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2-Final Report of the Archaeological Site Examination of the U.S. 12 Mottville Bridge and Approaches Replacement Project, St. Joseph and Cass Counties, Michigan

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Final Report of the
Archaeological Site Examination of the
U.S. 12 Mottville Bridge and
Approaches Replacement Project,
St. Joseph and Cass Counties, Michigan

MDOT No. 79-1342

Submitted by: Dr. Elizabeth Garland

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April, 1980

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II. The Survey Area

The survey area includes a total distance of about two miles extending east and west of the village of Mottville along U.S. 12 in St. Joseph and Cass Counties, Michigan. The village of Mottville is located in St. Joseph County. Three alternates have been proposed by MDOT for widening the approaches and replacing the existing bridge which crosses the St. Joseph River north of Mottville (Fig. 1).

Alternate A involves relocating the bridge to a position north of the present crossing which would have the effect of straightening the approaches in each direction.

Alternate B would involve the least disturbance to the landscape, involving only replacement of the existing bridge.

Alternate C would straighten the approaches by relocating the bridge to the south of its present location.

All three modifications involve expansion from 66' to 150' of the bridge approaches for about 1/2 mile east and 1 mile west of the village of Mottville. Within the village limits the existing 100' ROW will remain.

The region traversed by this project is characterized by glacial outwash deposits which lie east of the Sturgis (Ms) moraine (Martin 1955). This area of southern lower Michigan would have been open to settlement by human populations before the end of the last glacial period; a recent estimate places this date at ca. 14,800 B.P. (Farrand 1977:75). The fact that the project involves a crossing of the St. Joseph River made it a particularly interesting one in terms of archaeological site potential. While Cass County is not well known archaeologically, the Lower St. Joseph River valley in Berrien County is known to have had extensive prehistoric occupation.

TABLE 1. Site Locations and Cultural Placement

<u>State Number</u>	<u>Site Name</u>	<u>Property Owner</u>	<u>Location (Co., Twp., Sec., 1/4 Sec.)</u>	<u>Cultural/Chron. Placement</u>
20 CS 43	Zaika I	Pete C. Melville	NE-NE-SE, Sec. 1, 8S-13W, Cass Co.	undetermined prehistoric
20 SJ 22	Zaika II	Pete C. Melville	NW-NW-SW, Sec. 6, 8S-12W, St. Joseph Co.	Early (& Late?) Archaic
20 CS 44	Zaika III	Zaika Family	SE $\frac{1}{2}$ -NW-SE, Sec. 1, 8S-13W, Cass Co.	Early-Late Archaic, Early Woodland
20 CS 45	Stork	J. & E. Stork	NW-NE-SE, Sec. 1, 8S-13W, Cass Co.	Paleo-Indian & Archaic
20 SJ 21	Davis	Charity Davis	center, near w. edge, Sec. 6, 8S-12W, St. Joseph Co.	undetermined prehistoric
_____	Joseph Knorr House	Charity Davis	St. Joseph, Mottville, Sec. 6, center near west edge	standing structure

Cultural Material from the Zaika I Site

<u>Artifact</u>	<u>wt/g</u>	<u>Raw Material</u>	<u>Plate Illustration</u>
Denticulate uniface	7.5	brown/gray chert	6 e
Denticulate uniface	24.0	dull purple/white mottled chert	6 b
Uniface w/fine retouch	1.9	(same as above)	6 c
Uniface w/fine retouch	4.0	gray/white mottled chert	6 d

FCR was medium; a little heavier than on Zaika II.

2. Zaika II (Alternate C and extension of N. River Rd.-see Fig. 2-will impact).

Zaika II is located on a similar low rise or knoll in the same field as the Zaika I site, about 150' to the east of Zaika I. A low wet area which drains toward the river separates the two sites. The site lies some 200 feet north of the river and is situated near the east edge of Melville's property. It covers an area about 15 by 20 meters (300 m²). The site was identified by a light scatter of FCR and the presence of lithic debitage and artifacts. Our survey recovered 2 chips and 3 artifacts from the site surface; as with Zaika I, a remarkably large number of tools in relation to debitage. Again surface visibility was good. Two 1 x 1 foot shovel probes were placed to determine the depth of plow zone, which was found to be 20-30 cm deep. Nothing was noted below the plow zone, which is rather shallow and suggests that the site has been eroding out. The artifacts recovered include a slate knife (Plate 6-f), and a rectangular biface which appears to be an intentionally fabricated wedge, rather than a flake which has acquired wedge morphology through use (Plate 6-g). The third tool is a bifurcate stemmed point which lacks basal grinding, and has a well thinned excurvate blade (Plate 6-h). Projectile points with similar basal treatment date to the Early Archaic in the Middle South (Chapman 1975). This point is not typologically similar to the bifurcate base points in the Zaika collection (Plate 3-b; bottom row).

