-2 SOURIS ARCHAIC COMPLEX

NORTH DAKOTA



F-1 SOURIS ARCHAIC COMPLEX

NORTH DAKOTA



F-2 SOURIS ARCHAIC COMPLEX

NORTH DAKOTA

1. *Brown's Vally*, Fig. A-1. The six points found in this single important burial^{4a} at the exact spillway from Lake Agassiz clearly reflect a common shape pattern. Even the outer curves of the two knives closely imitate those of the projectile points. There is a wide variation in length, $3\frac{1}{2}$ to $11\frac{3}{4}$ centimeters—yet when the edge shapes are reduced to graph-like profiles based on tenths of the length of each point, the similarity in shape is clearly revealed. However, these may well have been the work of but one maker.
2. Fig. A-2. If you will bear with an illustration from outside the area under consideration, I feel that I can further strengthen the impression I am striving to give. The eight points illustrated here were found embedded in the Naco Arizona mammoth.⁷ The Naco points are a western fluted type. They vary from $5\frac{3}{4}$ to $11\frac{3}{4}$ centimeters in length. They probably were not the work of one maker, though they could have been. The similarities of edge profile are equally striking. They all have a common shape pattern.
3. Fig. B-1. If we turn to the three most perfect points from MacNeish's Thunder Bay site⁵ on the high beach lines of Lake Superior, we see again a similarity in point profiles and again a common shape pattern for this site.
4. Let's try our point profiles on the stone points associated with Old Copper in Wisconsin. The greatest number of points are from the Reigh site⁸ in Winnebago County, Figs. C-1, C-2. All of these points seem to have somewhat similar shapes, allowing for the necessary elongation of shape of the larger points. The limiting factor in design would seem to be attachment at the base to the stout shaft of a stabbing spear or javelin. This width would then be carried away in varying angles to the tip as a longer or shorter point was desired. In absolute shape two or at most three composite profiles would define the common pattern.
5. Fig. B-2. The Oconto points, Oconto County,⁹ seem to fit the Reigh patterns. They have been dated at as much as 6,000 years ago by Carbon 14.
6. Fig. B-3. When we come to the Osceola, Grant County, site¹⁰ the points are all again in a pattern common to the site even though they vary from a little over 3 to over $12\frac{1}{2}$ cm. in length. However, the point pattern of the Osceola stone points sharply diverges from that of the previous two Old Copper sites. All blades are narrow and elongated. These narrow blades are in a tradition that survived into Hopewellian times on the Mississippi

and may well indicate a much later Old Copper site than the Oconto and Reigh. Indeed, a re-examination of the site report suggests that this so-called "Old Copper" site is in reality a Woodland site with Hopewellian affinities.

As it is now apparent from Quimby's¹¹ recent summary in *American Antiquity* that Lake Agassiz was in existence during Old Copper times, the numerous finds of Old Copper along the ancient border spillway from that extinct lake to Lake Superior seem significant and a collection of old copper tools from the vicinity of Crookston received at the Museum from the late Dr. J. F. Norman seemed to offer a chance to test out the point profiles depicted on the previous charts. If the profiles are meaningful and if our hypothesis is correct, we should find broad based points similar to those from Reigh and Oconto in the Crookston area.

Last summer I accompanied Elden Johnson and Philip Taylor to the Crookston area where Dr. Norman's "Old Copper" had been found. The points illustrated by the profiles in Fig. D-1 had been found in fields from which some of the Old Copper had come. You will note that these almost all fall into the same broad based tradition as those from the Reigh and Oconto sites. They were all of brown chalcedony heavily patinated.

A short drive to the east at Fertile, Minnesota lies the area of the delta of the Sand River where it flowed into Lake Agassiz. Local collectors have concentrated on this dune area where, during the dry years, a series of blowouts revealed numerous points of brown chalcedony. The points from which the profiles in Fig. D-2 were constructed are from the blowouts and are from the collection of Mr. Guy Skeim of Crookston. Again we see the broad based tradition similar to those associated with Wisconsin Old Copper at Reigh and Oconto.

This man and his wife have made the collection of points from blowouts a notable hobby. For several years his work took him to the North Dakota region of the Souris Valley. There, during the dry years, he and his wife systematically worked over the blowouts of the years of drouth. His collection of many scores of beautifully fashioned brown chalcedony points is superb and contains many surprises. We photographed the larger and more unusual points and reduced them to point profiles.

Here again are innumerable small and large points in the Old Copper lithic tradition, Fig. F-2. One large point Mr. Skeim claims was embedded in the skull of a wolf when found—a suggestion that these were in truth points used on stabbing spears.

However, there were other surprises. Three points are clearly in the Brown's Valley-Red Ochre tradition of Archaic points, Fig. E-1. The curious eared points similar to those found in archaic sites in Missouri were present in great variety, Fig. E-2.

Here then, we have suggestive evidence of a great Archaic culture complex in the plains of North Dakota. It occupies the approximate area of the Lake Souris stage of Lake Agassiz and might well be designated the Souris Archaic Complex.

There seems to be a well developed extension of this complex down the James River to the Missouri if we include the Archaic points derived from similar blowouts in the collection of Mr. Jensen of Brown's Valley, the finder of Brown's Valley Man and the associated artifacts. I have also seen some of the broad based points similar to those from Old Copper sites derived from the Blue Earth region along the Minnesota.

I think perhaps you may understand why we at The Science Museum are anxious to turn the spotlight on Early Man along the shorelines of Lake Agassiz and the other postglacial lakes that once fed the Mississippi. It seems high time that we stop attempting to derive the early settlement of the Mississippi Valley from the far west and carefully investigate the normal routes by water to the west and north. There, we feel, may be found the true answer to the coming of man to the Great Lakes and valley of the Mississippi River.

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