

## THE COATES CREEK SITE: A POSSIBLE LATE PALEO-INDIAN- EARLY ARCHAIC SITE IN SIMCOE COUNTY, ONTARIO

**Peter L. Storck**

### ABSTRACT

The Coates Creek site is a small hunting station situated on an abandoned strandline tentatively identified with Lake Ardtrea, the first of the so-called "upper group" of post-Algonquin beaches. One side-notched projectile point appears to have a combination of Paleo-Indian and Archaic or later attributes. This, together with two lanceolate projectile point bases and three flake graters, suggests that the site may have been occupied by peoples with both late Paleo-Indian and Early Archaic cultural affiliations.

### INTRODUCTION

The Coates Creek site (BcHa-44) was discovered in 1975 during the course of survey work for Paleo-Indian sites along the former strandline of glacial Lake Algonquin between Creemore and Thornbury (Storck 1975a, b). The site is located approximately five miles (eight kilometers) northeast of Creemore in Sunnidale Township, Simcoe County (Fig. 1). The exact location is on file at the Royal Ontario Museum. The creek after which the site was named cuts through the Algonquin beach approximately six-tenths of a mile (ca. 1000 meters) south of the site.

The site was initially discovered when two artifacts, a flake graver and an unworked flake, were found in the wall of an excavation that had been made by earth-moving equipment on the edge of a gravel quarry. Part of the site was destroyed by quarrying activities prior to its discovery and it is not known whether the part which was excavated was the central area or only the periphery of the occupation (Fig. 2). Two or three months after the completion of our work whatever might have remained of the site was destroyed by quarrying activities.

### *Geology*

The site is situated at an elevation of approximately 775 feet (ca. 236 meters) above sea level on the fourth of five terraces above the former lake bed of glacial Lake Algonquin and on the south side of a former peninsula that jutted out into that lake (Fig. 3). The fifth and highest terrace is at an elevation of approximately 784 feet a.s.l. (ca. 239 meters) which, in this area, is within the elevation range of the top of the Algonquin bluff (Burwasser 1974). The terrace on which the site is located is tentatively identified as the Ardtrea strand-line, the first of the so-called "upper group" of post-Algonquin beaches, because of its position immediately below the Algonquin beach and its elevation with respect to the latter. The fourth terrace is approximately ten feet below what is presumed to be the Algonquin strand, a difference in elevation that is identical to that reported by Deane (1950:73) between the Algonquin and Ardtrea strandlines at roughly the same latitude in the southern part of the Lake Simcoe area.

The Ardtrea strandline has not been adequately dated. Peterson (1965) and Tovell and Deane (1966) reported a date of  $11,700 \pm 250$  B.P. for a grizzly bear skull (*Ursus arctos-horribilis*) found in gravel deposits associated with the Ardtrea strandline near Lake

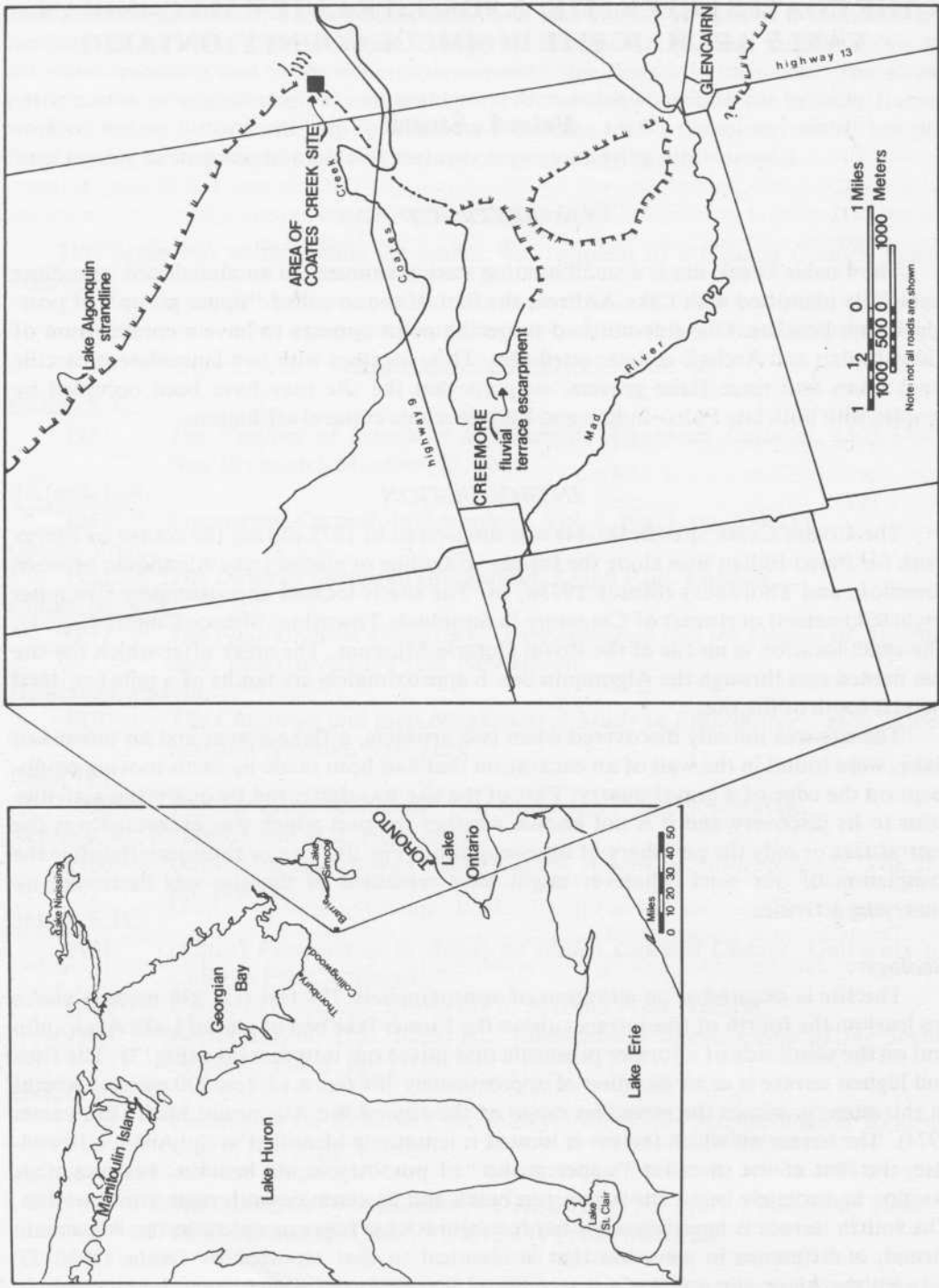


Fig. 1. Outline map of southern Ontario showing location of Coates Creek site.

Simcoe. However, recent work by Karrow et al (1975) indicates that Lake Algonquin probably drained sometime shortly after 10,400 years B.P. which, if correct, would make the 11,700 year date for the Ardtrea strandline too old. Since Lake Ardtrea formed after

the draining of Lake Algonquin, it should be younger than 10,400 years.

#### *Excavation Method*

Test excavations were conducted over a period of approximately three weeks with a crew of from two to five persons (Fig. 4). A total of 31 contiguous test squares, isolated squares, and 3 baulks of varying sizes were excavated in the area immediately adjacent to the quarry. This exposed an area of approximately 1,200 square feet. Eight additional five-foot test squares were excavated elsewhere at widely scattered locations on terrace 4 to determine whether any other sites or occupation areas were present. A single five-foot test square was also excavated on the highest terrace (terrace 5). Although one or two flakes were found in most of these squares, no other concentrations of flakes or artifacts comparable to those uncovered in the main excavation area adjacent to the quarry were discovered.



Fig. 2. View of the main excavation area looking toward the northwest. The hummocky area below the large tree near the centre of the photograph is the topsoil that was removed prior to the discovery of the site by the quarry operators from the area immediately west (to the left in the photo) of the archaeological excavations. This probably destroyed part of the site as flakes were found in the wall of one of the cuts and on the surface of the gravel exposed by the removal of the soil. The surface of terrace 4 on which the site is located can be seen extending to the base of the slope (terrace 5) in the middle right of the photograph. Photo by Lorne Fromer.