sites, and it is highly likely that this whole area was occupied, with our two sites lying near the eastern periphery. The major site occupation may be situated nearer the bluff which extends from 790' down to 770' behind the Zaika house (Figure 1).

The entire collection source area must have been dryer when the site was occupied. John Halsey (personal communication) has informed me that at least one other site from a boggy area has been reported recently; the artifacts were unbroken projectile points (misses) to the virtual exclusion of other types of artifacts. The Zaika collection however includes significant numbers of artifacts other than points (Plate 4, 5), suggesting a camp of some degree of permanence, and doubtless the non-point portion of the assemblage would be much larger if all retouched pieces present on the site were included in the Zaika collection. For example there are no wedges and very few unifaces in the collection. Of the seven artifacts we recovered from Zaika I and Zaika II, probably only the point would have been picked up by Mr. Zaika.

There is however no doubt that hunting was a major activity at the site from the number of points that are present. In this connection our field crew observed a very prominent deer trail running east-west along the western part of the proposed alignment of Alternate C, and Mrs. Davis, who lives at the junction of North River Road and U.S. 12, regularly observes a herd of deer which range in an area east of her house. The St. Joseph River is fairly shallow in this area, and in the early historic period Mottville was where the Chicago trail crossed the river. This was known as the Grand Traverse of the St. Joseph River (Anonymous 1877). Neither bluff nor marshes impede access to the river at this point. It is tempting to suggest that at different periods during the Archaic when the climate may have been somewhat dryer than present and the water table lower, the Zaika sites would have been an ideal location for a winter hunting camp. The river ford at this location may have made the area particularly desirable.

The match with the point from 20 BE 240 is almost perfect, better than can be illustrated. There is no doubt that the Stork artifact is a fluted point.

The other artifact from this site is what appears to be the distal end of a very well made bifacial scraper. The tool has a biconvex cross section, and is made on good quality lustrous gray chert. It is definitely not of Paleo-Indian age. It is probably an Archaic artifact, but this is not certain.

Cultural Material found at the Stork Site

Debitage - 8	blocky flakes (5)	$\frac{\text{wt/g}}{8.4}$
(local chert)	bifacial thinning (3)	$\frac{3.2}{11.6 \text{ g}}$

FCR - light scatter

<u>Artifacts</u>	<u>wt/g</u>	<u>Raw Material</u>	<u>Plate Illustration</u>
fluted point segment	2.2	Mottled blue/white chert with secondary heat fractures and reddish discoloration.	7
biface fragment	2.5	lustrous dark gray chert	6 a
Fluted point segment measurements:		<u>Max. thickness</u>	<u>Width</u>
		.55 cm.	2.46 cm.

5. Davis Site (Alternate A will impact)

The Davis site is located near the house owned by Mrs. Charity Davis at the junction of North River Road and U.S. 12. The house is located on a knoll, which was probably the main site location. Mrs. Davis reports having once found an arrowhead in a flower bed near her back door east of the house, and also has found a stone axe in a garden just northwest of her house. These artifacts were not available for study, having been given away or misplaced. We examined the garden and noted light FCR, but found no debitage or artifacts.

It is clear from the above that Alternate B is the preferred route from the perspective of this study. An evaluation and recommendation for each site follows.

1. Zaika I and Zaika II.

These two sites will be considered together because of the high probability that they are related to each other and to the multicomponent Archaic-Early Woodland Zaika III site which is known from the collection illustrated in Plates 1 -5. This complex of sites is considered to be of great archaeological significance. I can think of no excavated and reported Early Archaic sites in southwest Michigan, and there can be but few in the entire state. Virtually all known Early Archaic material comes from surface collections which have been gathered over large areas and over long periods of time, and which contain both earlier and later material as well (Fitting 1975:66). Zaika is different in several respects: 1) the collection has been acquired since 1950, 2) it all comes from a restricted area of the Zaika property, 3) there is no evidence of Paleo-Indian, or good evidence for post-Early Woodland in any of the 3 Zaika "sites". It seems to me that the possibility for establishing a stratigraphic relationship between the earliest occupation and the Late Archaic/Early Woodland exists at Zaika. This may be better ascertained via lateral separation of components than by vertical stratigraphy, but carefully planned surface survey and excavation strategies could perhaps reveal these relationships. There may also be a distinct Early Woodland component here; pottery may be present but as yet undetected.

