THE HEAMAN SITE: A PRELIMINARY REPORT ON A PALEO-INDIAN SITE IN MIDDLESEX COUNTY, ONTARIO

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ABSTRACT

The Heaman site is one of a number of Paleo-Indian sites clustered along the northeastern edge of the Thedford Marsh in Middlesex County, Ontario. The surface of the site has yielded a small collection of fluted, Agate Basin and Scottsbluff type points which forms the basis of this paper. Other Paleo-Indian artifacts recovered in the vicinity of the marsh are also recorded. The high frequency of Paleo-Indian sites is explained by their orientation to a favourable, post-Algonquin microenvironment.

INTRODUCTION

During the summers of 1973 and 1974 a number of Paleo-Indian sites were located near a former lagoon of glacial Lake Algonquin in southwestern Ontario. The identifiable point types from the sites include fluted, Agate Basin and Scottsbluff. There are also points which resemble Plainview and Hell Gap.

Although most of the sites appear to be small on the basis of the surface survey, the discovery of such a variety of Paleo-Indian sites in a small area of southwestern Ontario is quite intriguing. There is also the exciting probability that some of the sites lie buried under deltaic deposits on the bed of the former lagoon.

The lagoon area is known locally as the Thedford Marsh, named after the lowlands near the town of Thedford about five miles southeast of Lake Huron. Whereas the majority of the Paleo-Indian sites are situated on a shoreline plain overlooking the former lagoon bed, the Heaman site is found on the bed itself. Specifically the site is located on land presently owned by Fred Heaman on the northeastern quarter of Lot 22, Con. VIII, McGillivray Township, Middlesex County, Ontario.

The surface manifestation of the site appears to be restricted to a low sandy rise about 20 meters in diameter. At an elevation of 595 feet above sea level, the rise is possibly a remnant of one of the fossil beaches which are observable in the area. About 100 meters east of the site lies an Algonquin shoreline which was later reoccupied by Lake Nipissing waters. Beyond the ridge, continuing eastward, lies a shoreline plain of Berrien sandy loam. Stretching for about five miles to the west of the site is the low, mucky terrain associated with the former lagoon bed. The site is flanked on the north by the Moray Creek which cuts the shoreline ridge at right angles and then flows westward across the lake bed to the Ausable River.

DESCRIPTION OF THE ARTIFACTS

The collection from the Heaman site consists of 7 projectile points, 2 utilized flakes, 1 knife, and 1 anvil-abrading stone. Whereas seriation is impractical due to the surface provenance and the size of the sample, it is possible to infer cultural affiliations by comparing the workmanship and attributes of the artifacts to others from more thoroughly investigated sites. The artifacts probably do not represent a reliable cross-section of the cultural material on the site but they indicate where future research should

be directed as well as providing information on the distribution, activities, settlement patterns and technology of early man.

The artifacts were clustered for study according to their similarity of function and form. The following descriptions are cross-referenced to the lettered specimens in the Plates. For simplicity, all pertinent metrical data have been abstracted and placed in tabular form following the text. Likewise, the material of manufacture has been summarized and keyed to the descriptions in Table IV.

Lanceolate projectile points: Artifacts Al to AS (Plate I) are characterized by a fine-quality flaking which ranges from oblique transverse to collateral. The flake scars are quite shallow and generally are rectangular in shape. Heavy grinding occurs on the straight or convex base and continues up the lateral edges of the point almost to the midsection. The points exhibit a biconvex cross-section which is slightly emphasized on one face. They are manufactured from a variety of chert materials, one of which has its source just a few miles southwest of the site.

Stemmed, slight-shouldered artifacts: The basal fragment shown in Plate I, A6, has slight-shoulders and a broad, straight-shanked stem. The artifact exhibits transverse parallel flaking which results in a biconvex cross-section. Grinding does not occur on the base but can be found on the lateral edges just above the shoulders. Artifact A7 (Plate I) is a one-shouldered basal fragment with light grinding on the lateral and basal edges of the stem. Like the other points it has transverse parallel flaking and fine secondary retouch.

Utilized flakes: Two utilized flakes have been found on the surface of the site. Artifact A9 (Plate II) terminates in a hinge-out fracture. It exhibits a ground striking platform, marginal retouch and evidence of wear along the expanding edges. Flake A10 (Plate II) is a decortification flake with slight marginal retouch along the two edges which converge to a definite beak or spur. The term beak is taken from Irwin and Wormington (1970:30) who suggest that beaks may have been perforators or groovers or may have served for ripping.

Pecked and Ground Stone: The brick-shaped, stone artifact illustrated in Plate II (A1 1) is most interesting. On each of two opposing faces there are two separate areas marked by striae which generally converge on a central point where they are obliterated by a concentration of pecking. Additional pecking occurs at random on the faces and occasionally on the sides. It is probable that the artifact was an anvil and abrading tool used during the process of point manufacture. The striae were probably ground out during the repeated rubbing of the laterial edges of the points against the stone during the smoothing of the stems.