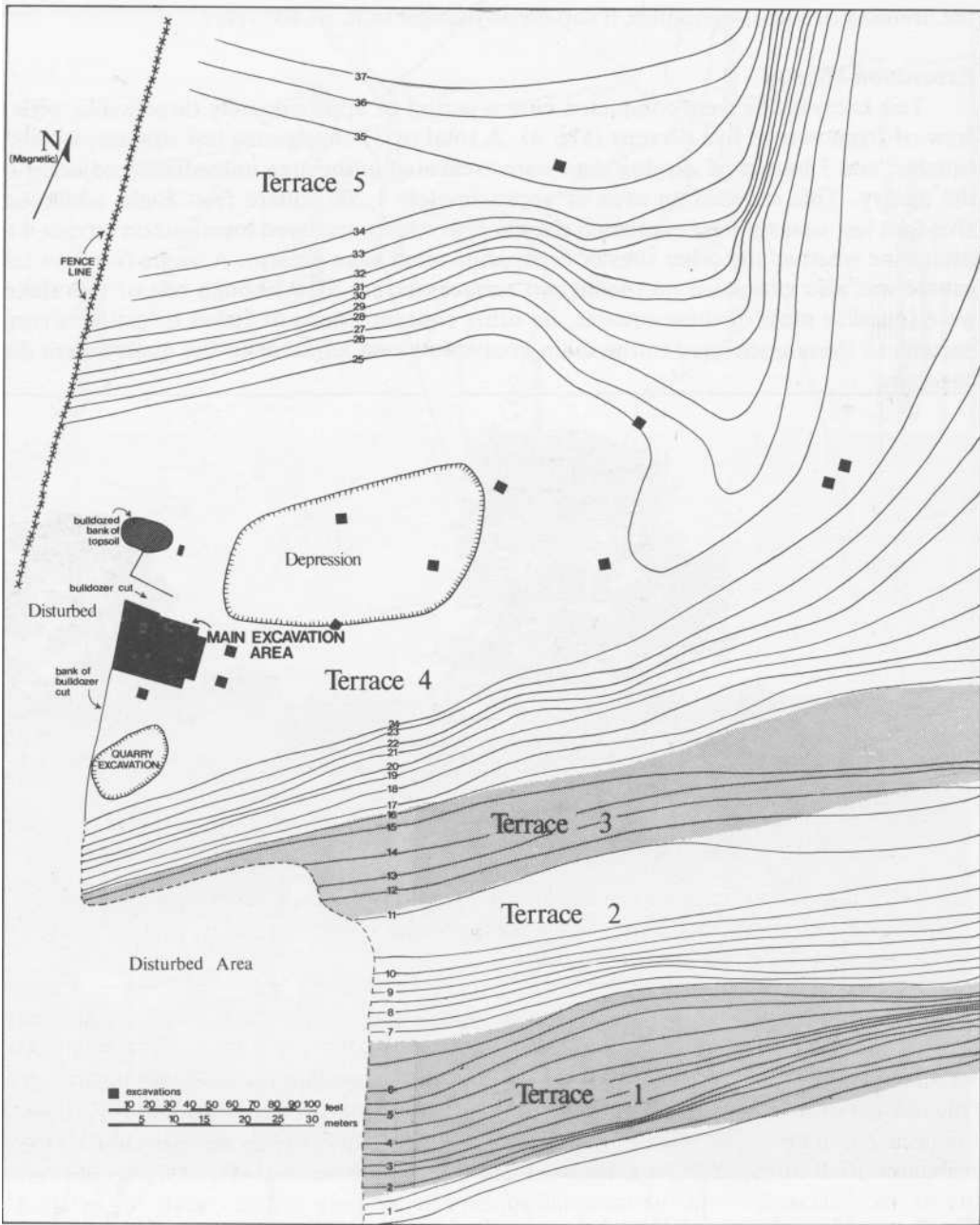


Fig. 3. Contour map of Coates Creek site. Former lake terraces 1 and 2 mapped at a contour interval of one-half foot; terraces 3, 4, and 5 mapped at an interval of one foot.

Since the site had been ploughed, the vertical location of each artifact was not recorded. The horizontal distribution, however, was recorded in some detail. This was done by subdividing the squares into smaller sub-units, and bagging the material from each sub-unit separately. Five-foot squares were sub-divided into 4 two and one-half foot square sub-



Fig. 4. View of the main excavation area looking toward the southeast. The deep cuts in the foreground and in the upper right were made by the quarry operators to determine the gravel content of the terrace at this location. The edge of terrace 4 is just beyond the quarry cut in the upper right. The lower terraces, 1, 2 and 3, cannot be seen. The relatively flat, low-lying ground in the distance is the former bed of glacial Lake Algonquin. Photo by Lorne Fromer.

units. Ten-foot squares were sub-divided into 25 two foot square sub-units. These sub-units were designated alphabetically beginning in the northwest corner of the square and were excavated separately down to the bottom of the plough zone. The plough zone was excavated with shovels and the soil was routinely screened through one-quarter inch mesh rocker-type screens. After the plough zone was removed, each square was carefully troweled in an attempt to find features.

#### *DESCRIPTION OF THE ARTIFACTS*

The artifacts and various classes of debitage that were obtained from the excavations are listed in Table 1.

##### *Raw Material*

With only one exception, the artifacts are made of a highly weathered chert which is dull white, creamy white, or light tan in colour with varying amounts of reddish-brown, pink, or yellow mottling or, more rarely, solid reddish-brown. The latter is often only the

TABLE 1  
ARTIFACTS AND DEBITAGE FROM  
ALL AREAS OF EXCAVATION

Artifact Total	92	4.4%
Debitage Total	1992	95.5%
Specimen Total	2084	99.9%
<b>Artifacts</b>		
	No.	%
side-notched projectile point	1	1.0
lanceolate projectile points (bases)	2	2.1
flake gravers	3	3.2
bifacially-worked knife	1	1.0
incomplete, bifacially-worked preforms	6	6.5
ovoid bifaces	2	2.1
fragment from a unifacial scraper	1	1.0
spheroidal core nucleus	1	1.0
core fragments	17	18.4
worked and/or utilized flakes <sup>1</sup>	58	63.0
	92	99.3%
<b>Debitage</b>		
unworked flakes - complete	648	32.5
proximal	371	18.6
mid-section and distal	820	41.1
bifacial retouch flakes <sup>2</sup>	67	3.3
angular chert fragments	86	4.3
	1992	99.8

1 - includes 5 bifacial retouch flakes

2 - includes 5 worked and/or utilized flakes

colour of the cortex, the interior of the chert being the lighter colours previously mentioned. Most of the chert has a dull surface appearance but some flakes appear slightly glossy. One artifact, a bifacially-worked knife (Fig. 10), is made of dark grey chert with light tan mottling. No flakes of this material were found. Two quartz flakes were recovered but none of the artifacts are of this material.

Unfortunately, the bedrock source (s) or secondary sources of origin (such as glacial till, stream deposits, or colluvium) of the two types of chert are unknown.

#### *Side-Notched Projectile Point* (Fig. 5; Table 2)

The tip of one shoulder and one corner of the base on the same side are broken but otherwise this point is complete (Fig. 5). The measurements are given in Table 2. Both the transverse and longitudinal sections are symmetrically bi-convex. The primary flake scars are shallow, rectangular in shape, and generally uniform in size. Basal and lateral edge grinding is quite pronounced, the lateral grinding extending roughly to the area of greatest width. The single complete side-notch is U-shaped and oriented obliquely to the long axis of the point at an angle of approximately 58°. Although this may not be clear in



Fig. 5. Side-notched projectile point; left, obverse face; right, reverse face; catalogue number: 975.245.5.

the photograph, the lateral margin of the projectile point extends 2 mm below the base of the complete notch before it merges with the base at an angle of approximately  $140^\circ$ . Since the notch is located slightly above the junction of the side and the base, the point is classified as side-notched rather than corner-notched.