Recommendation: Zaika I and Zaika II should be mitigated if Alternate C is selected. A procedure of plowing and gridding, followed by a controlled recording of surface evidence and selected excavation of units with significant concentrations of cultural material might be employed. It is further recommended that mitigation of these two sites be as complete as possible, in view of the archaeological significance of the 3 Zaika

Recommendation: Phase 2 testing if Alternate A is selected.

4. Joseph Knorr House.

The house appears to me to have both historical interest and also architectural merit. I would venture to suggest that this house should be preserved if at all possible.

Recommendation: Request that a historian evaluate this property if Alternate A is being actively considered for this project.

WESTERN MICHIGAN UNIVERSITY
DEPARTMENT OF ANTHROPOLOGY
FIELD SHEET - ARCHAEOLOGICAL SITE SURVEY

Site number 20 CS 43

County Cass Township South Porter Name Zaika I
Quarter Sec. Town Range
Section 1 NE - NE - SE 8S 13 W USGS Quadrangle Vandalia, Mich.-Ind.
15'
Owner Pete C. Melville Address Classification
undetermined prehistoric
Occupant none Address

Attitude toward excavation Possibility of destruction Alt. C,
Mottville Bridge Replacement
Type of site sparse scatter Approximate size 15 m. x 25 m.

Topography Terrace 10' above St. Joseph R. Elevation 769'

Surface features site is on slight rise Kind of soil Oshtemo-Spinks-Oakville Assoc.

Vegetation cultivated Nearby water source St. Joseph River 320'
to the south.

Type of artifacts from site

4 unifaces
medium FCR

Location of collections Surface collections W.M.U.

Catalog numbers Excavated Material

Published references E.B. Garland (1980).
Report of the Archaeological Site Examination of the U.S. 12 Mottville Bridge
and Approaches Replacement Project, St. Joseph & Cass Counties.
Michigan History Division, Dept. of State, Lansing.
Unpublished references (Manuscripts, notes)

Dept. of Anthropology, W.M.U.

Photographic record

Dept. of Anthropology, W.M.U.

Source of this information

Actual visit to site X Correspondence
Publications Conversation
Unpublished accounts

This record by Deborah Rhead Date 10-29-1979

Remarks Permission to walk property given by John Zaika of S. River Road.
Zaika family formerly owned this property.

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FIELD SHEET - ARCHAEOLOGICAL SITE SURVEY

Site number 20 CS 44

County	Cass	Township	S. Porter	Name	Zaika III
	Quarter Sec.	Town	Range		
Section	1 SE $\frac{1}{2}$ -NW -SE	8S	13 W	USGS Quadrangle	Vandalia Mich.-Ind. 15'
Owner	John Zaika Family	Address	S. River Road	Classification	Early-Late Archaic, Early Woodland
Occupant	Zaika	Address			
Attitude toward excavation	good	Possibility of destruction	site is being farmed.		
Type of site	campsite(s)	Approximate size	possibly 5 acres or more		
Topography	Terrace of St. Joseph River, 10' above river.	Elevation	768-769'		
Surface features	field has been drained	Kind of soil	Oshtemo-Spinks-Oakville Assoc.		
Vegetation	cultivated	Nearby water source	St. Joseph River borders site on the east.		
Type of artifacts from site	John Zaika has a large collection.				
Location of collections		Surface collections	John Zaika		
Catalog numbers		Excavated Material			
Published references	E. B. Garland (1980). Report of the Archaeological Site Examination of the U.S. 12 Mottville Bridge and Approaches Replacement Project, St. Joseph and Cass Counties. Michigan History Division, Dept. of State, Lansing.				
Unpublished references (Manuscripts, notes)	Dept. of Anthropolgy, W.M.U.				
Photographic record	W.M.U.				
Source of this information					
Actual visit to site		Correspondence			
Publications		Conversation	X - John Zaika with D. Rhead, P. McAllister, and R. D. Hoxie		
Unpublished accounts					
This record by	E. B. Garland	Date	10-29-1979 12-7-1979		
Remarks	Artifacts were found starting in 1950 when the Zaikas drained this field, which had been marshy.				