Fluted point: A basal fragment of a fluted point (see Plate II, A8) was found about 150 meters northeast of the site on the shoreline ridge of Lake Algonquin. The point exhibits broad, multiple fluting and basal finishing flakes on each face. Lateral grinding occurs on the edges.

DISCUSSION

A. The Artifacts

On typological grounds it is possible to isolate two Paleo-Indian traditions occurring on the Heaman site: fluted point and Plano. The former is represented by the fluted point base (Plate II, A8) and a few flakes of the same material, while the substantial majority of the artifacts can be ascribed to the Agate Basin and Cody complexes of the Plano

tradition. The following portion of this study is an attempt to establish the age and cultural affiliations of the artifacts, beginning with those attributable to the Plano tradition.

Points Al to AS (Plate I) bear resemblance to Agate Basin points. The age and affinity of these and similar artifacts in Ontario are presently unknown but can be inferred through comparison to well established chronologies for similar artifacts elsewhere. One sequence which lends itself for comparative purposes is that found on the Hell Gap site near Guernsey, Wyoming. The stratigraphic sequence at this site was Plainview, Folsom, Midland, Agate Basin, Hell Gap, Alberta, Cody and Frederick (Irwin and Wormington, 1970:25). The Agate Basin level can be placed around 8000 B.C., while the Cody level bears a mean date of 6640 B.C. (Willey, 1966:47).

In the province of Ontario and the surrounding regions, sites yielding Agate Basin-type points have not been reported but the point type does occur on a few sites and locations in addition to Heaman in southern Ontario. One such site, called Crawford II by the author, is located on the Algonquin shoreline about 4-1/2 miles southwest of Heaman (see Figure I, C). Other locations yielding Agate Basin-type points are coded as B, D, E and Gin Figure I and their artifacts bear the respective letters in Plate IV. Additional sites and locations are known to the author from Huron, Lambton, Oxford and Brant counties.

The slight-shouldered artifacts A6 and A7 bear striking resemblances to Scottsbluff points and Cody knives respectively. It has already been noted that similar artifacts belonging to the Cody complex are dated around 6600 B.C. on the Plains. In Ontario, points reminiscent of Scottsbluff have been recovered from the George Lake I site (Greenman, 1966:541) and also from the surface of the Crawford II site (see point C6, Plate III). Other points of the same variety have been found by the author on a Thames River terrace in Delaware Township and also near swampy terrain along the Maumee shorelines in Caradoc and Lobo Townships, Middlesex County.

The finding of the fluted point base (A8, Plate II) on the Algonquin ridge at the Heaman site did not come as a surprise considering the number of fluted points and fluted point sites occurring in the area. The Parkhill and McLeod Paleo-Indian sites are found just 2 miles and 3-1/2 miles respectively south of Heaman on the Algonquin beach. A third site is located about 5-1/2 miles to the southwest. The fluted point fragments I, J and K (Plate V) were recovered in fields adjoining the Parkhill site and probably belong to the Parkhill Complex. Fluted point M (Plate V(was found on a Lake Warren shoreline north of the Moray Creek about 6 miles east of Heaman. A channel flake and several scrapers were picked up on the same location. The resharpened fluted point (L, Plate V) was found at an elevation of 595 feet just below the Algonquin ridge about 2 miles southwest of the Heaman site. Additional fluted points, sites and locations are reported in Deller (1976).

The anvil and abrading tool (Plate II, A11) has counterparts on Paleo-Indian sites elsewhere. For example, a combination hammerstone-anvil with a small V-shaped groove on each face was found beneath bison vertebrae on the Olsen-Chubbuck site in Colorado (Wheat, 1972:135). Abrading tools are reported from the MacHaffie site in Montana, Lime Creek site in Nebraska and Browns Valley site in Minnesota (Wormington, 1957). Several stone abraders were found on the Holcombe sites in Michigan (Fitting, Devisscher and Wahla, 1966:89, 95, 106) and three cobbles with shallow, ground grooves and one anvil having elongated cuts are reported from the Debert site in Nova Scotia (MacDonald, 1968:105). One of the abraders from the latter

site has two grooves intersecting at a 45 degree angle which is reminiscent of the radiating grooves on the Heaman anvil.

B. *The Location*

It is interesting to examine the location of the Heaman site relative to the lake stages of the Huron basin (see Figure 2). It has already been noted that the site is situated below the shoreline ridge of Lake Algonquin. Considering the elevation of the site at 595 feet, the first impression one might get is that it was situated on the active shoreline of Lake Algoma. This seems plausible in terms of the provenance of the artifacts but it is difficult to reconciliate the comparatively recent age of the lake with the apparent antiquity of the cultural material. If the vintage of the artifacts in indeed ca. 7000 B.C. to 6000 B.C., then the site would pre-date both Lakes Algoma and Nipissing and furthermore, at an elevation of 595 feet it must have been innundated by Nipissing waters which reached an elevation of 605 feet. This being the case, one would expect the site to be covered by deltaic sediments deposited at the mouth of the Moray Creek in Lake Nipissing. It is possible that the bulldozer which was used to clear the land of scrub growth in 1971 uncovered some of the artifacts.