The point is unusual in that it appears to have both Paleo-Indian and Archaic or Woodland attributes. The notches are either Archaic or Woodland attributes. However, the shape of the blade, with the maximum width occurring nearer the tip than the base, is an attribute frequently found on certain early Plano (Late Paleo-Indian) point types such as *Agate Basin* (Negro 1959; Wormington 1964; Wormington and Forbis 1965) and *Hell Gap* (Agogino 1961; Frison 1974). The thinness of the point and the parallel, col-lateral flake scars are also suggestive of the more regular or carefully controlled type of flaking found on Paleo-Indian as compared with Archaic and most Woodland points. Although basal grinding may occur on certain Archaic and Woodland point types, the combination of lateral and basal grinding is a widespread Paleo-Indian attribute. The even outline of the blade, the pattern of flaking and the lack of noticeable differences in patination strongly suggest that the point was not resharpened or notched after it was first made and that the various attributes were combined at the same time rather than added at different times by different people.

#### *Lanceolate Projectile Points* (Figure 6; Table 3)

Two bases of what are presumed to have been lanceolate projectile points were recovered. The extensive marginal retouch and the lateral and basal grinding on the specimen on the right in Fig. 6 indicate that both artifacts were broken after they had been corn-

TABLE 2  
 MEASUREMENTS OF  
 SIDE-NOTCHED PROJECTILE POINT  
 (IN MILLIMETERS)

length: .....	45.0
maximum width: .....	19.5
thickness: .....	5.5
length of lateral grinding above notches: .....	17.0; 15.5
basal grinding: .....	present
length of notches: .....	3.5; broken
width of notches : .....	3.0;1.5

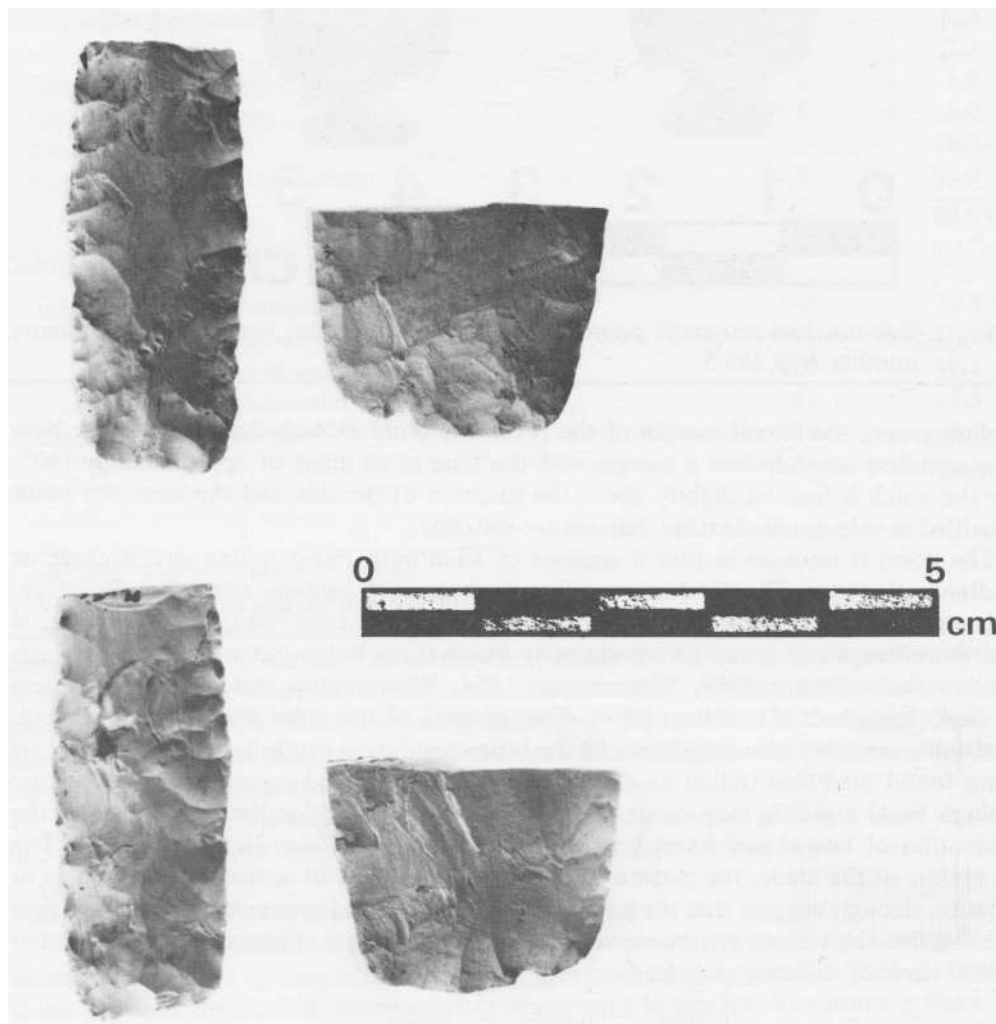


Fig. 6. Lanceolate projectile points; upper, obverse face; lower, reverse face; catalogue number: left, 975.245.4; right, 975.245.3.



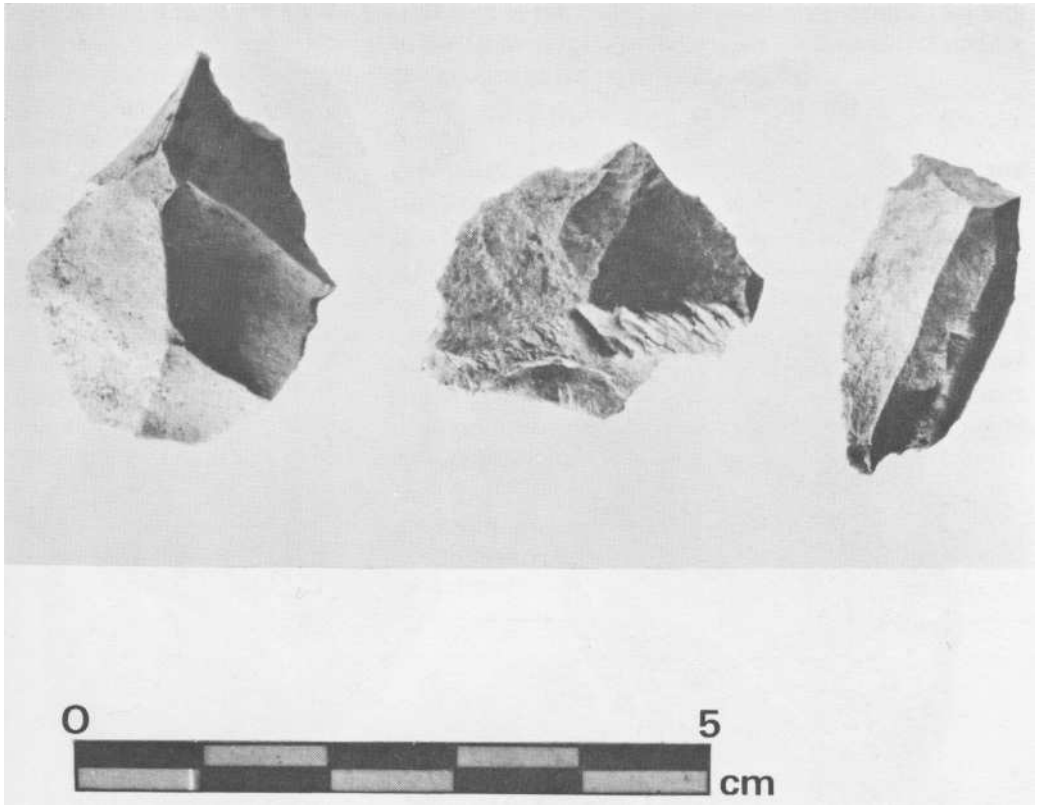


Fig. 7. Flake gravers; catalogue numbers, left to right: 975.245.2, 1, 58.