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FIELD SHEET - ARCHAEOLOGICAL SITE SURVEY

Site number 20 SJ 21

County	St. Joseph	Township	Mottville	Name	Davis
Section	6	Quarter Sec.	center, near west edge	Town	8S
		Range	12 W	USGS Quadrangle	Vandalia, Mich.-Ind. 15'
Owner	Charity Davis	Address	Rt. 3, Box 192	Classification	undetermined prehistoric
Occupant	same	Address	White Pigeon		

Attitude toward excavation Possibility of destruction Alt. A, Mottville Bridge Replacement

Type of site FCR scatter in garden; arti- Approximate size facts reported found in the past.

Topography house is on a knoll Elevation 770'

Surface features Kind of soil Oshtemo-Spinks-Oakville Assoc.

Vegetation lawn & garden Nearby water source St. Joseph River 500' to the south

Type of artifacts from site
axe and points found in flower beds and garden near the house
by Mrs. Davis over a period of years.

Location of collections Surface collections misplaced or given away.

Catalog numbers Excavated Material

Published references E. B. Garland (1980)
Report of the Archaeological Site Examination of the U.S. 12 Mottville Bridge
and Approaches Replacement Project, St. Joseph and Cass Counties.
Michigan History Division, Dept. of State, Lansing.

Unpublished references (Manuscripts, notes)

Photographic record

Source of this information

Actual visit to site	X	Correspondence
Publications		Conversation
Unpublished accounts		X

This record by Deborah Rhead Date 10-29-1979

Remarks Site probably centered on knoll where house was built.