It should also be noted that some of the artifacts and flakes are polished smooth as if they had been tumbled by wave action (see Plate I, A2; Plate IV, D2, and G). Such is especially the case of numerous flakes which can be found along the very crest of the Algonquin shoreline ridge south of Heaman. The latter flakes may indeed mark the upper reaches of the Lake Nipissing waters as well as indicating that they were left there before Nipissing times.

The number and variety of Paleo-Indian sites and locations occurring within a few miles of the Heaman site dramatically indicate that generations of early hunters favoured the area. Regarding the makers of the fluted points it has been suggested that the Paleo-Indians were attracted to the area by a favourable microenvironment which existed in the vicinity of the former lagoon of Lake Algonquin (Deller, n.d.).

The Late Paleo-Indians may likewise have been attracted to the area by a desirable microenvironment, the identification of which is made difficult by a lack of pertinent data from the area. However, based on studies conducted further afield, the following environmental model is submitted for the Heaman site: Assuming the site was occupied between 7000 and 6000 B.C. or thereabouts, a period which falls within the time range of related sites on the central North American plains (Willey, 1966; Haynes, 1967), the floral assemblage in existence in the southwestern part of Ontario may have been characteristic of a pine forest with a small deciduous element (Cleland, 1966). Such a pine forest environment generally would have been impoverished in terms of supporting human populations since the resinoid trees would offer scant food for herbivorous animal species. Indeed, "the gloomy recesses of the pine woods, monotonous and scant in nutritional plants, were not often frequented by animal and bird life in appreciable numbers" (Hinsdale, 1932:7). However, the former lagoon area probably supported a somewhat different biota than the surrounding pine forest region. Throughout most of its known history the lowlands associated with the bed of the former lagoon have been occupied by drowned lands and marshes and similar conditions may have prevailed at the time of the Paleo-Indian occupation. It can be noted that the temporal placement of the site between 7000 and 6000 B.C. would put the occupation shortly after the Stanley-Chippewa low (see Figure 2) which is dated around 7500 B.C. by Hough (1963:103) and 8000 B.C. by Flint (1971:567). The water level associated with this lake in the Huron

basin is estimated at being 390 feet lower than the present surface of Lake Huron at 580 feet (Hough, 1963:103). This appreciably lower lake level would have resulted in the lowering of the water table of the surrounding terrain, including the basin of the former lagoon. Thus if the marshlands existed at all in the basin they may have been somewhat smaller than they were in more recent times.

The former lagoon area with its marshlands and related biota may have provided a richer environmental niche: a veritable island of abundance within an otherwise more sterile and unfavourable environment in terms of supporting human populations. The Paleo-hunters camping on the borderline edge at the Heaman site would have been able to exploit both environments—seeking desirable fauna and flora within the pine forest, but probably of greater importance, seeking the animal and plant resources of the neighbouring marshlands. Moose or woodland caribou may have been the primary game animals but it is also plausible that smaller animals such as deer, waterfowl, fish, muskrats or turtles, etc., may have supplemented the diet of the early hunters. It is hoped and anticipated that further investigations at the Heaman Paleo-Indian site will shed more light on this and other matters, thus illuminating another segment of Ontario's early prehistory.

ACKNOWLEDGEMENTS

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TABLE I
METRIC DATA ON PROJECTILE POINTS FROM THE HEAMAN SITE
(Measurements in mm)

Plate & Specimen	Type or Comments	Total Length	Maximum Thickness	Blade Length	Blade Width	Stem Length	Stem Width	Material*
I, Al	Agate Basin	88	11	53	26	35	24	f (ii)
I, A2	Agate Basin	**	8	**	23	35	22	a
I, A3	Agate Basin	**	7	**	**	29	24	b
I, A4	Agate Basin	**	8	**	28	**	27	c
I, A5	**	**		**	**	**	24	a
I, A6	Scotts-bluff	**	8	**	30	**	25	k
I,A7	Cody Knife	**	8	**	26	**	24	g

FLUTED POINT

Plate & Specimen	Type or Comments	Total Length	Maximum Width	Basal Width	Width of Fluting	Length of Fluting	Maximum Thickness	Material*
II, A8		**	30	23	18, 17	**		**h**

* See Table IV.
** Indeterminable.

TABLE 2
METRIC DATA ON PROJECTILE POINTS FROM THE CRAWFORD II SITE
(Measurements in mm)

Plate & Specimen	Type or Comments	Total Length	Maximum Thickness	Blade Length	Blade Width	Stem Length	Stem Width	Material*
III, C 1	Plano	**	9	**	29	26	27	b
III, C2	Plano	**	10	**	29	29	27	b
III, C3	Plano	**	9	**	**	39	31	j
III, C4	Preform	**	11		35	—	—	b
III, C5	Plano	**	10	**	31	24	26	b
III, C6	Scotts-bluff	**	7	**	30	16	23	e
III, C7	HI-Lo	**	8	**	**	21	22	b
III, C8	**	**	6	**	**	**	**	f(i)

* See TableIV.
** Indetermible.