TABLE 3  
METRICAL ATTRIBUTES OF ARTIFACTS  
(IN MILLIMETERS)

	length	width	thickness	cross-section
lanceolate projectile points				
975.245.4 (Fig. 6, left)	—	16.0	6.5	lenticular
975.245.3 (Fig. 6, right)	—	26.0	7.5	lenticular
bifacially-worked knife				
975.245.6 (Fig. 8)	74.0	36.5	13.5	—
ovoid bifaces				
975.245.9 (Fig. 10, left)	55.0	45.0	14.5	—
975.245.7 (Fig. 10, right)	51.0	36.0	17.0	—
spheroidal core nucleus (Fig. 11)	41.5	—	26.0	—

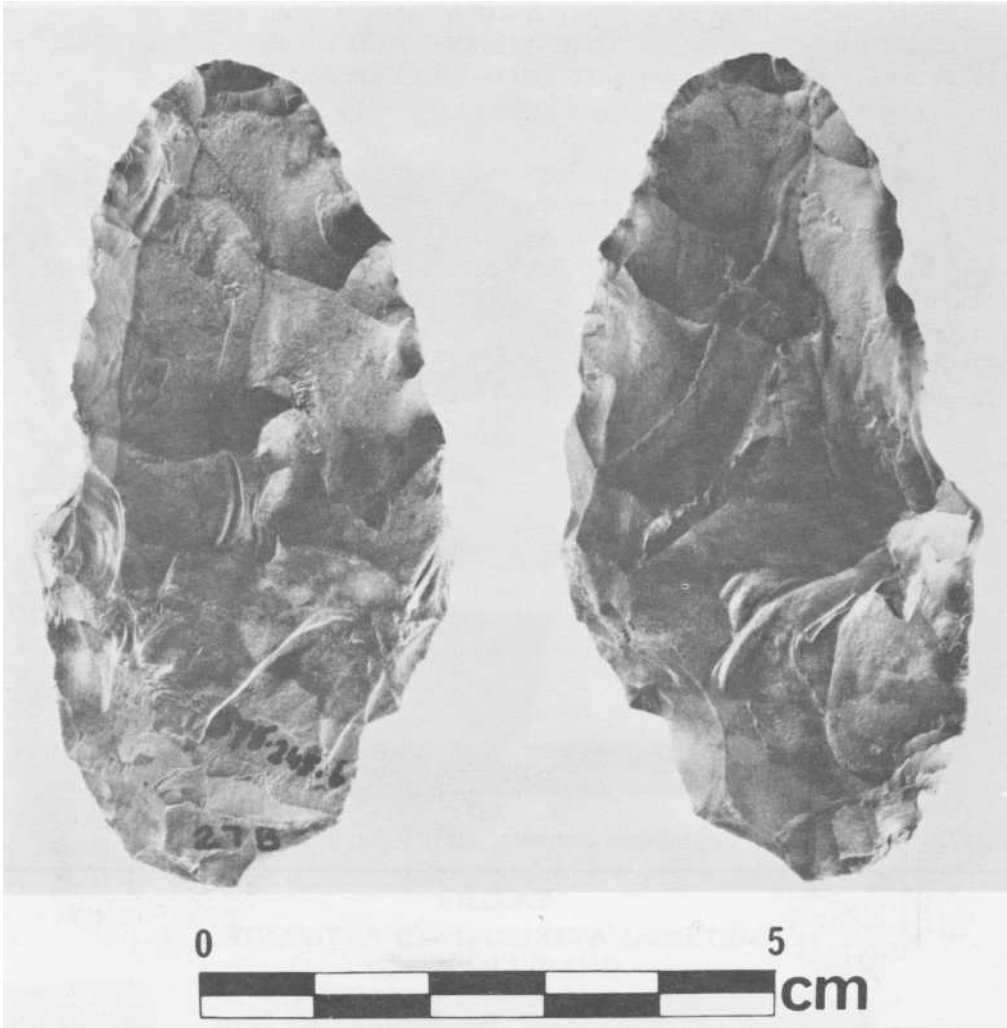


Fig. 8. Bifacially worked knife; left, obverse face; right, reverse face; catalogue number: 975.245.6.

pleted; the breakage probably occurring while they were hafted.

The specimen on the left (Fig. 6) has a straight base with rounded corners and slightly convex but parallel sides. The primary flake scars are shallow and irregularly-shaped and have been largely obliterated by continuous marginal retouch that produced shallow, rectangular and expanding flake scars of roughly equal size. The sides and base have not been ground.

The specimen on the right (Fig. 6) has shallow, irregularly-shaped primary flake scars and discontinuous marginal retouch. The base is slightly convex with rounded corners. Both the sides and the base have been ground.

#### *Flake Gravers (Fig. 7)*

Three flake gravers were recovered, one with two graver tips or spurs (Fig. 7, left) and the other two with single spurs. The spurs on all three artifacts were formed by uni-

facial flaking directed from the ventral face of the flake. The spurs range from 2 to 4 mm in length and exhibit signs of wear in the form of minute flake scars on the ventral surface at the apex of the spur and/ or dulled, rounded edges on the sides.

*Bifacially- Worked Knife* (Fig. 8; Table 3)

This artifact is made of dark grey chert with light tan mottling. Two thick areas are present in the middle part of the artifact on the obverse face. It may not have been technically possible to thin these areas further because the adjacent edges are quite thick despite having been heavily battered. The artifact does not appear to have been trimmed by secondary retouch along the edges. The small flake scars which are present at irregular intervals around the circumference of the artifact are probably the result of the primary flaking that initially shaped the artifact. While this might suggest that the artifact had not been completed, no flakes of this material were found in the excavations. The artifact is identified as a knife because of its bi-pointed shape and the fact that it probably could have been used for cutting without further trimming.

*Incomplete Bifacially- Worked Preforms* (Fig. 9)

Six artifacts are regarded as incomplete preforms because they all exhibit bifacial flaking to some extent but lack a well-defined shape and secondary retouch or evidence of

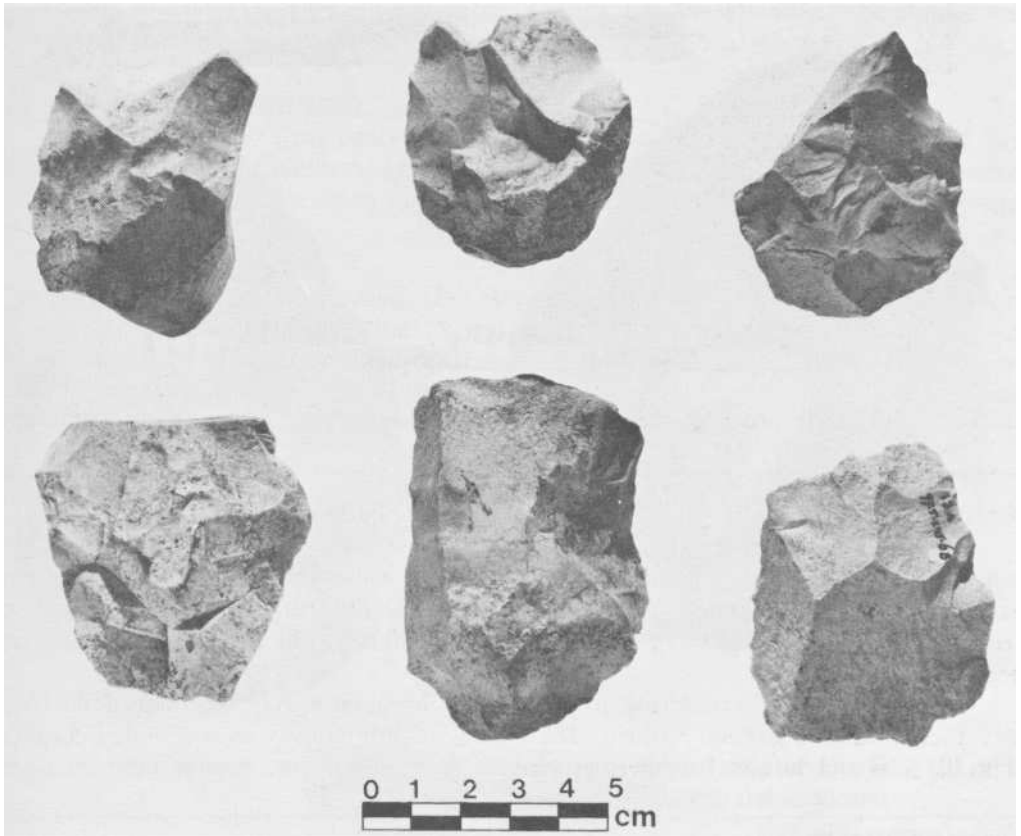


Fig. 9. Incomplete bifacially worked preforms; catalogue numbers, left to right: upper row, 975.245.11, 12, 8; lower row, 975.245.80, 74, 68.