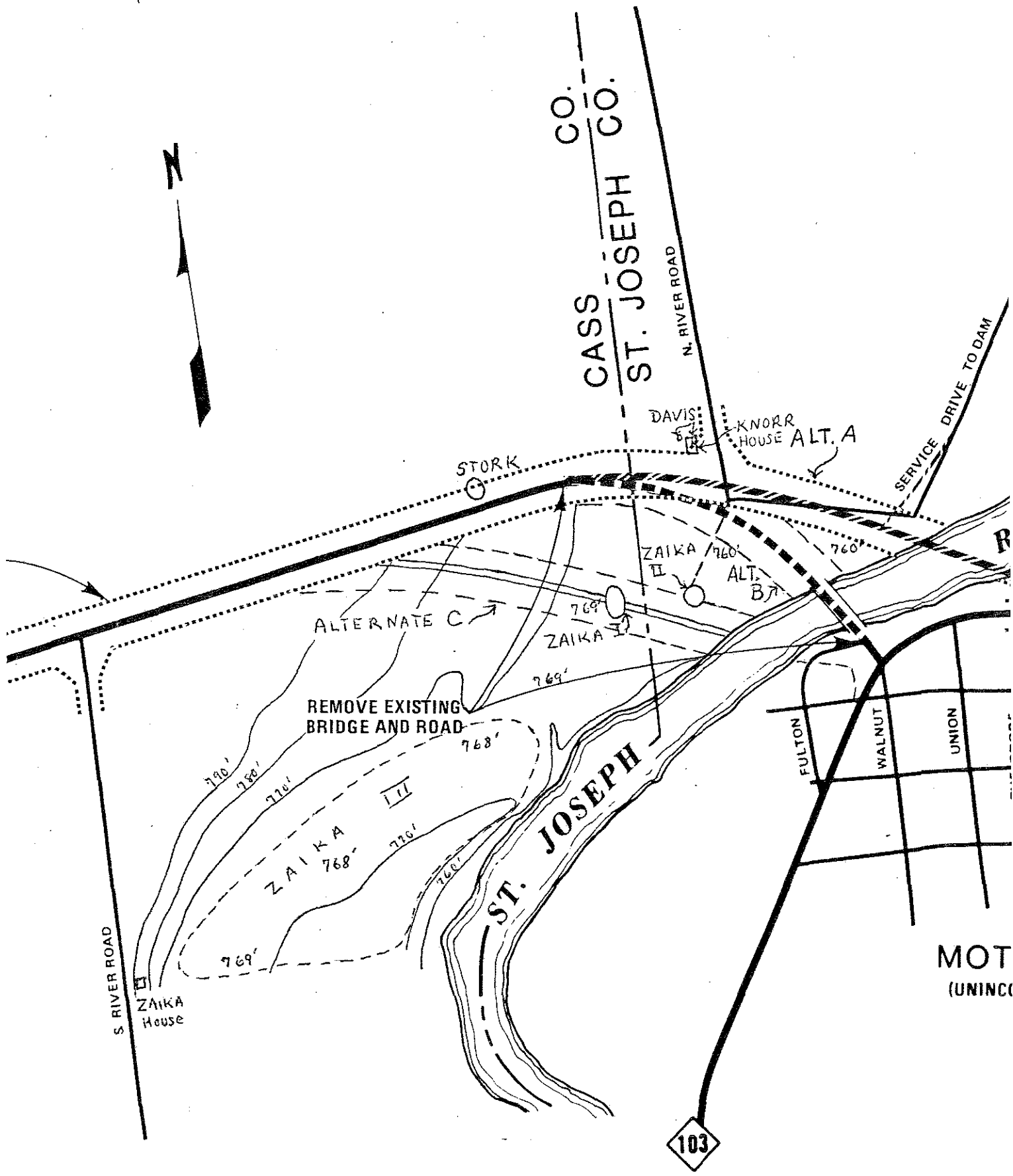
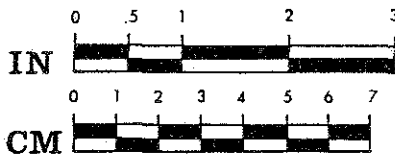
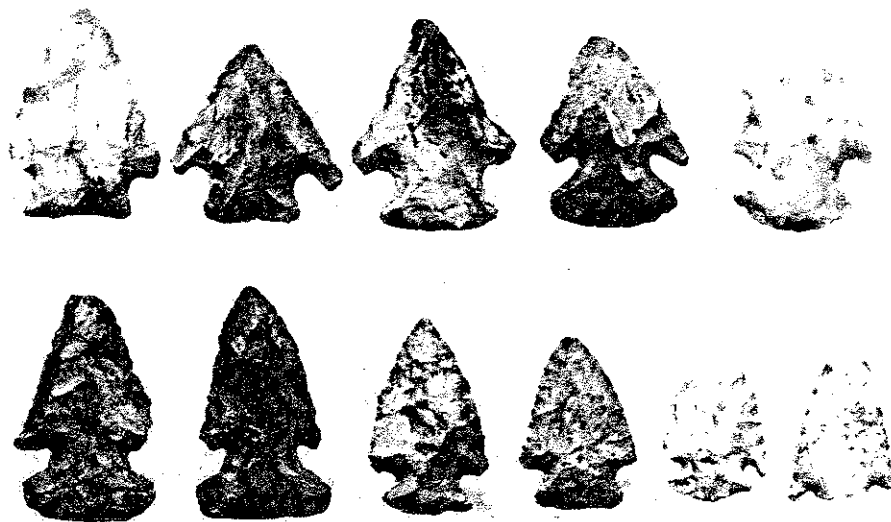
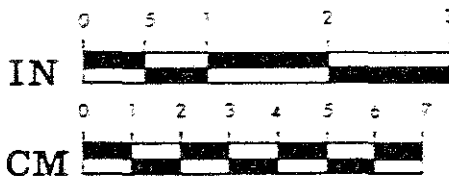
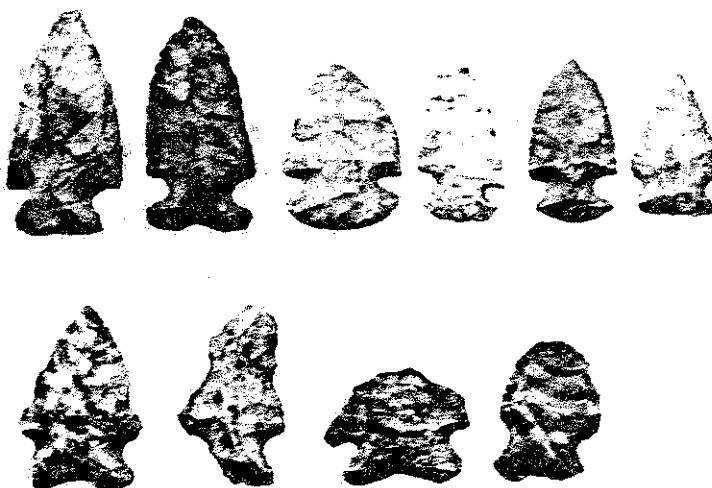


Figure 1.