TABLE 3
METRIC DATA ON POINTS FROM VICINITY OF HEAMAN SITE
(Measurements in mm)

Plate & Specimen	Type or Comments	Total Length	Maximum Thickness	Blade Length	Blade Width	Stem Length	Stem Width	Material*
IV, B2	Agate Basin	**	7	25	24	**	24	a
IV, D	Agate Basin	50	8	22	20	28	20	
IV, E	Agate Basin	55	7	28	24	26		b
IV, F	**	**	5	**	22	**	**	b
IV, G	**	**	5	**	21	**	**	a
IV, H	**	84	7	48	21	36	22	1

FLUTED POINTS

Plate & Specimen	Type or Comments	Total Length	Maximum Width	Basal Width	Width of Fluting	Length of Fluting	Maximum Thickness	Material
V, I	Parkhill Complex	**	24	**	12 **	**	7	d
V, J	Parkhill Complex	**	21	18	11,11	45,25	7	a
V, K	Parkhill Complex	**	26	**	13,nil	**	5	d
V, L	Resharp-ened	36	21	20	16,nil	18,nil	7	f(i)
V, M	Parkhill Complex	28	17	14	8,9	25,11	6	b

* See Table IV.
**Indeterminable.

TABLE 4
DESCRIPTION OF LITHIC MATERIALS

Code Letter (for use in Tables)	Description	Comments
a	A soft chert of light, chocolate-brown colour	Unknown source.
b	A chert tending to mauvy-grey in colour with occasional bands or small circular inclusions of light grey.	Port Franks chert. Source a few miles south-west of Heaman.
c	A crisp, glossy chert of olive colour with mottles of light, bluish grey.	Unknown source.
d	A fine-grained chert, occasionally banded or flecked and tending in colour from white to yellowish white to orange.	Amabel chert.
e	A dull, white chert.	Unknown source.
f(i)	A chert of light brown colour.	
(ii)	A chalky chert of light brown colour.	Unknown source.
g	A glossy, black chert.	Unknown source.
h	A mottled brown, steel-grey and light bluish-grey chert.	Unknown source. (Possibly Onondaga)
	A grey-brown chert exhibiting cavaties left by fossils.	Possibly Bayport.
j	A mottled light-brown, light grey and light bluish-grey chert.	Unknown source.
k	A shaly material of light black colour	Unknown source.
1	A fine-grained, dark-grey argillite.	Unknown source.