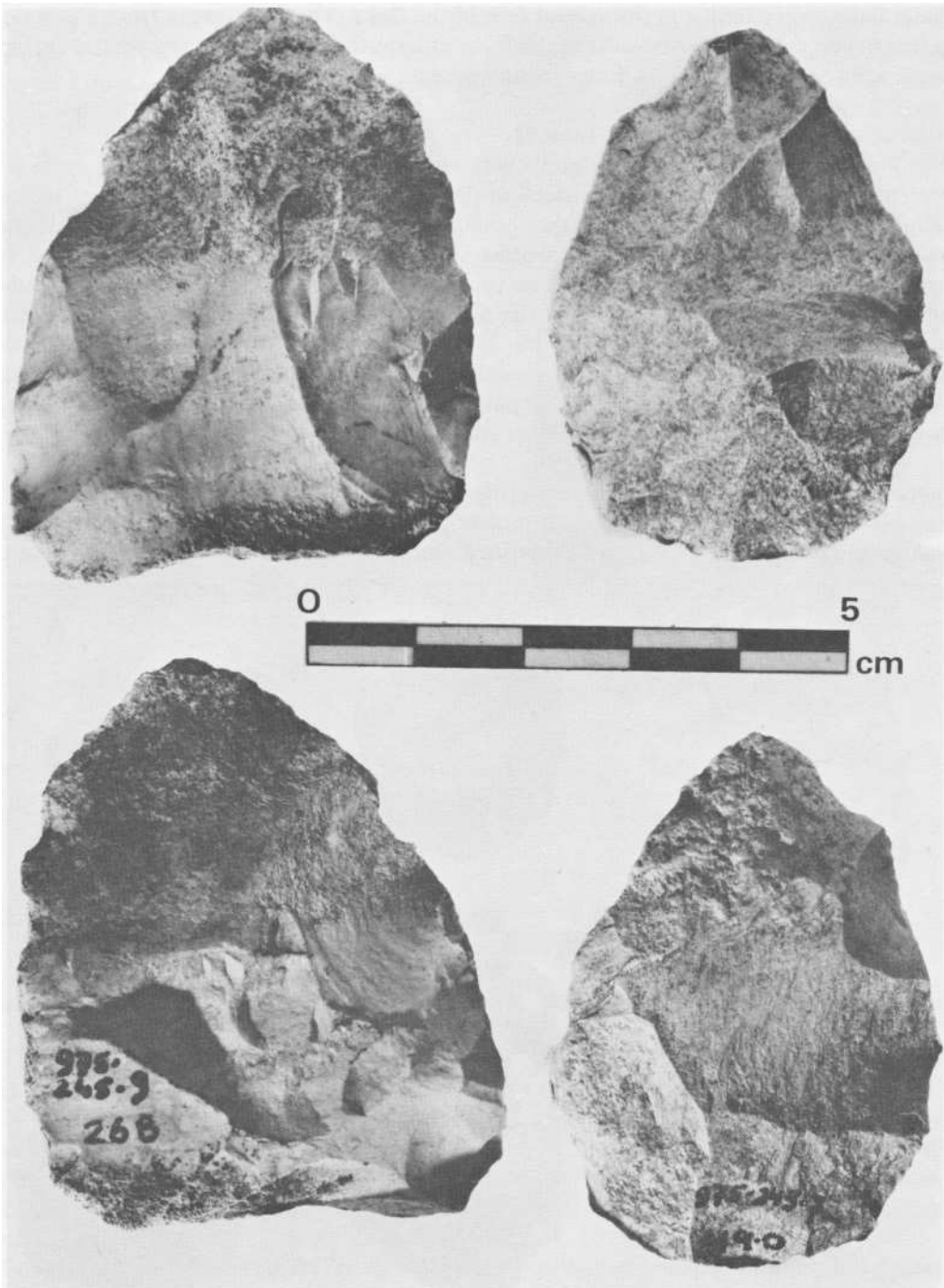


Fig. 10. Ovoid bifaces; upper row, obverse face; lower row, reverse face; catalogue numbers, left to right: 975.245.9, 7.

use. Three specimens (Fig. 9, bottom row) are quite thick, being almost tabular in form, and exhibit little bifacial flaking; consequently, they may represent early stages in preform

manufacture. The other three specimens (Fig. 9, top row) exhibit much more extensive bifacial flaking, are thinner, and have a more definite form. These artifacts are broken and, for this reason, were probably discarded during an intermediate stage in the manufacture of preforms.

*Ovoid & faces* (Fig. 10; Table 3)

These two artifacts were probably intended as blanks for other tools since they do not exhibit secondary retouch or evidence of use and, therefore, appear to be unfinished. The larger specimen appears to have been broken at the base which accounts for its straight appearance.

*Fragment from Unifacial Scraper* (not illustrated)

This artifact has a convex scraping edge approximately 30 mm long which was formed by unifacial edge retouch. The flaking was directed from the ventral face of the flake. Since the ventral face is flat, the scraping edge forms an acute angle of approximately 30°.

*Spheroidal Core Nucleus* (Fig. 11; Table 3)

In shape, this artifact is a somewhat flattened sphere. Flakes were removed around the entire circumference at roughly the same plane but with sufficient variation to produce a markedly sinuous edge. The artifact may be the nucleus of a bifacially-worked core tool or preform which was discarded because for technical reasons it could not be thinned any further or because it would have become too small with additional trimming.

*Core Fragments* (not illustrated)

These artifacts are fragments of larger blocks that were used as a source of raw material. None exhibit deliberately prepared striking platforms; rather, flakes were removed from any suitable striking surface and from several different, frequently opposite, directions.

*Worked and/or Utilized Flakes* (Fig. 12; Table 4)

A total of 58 flakes exhibit short segments of continuous unifacial secondary retouch or evidence of use along the margins of straight, convex, or slightly concave edges or, more rarely, near a corner. The length of the functional edge ranges from 4 to 34 mm (Table 4).



Fig. 11. Spheroidal core nucleus; left to right, obverse face, reverse face, side; catalogue number: 975.245.10.

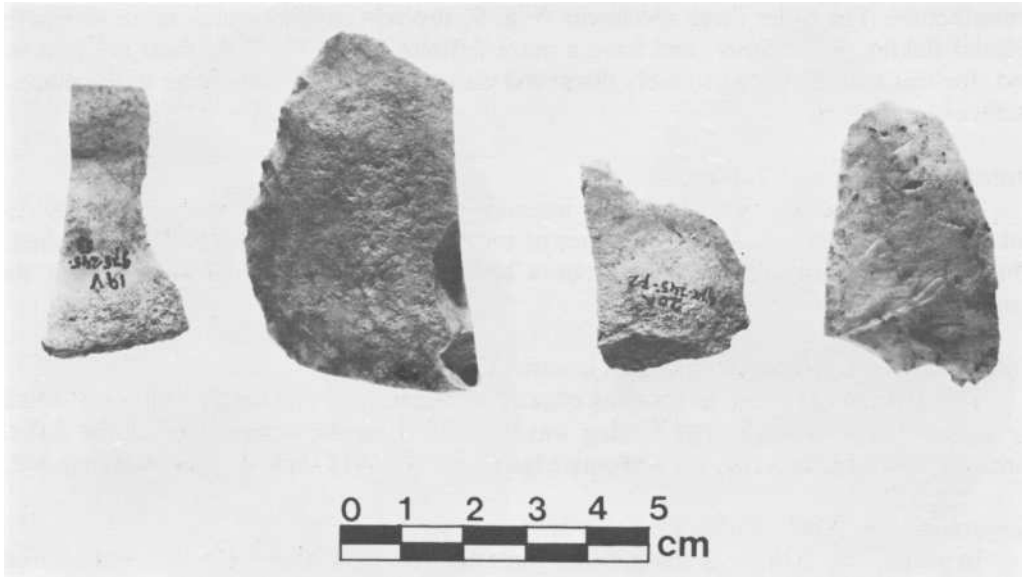


Fig. 12. Worked and/or utilized flakes; catalogue numbers, left to right: 975.245.53, 26, 72, 27.