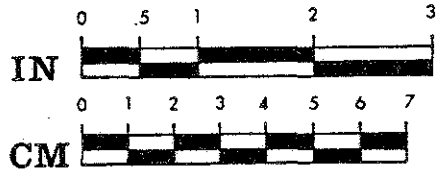
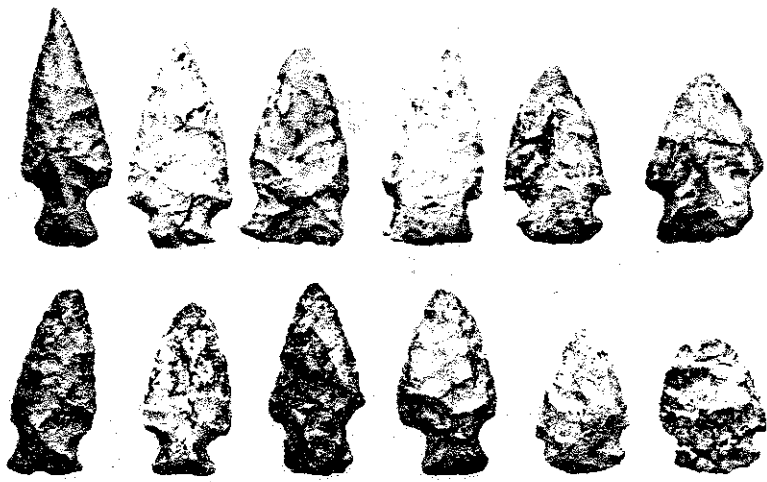


a.

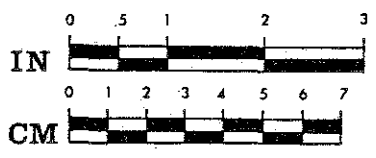
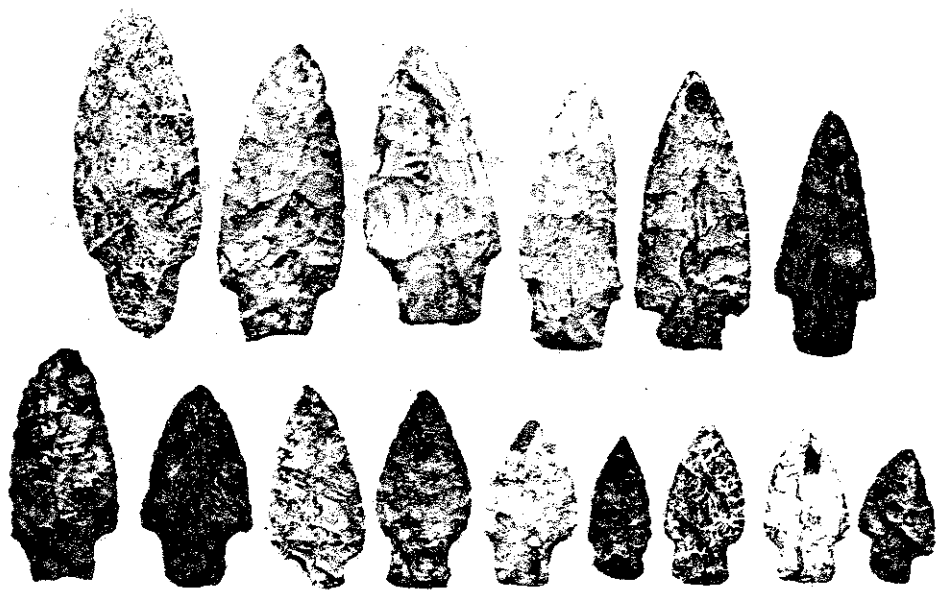


b.

Plate 1. Zaika III Collection.



a.



b.

Plate 3. Zaika III Collection.