FIGURE 1

PALEO SITES AND LOCATIONS RELATIVE TO ELEVATION AND DRAINAGE, McGILLIVRAY TOWNSHIP

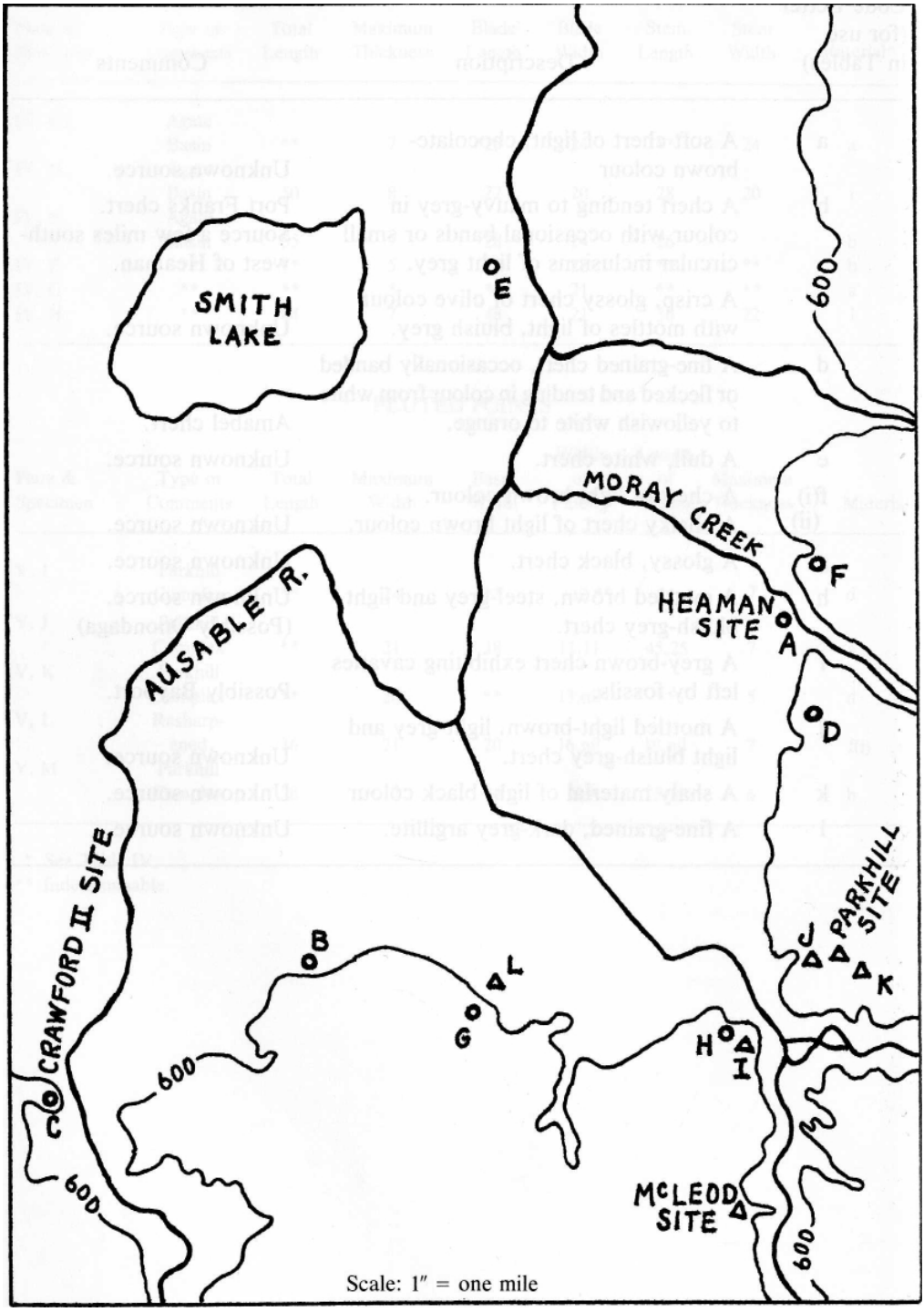
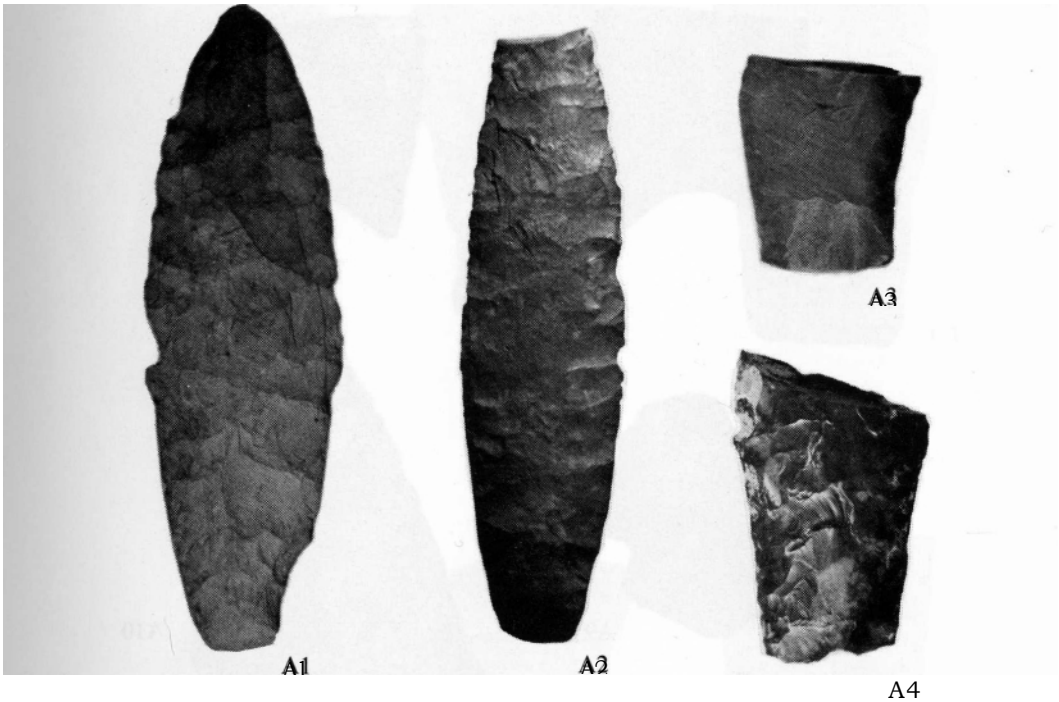