These flakes were apparently picked up at random, retouched if necessary, and used briefly for a specific task and then discarded. A selection is illustrated in Fig. 12.

*Bifacial Retouch Flakes* (not illustrated)

Out of a total of 1,086 flakes with preserved striking platforms, only 67 or slightly over 6% can be identified with reasonable certainty as having been struck from lenticular bifaces in the process of tool manufacture. (For a definition of this flake type see, for example, MacDonald 1968, or Storck 1974). These flakes have edge or platform angles ranging from less than 45° (3 or 4.4%) to 90° or greater (4.4%). The vast majority (58 or 86.5%) have angles between 45 and 89°. The angles of three (4.4%) cannot be accurately determined. The edges of the striking platforms on many of these flakes have been heavily

TABLE 4  
WORKED AND/OR UTILIZED FLAKES

shape of functional edge	length of functional edge (in millimeters)			standard deviation
	No.	Range	Mean	
straight	20	7-34	15.25	6.48
convex	15	10-33	17.46	7.08
concave	21	4-29	12.0	5.84
concavo-convex	1			
wavy	1			
	58	(includes 2 flakes with 2 opposed functional edges)		

abraded to facilitate flaking. It should also be noted that four of the 37 bifacial retouch flakes retain some cortex. This suggests that the process of decortication was not limited to the early stages of core preparation but also occurred, although perhaps only occasionally, during the later stages of preform preparation or perhaps even during the final trimming of the tool.

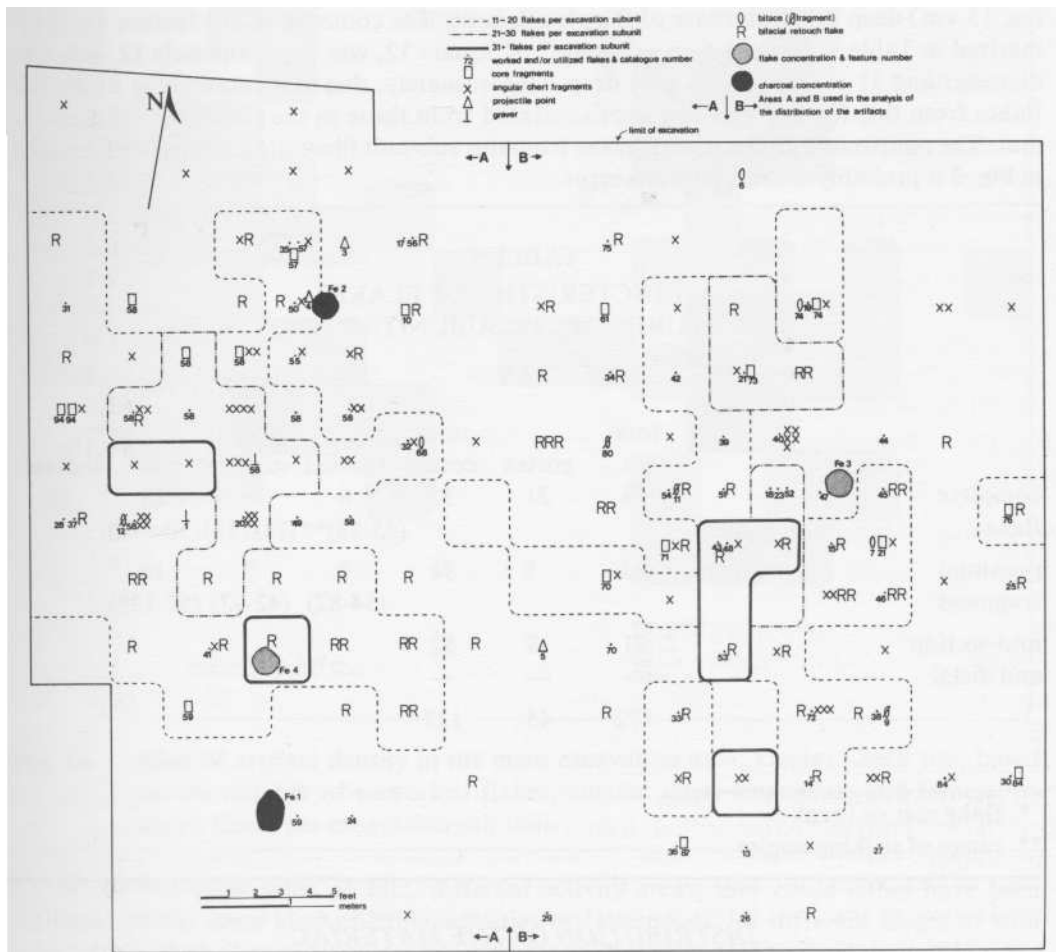


Fig. 13. Distribution of artifacts in the main excavation area, Coates Creek site.

*Features* (Fig. 13)

A total of four features were uncovered. Two of these contained charcoal while the other two consisted entirely of dense concentrations of unworked flakes.

Features 1 and 2 contained numerous small flecks or granules of what was presumed to be charcoal. *Feature 1*, a small, oval, basin approximately 12 inches (ca. 30 cm) wide (east-west), 18 inches (ca. 46 cm) long (north-south), and 1 inch deep, occurred in subunits M and N of Square 3. *Feature 2*, a circular basin approximately 12 inches (ca. 30 cm) in diameter and 1 inch (ca. 2.5 cm) deep, occurred in sub-units D and E of Square 2. The entire contents of both features were taken back to the laboratory for separation of the

charcoal but, unfortunately, neither feature contained sufficient amounts for dating purposes and the fragments were too small for floral identification.

Features 3 and 4, consisting of dense concentrations of unworked flakes, were defined entirely by the distribution of the flakes, there being no noticeable difference in soil colour or texture between the flake concentration and the surrounding area. *Feature 3*, in sub-units D and I of Square 19, was approximately 12 inches (ca. 30 cm) in diameter and 5 inches (ca. 13 cm) deep below the base of the plough zone. The contents of this feature are summarized in Table 5. *Feature 4*, in sub-unit C of Square 12, was approximately 12 inches in diameter and 11 inches (ca. 28 cm) deep. Unfortunately, due to a cataloguing error, the flakes from this feature were not kept separated from those in the remainder of the sub-unit. The relatively high density of flakes from this sub-unit illustrated on the contour map in Fig. 3 is probably the result of this error.

TABLE 5  
CHARACTERISTICS OF FLAKES  
IN FEATURE 3, SQ. 19, SUBUNITS D AND I

	total no.	cortex	non- cortex	platform type			
				faceted	natural surface	flat*	indeter.
complete flake	58	21	37	6 (45-83)**	9 (75-112)	23 (50-110)	20
proximal fragment	43	5	38	7 (54-82)	7 (42-97)	14 (57-118)	
mid-section and distal	71	19	52				
	—	—	—				
	172	45	127				

\* flake scar or break

\*\* range of striking angles

#### DISTRIBUTION OF THE MATERIAL

In order to determine whether there were any patterns in the distribution of the artifact material, a frequency distribution map of artifact density was compiled for the unworked chert flakes, angular chert fragments, and bifacial retouch flakes in each excavation sub-unit. The results are shown in Fig. 14. The map clearly shows two areas of relatively high artifact density separated by an intermediate area of low density. Each area is roughly oval and, using an artifact density of 11-20 flakes per sub-unit as the maximum defining limits, is approximately 15 feet wide (east-west) and 20 feet long. The centres of the two areas, as defined by a density of 31 or more flakes per sub-unit, are approximately 22 feet apart. These areas may be discrete activity areas within the same campsite that were used by a single person or possibly a few individuals as a locus for tool manufacture and possibly other activities as well. It is interesting that ploughing and other types of disturbances such as rodent burrowing and tree falls have not totally obliterated these areas although they may have been enlarged somewhat and made more diffuse.