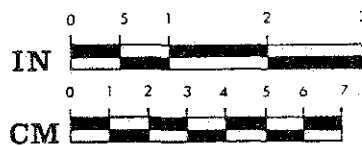
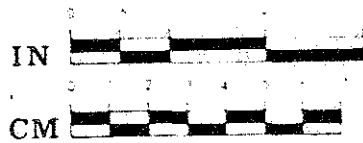
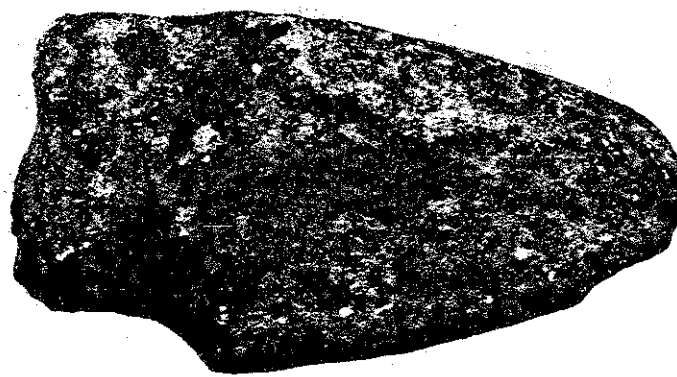


Plate 5. Zaika III Collection.

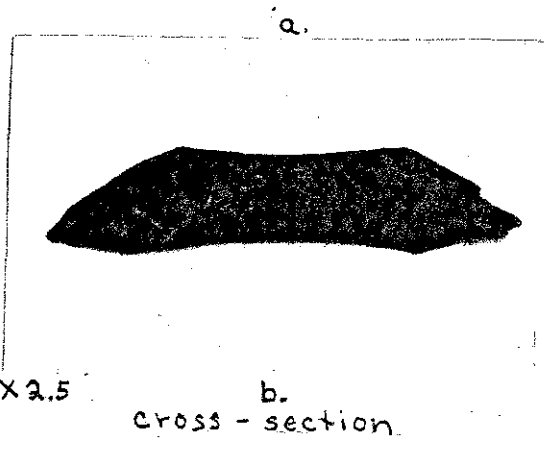
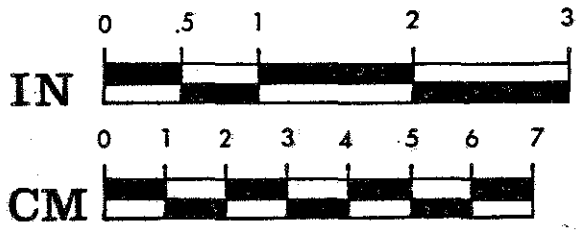
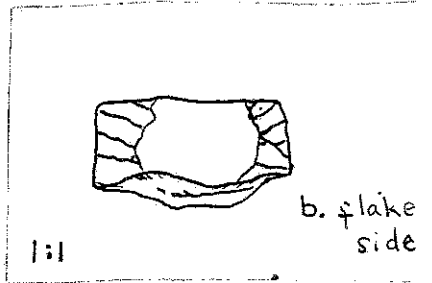
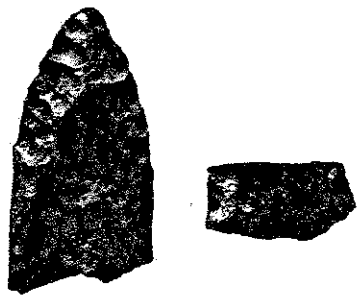
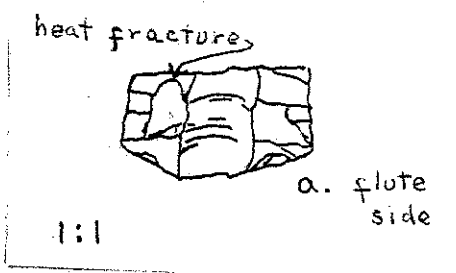
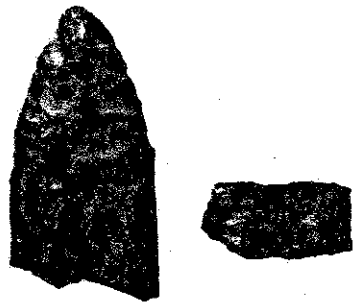


Plate 7. Fluted point segment from Stork Site.
Fluted point at left is from Berrien Co. (20 BE 240), shown for comparison.



Plate 8. The Joseph Knorr House.