PLATE I
ARTIFACTS FROM THE HEAMAN SITE



AS A6 A7

PLATE II
ARTIFACTS FROM THE HEAMAN SITE

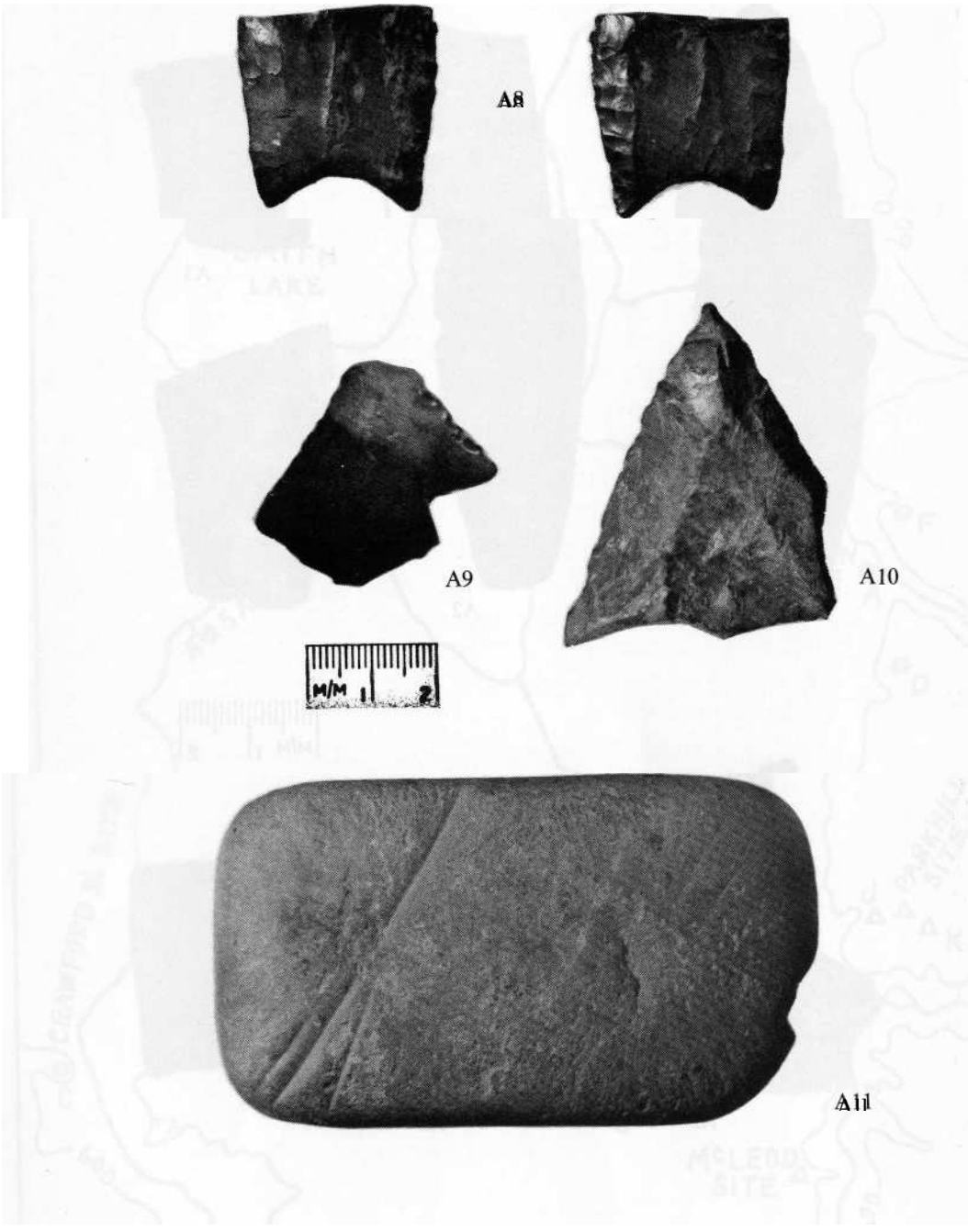