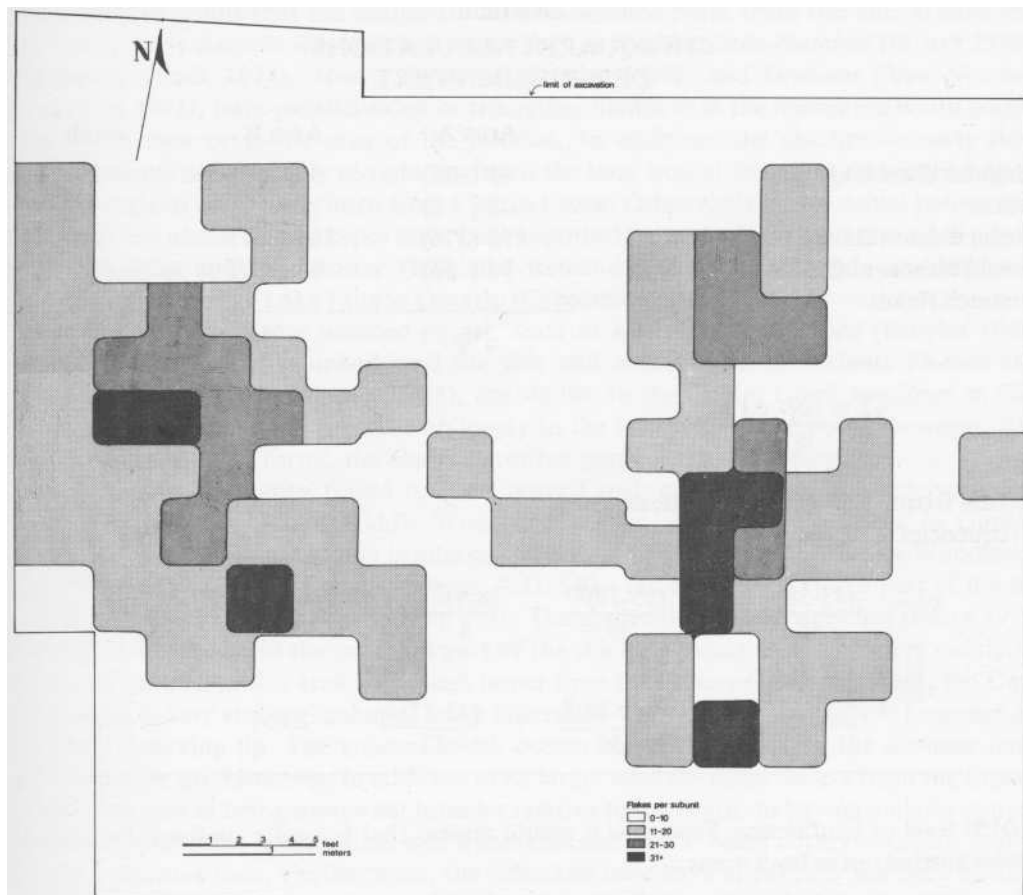


Fig. 14. Map of artifact density in the main excavation area, Coates Creek site, based on the number of unworked flakes, angular chert fragments, and bifacial re-touch flakes per excavation sub-unit.

If the two areas were, in fact, different activity areas, they could either have been the focus of the same kind of lithic activities or, alternately, of different stages of tool manufacture such as might occur if the removal of the cortex and the preliminary shaping of the raw material took place in one area and the preparation of preforms and final trimming occurred in another. In order to examine this possibility, a map was prepared of the distribution of all of the artifacts and several classes of lithic material (Fig. 13). No obvious patterns are discernable and the material appears to be more or less equally distributed between the two areas. However, as a further check, the two areas were compared statistically using a contingency table and chi-square test in order to determine whether there might be more subtle differences in the occurrence of (1) angular chert fragments, cores, and decortication flakes and, (2) ovoid bifaces, preforms, and bifacial retouch flakes. The former group would reflect the basic preparation of the lithic material while the latter would reflect the shaping and final trimming of the artifacts. The contingency table and calculations are illustrated in Table 6. The computed value of chi-square is 2.051. The .05% critical value for chi-square with three degrees of freedom is 7.81 and since this is greater than the computed value of 2.051, the test is not statistically significant at the

TABLE 6  
CHI-SQUARE CALCULATIONS  
DESCRIBED IN TEXT

	Area A	Area B	totals
angular chert fragments	43 (38)	35 (39)	78
cores	8 (8)	9 (9)	17
decortication flakes	378 (376)	386 (387)	764
ovoid bifaces and bifacial	30 (36)	43 (37)	73
retouch flakes			
	459	473	932

$$\chi^2 = \frac{(o_i - e_i)^2}{e_i}$$

actual frequencies are given first; expected frequencies are in parentheses.

$$\chi^2 = \frac{(43-38)^2}{38} + \frac{(35-39)^2}{39} + \frac{(8-8)^2}{8} + \frac{(9-9)^2}{9} + \frac{(378-376)^2}{376} +$$

$$\frac{(386-387)^2}{387} + \frac{(30-36)^2}{36} + \frac{(43-37)^2}{37} = 2.051$$

.0570 level of confidence. From this it would appear that basically similar lithic activities were carried out in both areas.

### DISCUSSION

There is an obvious bias in the composition of the lithic assemblage since tool manufacture and the repair of hunting equipment are the only activities clearly indicated at this site. The majority of the artifacts and the debitage relate to core reduction and the preparation of preforms, some of which may have been made into projectile points. The two basal fragments of lanceolate points appear to have been finished points that were broken while attached to spears indicating that hunting equipment was repaired at the site. The worked and utilized flakes could have been used in this activity for cutting the lashes to remove broken points from spears, smoothing shafts, etc. End scrapers are conspicuously absent suggesting either that skins were not worked at this site or else that it was done in another area. It is unfortunate in this regard that part of the site was destroyed prior to excavation since a larger excavation or more widespread sampling would have shown whether different activities were carried out in other parts of the site.

#### *Cultural Affiliation and Age of Occupation*

It is difficult to determine the cultural affiliation of the people who occupied the site because the small number of possibly "diagnostic" artifacts, and the side-notched point in particular, is typologically somewhat ambiguous.

A careful search of the literature dealing with Late Paleo-Indian-Early Archaic material in the Great Lakes region, and in eastern North America in general, failed to locate

any projectile points that are similar to the side-notched point from this site. Unlike this specimen, Early Archaic side-notched points such as *Raddatz Side-Notched* (Wittry 1959), *Big Sandy* (Tuck 1974), *Modoc Notched* (Fowler 1959), and *Graham Cave Notched* (Chapman 1975), have parallel-sided or triangular blades with the maximum width occurring at the base or in the area of the notches. In addition, the notches on early side-notched forms are generally at right angles to the long axis of the point rather than at an oblique angle as on the specimen from Coates Creek. Other early side-notched points very similar to the above named types have been reported from the Simonsen bison-kill site in Iowa (Agogino and Frankforter 1960), the Renier site in Wisconsin (Mason and Irwin 1960), and the George Lake I site in Ontario (Greenman 1966).

Early Archaic corner notched points, such as *Kirk Corner-Notched* (Broyles 1966, 1971) and *St. Charles Notched* (and the side and corner-notched variants *Thebes* and *Dovetail*, respectively; Chapman 1975), are similar to the Coates Creek specimen in that the notches are frequently oriented obliquely to the long axis of the point; however, like the early side-notched forms, the blades are either parallel-sided or triangular.

The closest similarity found to the Coates Creek point, is a corner-notched point from the Cap-Chat site, a Middle Woodland site on the Gaspé Peninsula in Quebec (Barre 1975). The age of the site is interpreted on the basis of a single Middle Woodland-type rim sherd and two radiocarbon dates: A.D. 540 ± 115 from the northern part of the site and A.D. 620 ± 115 from the southern part. The projectile point in question (Barre 1975: Fig. 37, 6) was found in the southern part of the site in Occupation I, a stratum overlying the dated horizon in this area. Although larger than the Coates Creek specimen, the Cap-Chat point is very similar in shape, being lanceolate with a relatively narrow base and an abruptly incurving tip. The greatest width occurs about two-thirds of the distance from the base to the tip. However, in addition to its larger size, the point differs from the Coates Creek specimen in being somewhat broader relative to its length, in having a plano-convex and plano-triangular longitudinal and transverse section, in being corner-notched, and in having a concave base. Furthermore, the sides and base have apparently not been ground as these attributes are not mentioned in the very detailed artifact description. This is the only point of this kind found at Cap-Chat, the other points consisting of much more rudely or roughly-shaped stemmed and side-notched forms. In general, the resemblance to the Coates Creek specimen seems superficial only and is regarded as a coincidence.

The two basal fragments of what are presumed to have been lanceolate projectile points are also somewhat ambiguous typologically. The longer of the two specimens (Fig. 6, left) is quite narrow and the parallel sides and lack of basal or lateral edge grinding are attributes not usually found on unstemmed Late Paleo-Indian points although they do occasionally occur. The second specimen could be the base of a Late Paleo-Indian point, such as *Agate Basin* to which it is very similar in size, outline, and basal and lateral edge treatment, but it is too small for positive identification.

Gravers are widely regarded as diagnostic Early and Late Paleo-Indian artifacts. However, the graver spurs on the three artifacts from this site, while unifacially prepared, are not as long and well-defined as is usually the case on Paleo-Indian artifacts. Unfortunately, none of the other artifacts are useful for purposes of determining the cultural identity of the people who occupied the site.

Although for these reasons it is difficult to interpret the artifacts, it is tentatively suggested that the assemblage represents an occupation by Late Paleo-Indian-Early Archaic peoples. Several of the attributes on the points suggest some sort of cultural relationship with one of the post-Folsom, pre-Cody Late Paleo-Indian cultures or complexes on the Plains or an intermediate area. This may have been either a developmental

relationship or one based on contact between contemporary groups of Paleo-Indian and Archaic peoples.

Unfortunately, it is not possible to date the occupation directly. The time of formation of the Ardtrea beach provides a maximum geological date of 10,400 years B.P., or slightly younger, for the site. Radiocarbon dates ranging from approximately 9,000 to 11,000 B.P. for the post-Folsom, pre-Cody complexes in the west (Irwin 1971) also suggest a possible time range of occupation for the site keeping in mind the geological "base date" provided by the time of formation of the Ardtrea beach. Obviously, comparative material from dated contexts will have to be obtained before the final interpretation of the material from this site will be possible.

#### ACKNOWLEDGEMENTS

I would like to thank Mr. Donald Garner, quarry foreman for Martin's Ready Mix of New Lowell, for permission to excavate at the site. I would also like to thank Mr. J.A. van der Meer (Parks Supervisor, Ministry of Natural Resources, Huronia District Office, Midhurst) and Mr. J. Parker (Superintendent, Wasaga Beach Park) for making arrangements for us to camp in Devil's Glen Provincial Park.

The photographs were taken by Brian Boyle and Bill Robertson of the ROM Photography Department. The maps were drawn by Julian Mulock of the ROM Art Department.

The field work reported in this paper was done under a provincial licence (number 75-A-0005) granted by the Ontario Ministry of Culture and Recreation. The support of the Royal Ontario Museum and The Canada Council (grant number S74-1632) is gratefully acknowledged.

#### REFERENCES CITED

- Agogino, George A.  
1961 A New Point Type from Hell Gap Valley, Eastern Wyoming. *American Antiquity*, Vol. 26, No. 4, pp. 558-560.
- Agogino, George A. and W.D. Frankforter  
1960 A Paleo-Indian Bison-Kill Site in Northwestern Iowa. *American Antiquity*, Vol. 25, No. 3, pp. 414-415.
- Barre, Georges  
1975 Cap-Chat (Dg Dq-1): Un Site du Sylvicole Moyen en Gaspésie. *Les Cahiers du Patrimoine*, No. 1, Ministère des Affaires Culturelles, Direction Generale du Patrimoine, Service d'Archéologie et d'Ethnologie.
- Broyles, B.J.  
1966 Preliminary Report: The St. Albans Site (46Ka27). Kanawha County, West Virginia. *The West Virginia Archaeologist*, No. 19, pp. 1-43.  
1971 Second Preliminary Report: The St. Albans Site, Kanawha County. *West Virginia Geological and Economic Survey, Report of Archaeological Investigations*, No. 3, Morgantown.
- Burwasser, G.J.  
1974 Quaternary Geology of the Collingwood-Nottawasaga Area, Southern Ontario. Ontario Division of Mines, Preliminary Map P. 919 Geological Series, scale 1:50,000. *Geology*, 1973.
- Chapman, Carl H.  
1975 *The Archaeology of Missouri, I*. University of Missouri Press, Columbia.

- Deane, R.E.  
1950 Pleistocene Geology of the Lake Simcoe District, Ontario. Canada Department of Mines and Technical Surveys, *Geological Survey of Canada, Memoir 256*. Ottawa.
- Fowler, Melvin L.  
1959 Summary Report of Modoc Rock Shelter 1952, 1953, 1955, 1956. *Illinois State Museum Report of Investigations No. 8*. Springfield.
- Frison, George C. (editor)  
1974 *The Casper Site: A Hell Gap Bison Kill on the High Plains*. Academic Press, Inc. New York.
- Greenman, Emerson, F.  
1966 Chronology of Sites at Killarney, Canada. *American Antiquity*, Vol. 31, No. 4, pp. 540-551.
- Irwin, H.T.  
1971 Developments in Early Man Studies in Western North America, 1960-1970. *Arctic Anthropology*, Vol. 8, No. 2, pp. 42-67.
- Karrow, P.F., T.W. Anderson, A.H. Clarke, L.D. Delorme, and M.R. Screenivasa  
1975 Stratigraphy, Paleontology, and Age of Lake Algonquin Sediments in Southwestern Ontario. *Quaternary Research*, Vol. 5, No. 1, pp. 49-87.
- MacDonald, George F.  
1968 Debert: A Palaeo-Indian Site in Central Nova Scotia. *National Museums of Canada, Anthropology Papers*, No. 16. Ottawa.
- Mason, Ronald J., and Carol Irwin  
1960 An Eden-Scottsbluff Burial in Northeastern Wisconsin. *American Antiquity*, Vol. 26, No. 1, pp. 43-57.
- Nero, Robert W.  
1959 An Agate Basin Point Site in Sask. *The Blue Jay*, Vol. XVII, No. 1, pp. 32-41.
- Peterson, R.L.  
1965 A Well-Preserved Grizzly Bear Skull Recovered from a Late Glacial Deposit Near Lake Simcoe, Ontario. *Nature*, Vol. 208, No. 5016, pp. 1233-1234.
- Storck, Peter L.  
1974 Two Probable Shield Archaic Sites in Killarney Provincial Park, Ontario. *Ontario Archaeology*, No. 21, pp. 3-36.  
1975a A Summer at the Beach. *Royal Ontario Museum Archaeological Newsletter*, New Series, No. 124. Toronto.  
1975b Glacial Lake Algonquin and the Early Palaeo-Indian Occupation of Southern Ontario: Progress Report. Manuscript on file at the Royal Ontario Museum, the Ontario Ministry of Culture and Recreation, and the Canada Council, Ottawa.
- Tovell, Walter M., and Roger E. Deane  
1966 Grizzly Bear Skull: Site of a Find Near Lake Simcoe. *Science*, Vol. 154, No. 3745, p. 158.
- Tuck, James A.  
1974 Early Archaic Horizons in Eastern North America. *Archaeology of Eastern North America*, Vol. 2, No. 1, pp. 72-80.
- Wittry, Warren L.  
1959 The Raddatz Rockshelter, Sk-5, Wisconsin. *The Wisconsin Archaeologist*, Vol. 40, No. 2, pp. 33-69.

Wormington, H.M.

1964 *Ancient Man in North America*. Denver Museum of Natural History, Popular Series No. 4, Fourth Edition. Denver.

Wormington, H.M., and Richard G. Forbis

1965 *An Introduction to the Archaeology of Alberta, Canada*. Denver Museum of Natural History, Proceedings, No. 11. Denver.

Department of New World Archaeology  
Royal Ontario Museum  
100 Queen's Park  
Toronto, Ontario M5S 2C6