PLATE III
ARTIFACTS FROM THE CRAWFORD II SITE

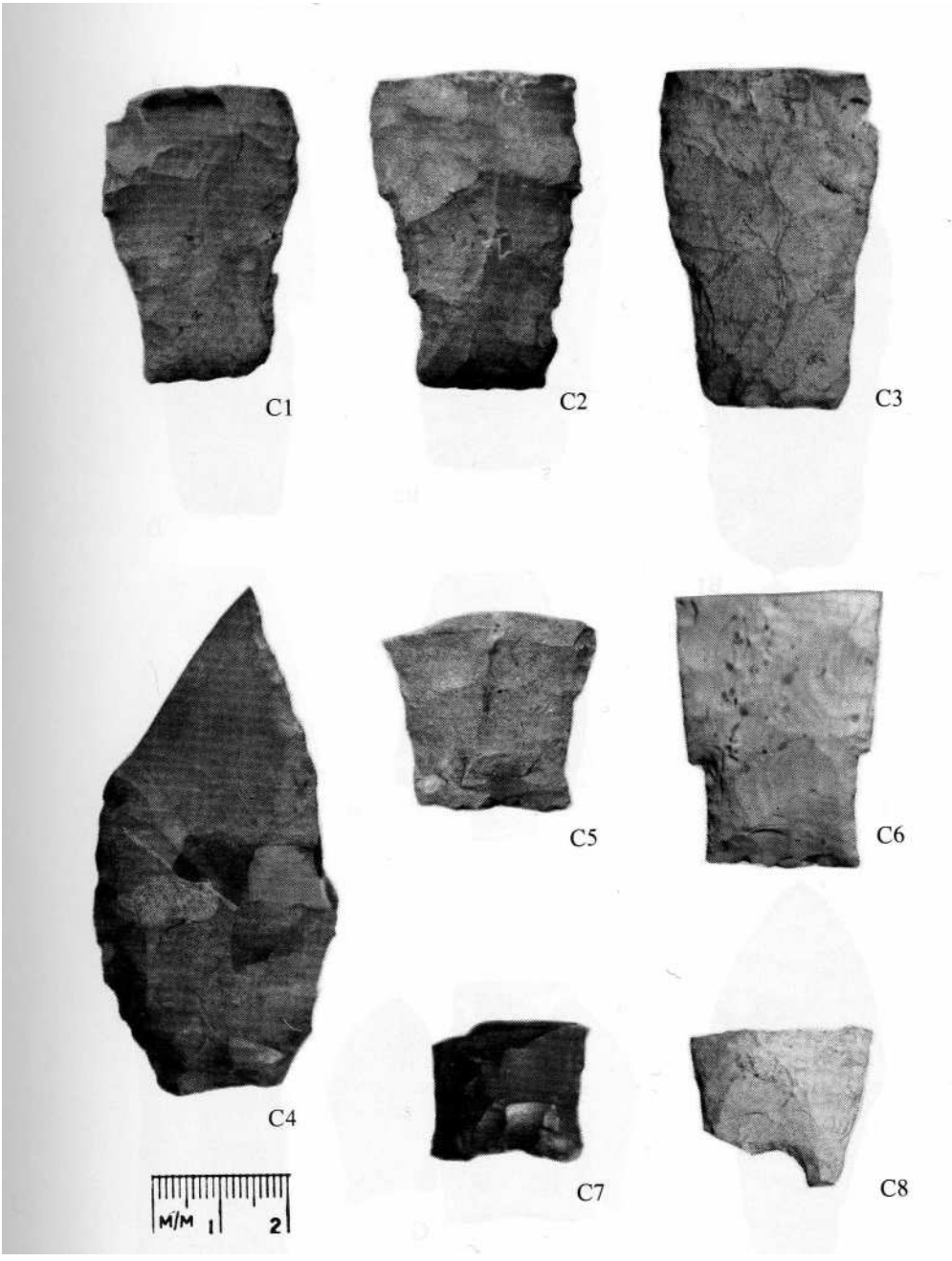
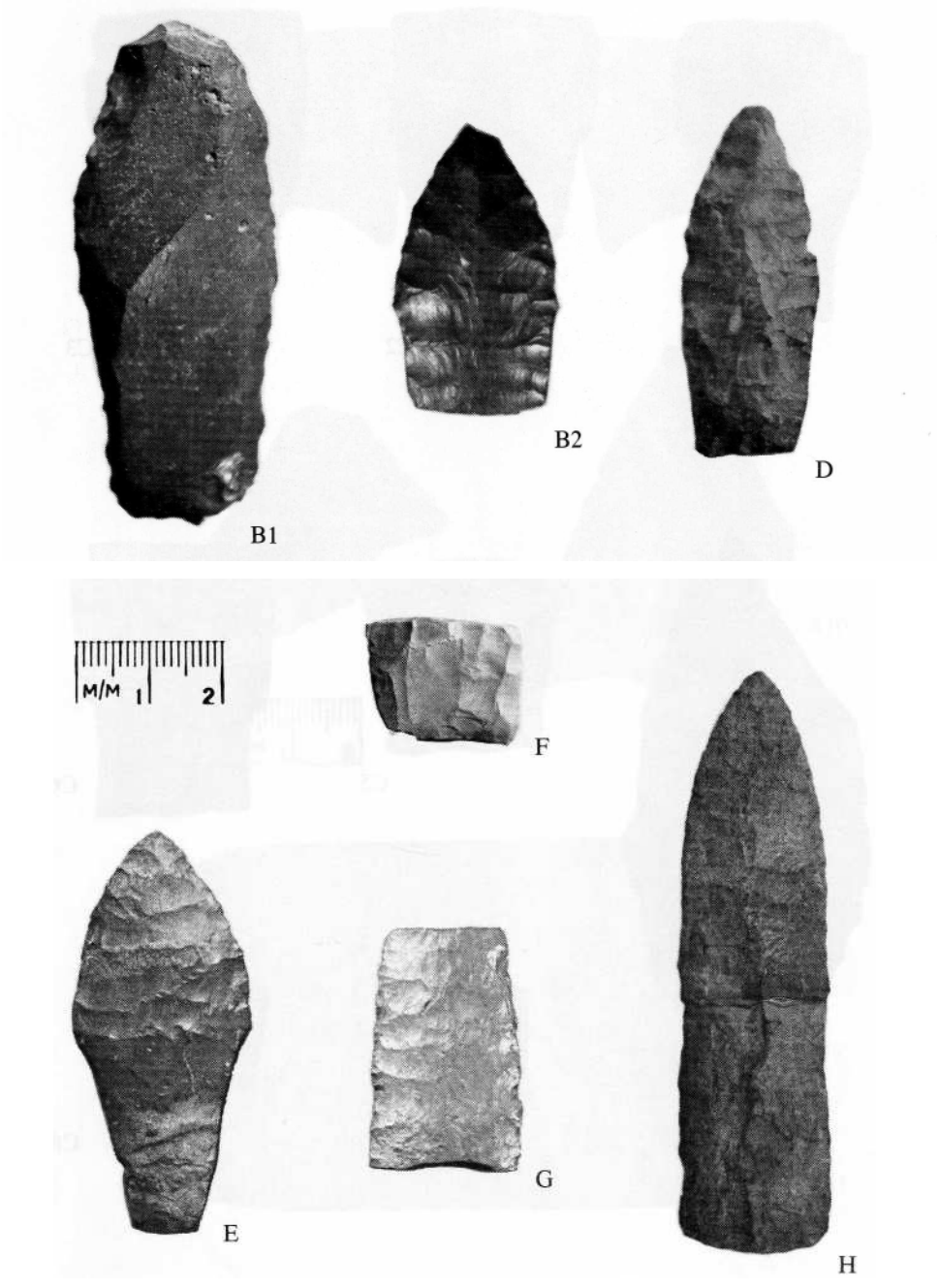


PLATE IV

PALEO-INDIAN ARTIFACTS FROM THE VICINITY OF THE HEAMAN SITE



Refer to Figure 1 for locations

PLATE V
FLUTED POINTS (and fragments thereof)
FOUND NEAR THE HEAMAN SITE

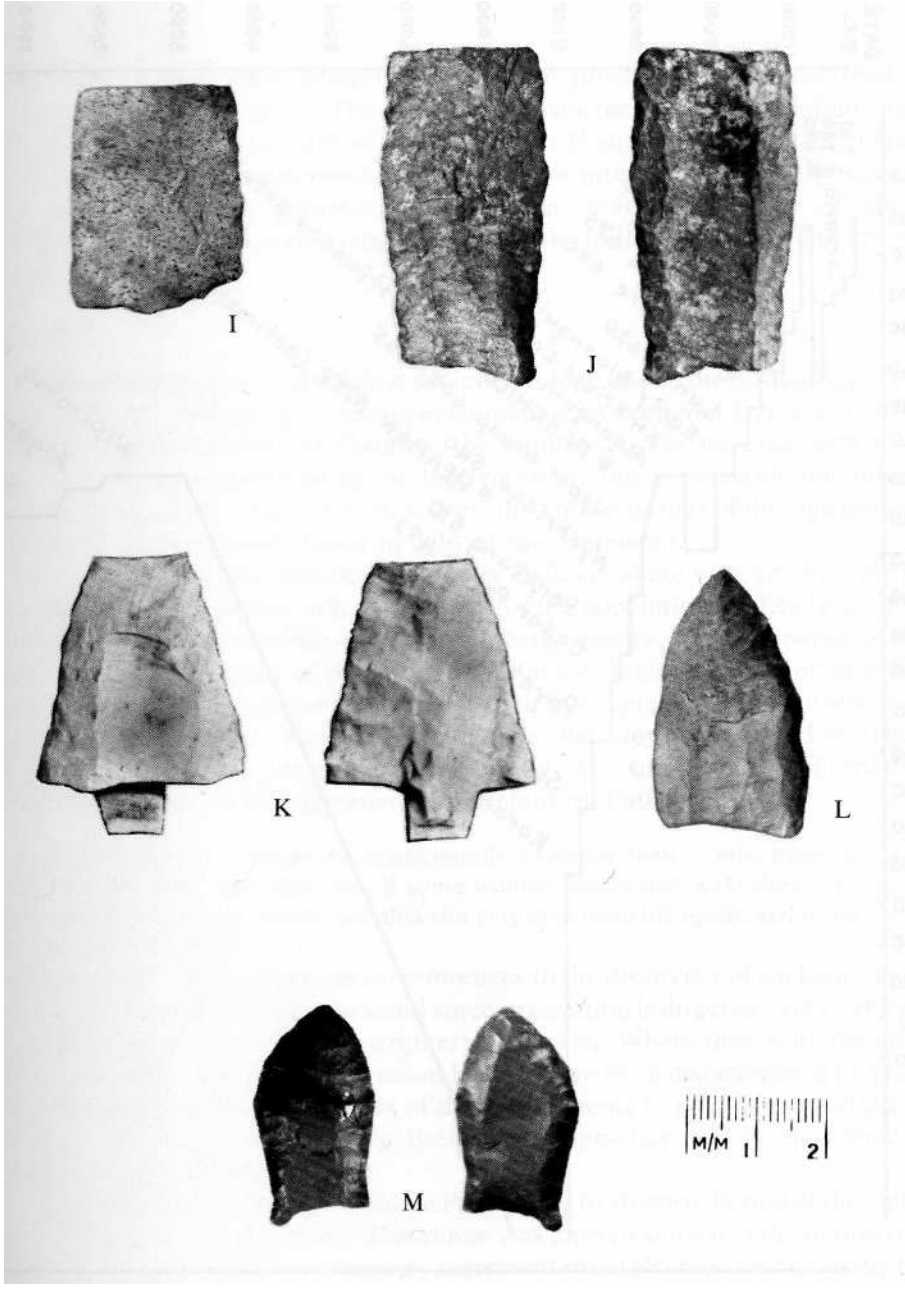


FIGURE 2
ESTIMATED PALEO OCCUPATIONS RELATIVE TO LAKE STAGES IN THE HURON BASIN