

THE MCKEAN COMPLEX AS A HORIZON MARKER IN MANITOBA
AND ON THE GREAT NORTHERN PLAINS

by

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ABSTRACT

The McKean Phase of the Early Middle Prehistoric Period is recognized by three groups of projectiles that have been identified as the McKean Lanceolate, Duncan, and Hanna types. Associated artifacts vary from one area to another on the Northern Plains, but in Manitoba, these artifacts include: 1) crudely chipped flat end-scrapers with tapered proximal ends, 2) thick, steep-angled end-scrapers, 3) crude two-sided scrapers, 4) bifaces with tapered backs, and possibly, 5) large lanceolate bifaces.

Manitoba sites containing artifacts of the McKean Phase are concentrated in the south and west where the environment would have been prairie, aspen parkland, and mixed forest, as it was at the time of historic settlement. Sites tend to be concentrated along major water ways. All of the sites in Manitoba containing components of the McKean Complex are represented by small artifact inventories which may indicate small family groups living in temporary camps.

The people who made the artifacts of the McKean assemblage probably belonged to three distinct, but related, ethnic groups identified by components having a predominance of McKean Lanceolate, Duncan, and Hanna projectiles, respectively. At some sites these different components are found isolated; sites where they are mixed may indicate social interaction.

The McKean hunters are recorded on the Northern Plains for the period of 3600 B.C. to 1300 B.C. The earliest evidence of McKean occupations comes from the Big Horn Canyon area of northwestern Wyoming and southwestern Montana. However, the present evidence indicates that McKean hunters may not have entered Manitoba until 2000 B.C. or possibly 1500 B.C. during a period of rapid migration

over the Northern Plains. The hunters who made projectiles of the McKean complex occupied many environmental niches including mountains, grasslands, aspen parklands and boreal forests and hunted whatever local game was available.

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CHAPTER I

THE PROBLEM

A Introduction

The McKean Lanceolate projectile type has been frequently referred to in the literature on Plains archaeology for a decade and a half. It is generally agreed that this point type is characteristic of the Early Middle Prehistoric Period of Plains prehistory (Wedel 1961). During this 15 years, both the number of McKean sites and the range of variation of traits attributed to the McKean type projectile have increased, but this accumulated data has not been synthesized. Also, there is inadequate knowledge of the associated artifacts that made up the total tool inventory of the McKean hunters. Only limited attempts have been made to understand geographical and temporal similarities and differences of the McKean projectiles as well as the associated tools and remains that yield evidence of cultural behaviour.

B Research Objectives

The main objective of this research was to gather and synthesize all available data on McKean materials in Manitoba. In accomplishing this objective, it was necessary to: 1) review the problem of McKean projectile point typology (Chapter II), 2) describe data from previously unpublished excavations such as the Filuk site (Chapter III) and the Cedar Lake site (Chapter VI), 3) re-evaluate previously reported sites including the Cemetery Point site (Chapter IV), the Larter site, Rock Lake and United Church sites in the light of recent research on the Northern Plains (Chapter VI) and, d) record all available data on surface sites

in Manitoba (Chapter VII). After this material was synthesized, a greater understanding of the tool kit, subsistence pattern, and other activities of the members of social groups who made these McKean artifacts was achieved.

In order to adequately understand the significance of the artifact inventories from sites in Manitoba which contain McKean components, it was necessary to have some understanding of the geographical and temporal distribution of McKean components throughout the Northern Plains (Chapter VIII). An understanding of the variation and change in the tool inventory of members of these early social groups who made artifacts of the McKean assemblage in different regions throughout the Northern Plains was also important.

C Development of the McKean Type on the Northern Plains

During the 1930's and early 1940's, several stratified sites were excavated in the north-central Plains. The lower levels of some of these sites, such as Signal Butte I (Strong 1933, 1935), Pictograph Cave I (Mulloy 1943), and Birdshhead Cave (Bliss 1950) contained lanceolate projectiles with concave bases. By the late 1940's, archaeologists such as Wedel (1949) were correlating the artifacts from these sites and interpreting the artifacts in the lower levels of these sites as the remains of early, preceramic hunters.

In the early 1950's, Mulloy (1954) and Wheeler (1952; 1954) each defined these early points. In doing so, they created two distinct definitions which later led to confusion. Wheeler (1952; 1954) tended to be a "splitter" and defined three types -- McKean Lanceolate, Duncan, and Hanna. On the other hand, Mulloy (1954) "lumped" all of the points found in the lower level of the McKean site into

a single McKean type.

Wheeler (1952) described the McKean Lanceolate projectile point on the basis of measurements of 8 complete and 20 proximal fragments from the lowest levels of three sites, 48CK4, 48CK204, and 48CK7 in the Keyhole Reservoir, northeastern Wyoming. His sample consisted of specimens that were not found in conjunction with other point types. These levels probably represented single components.

In 1954, Mulloy described the McKean point type in terms of all artifacts found in the lowest level of the McKean site (48CK7) in the Keyhole Reservoir. In analyzing the 115 whole and fragmented projectile points in the lower level, Mulloy preferred to treat them as variations of a single type.

Although Mulloy (1954) was of the opinion that the range of variation of the projectile points found in the lower level formed a continuum, he did distinguish three variations. One variation was the unstemmed lanceolate from that Wheeler (1952) identified as the McKean Lanceolate type. The second variation was a lanceolate form with "slight constriction of base sides to form a scarcely perceptible stem defined by a slight shoulder. Sometimes this constriction takes a form of a slight lateral notch, which is to say that the proximal end of the base appears slightly expanded" (Mulloy 1954: 445) The third form had "pronounced stem constriction and shoulders and the proximal end is sometimes slightly expanded" (Mulloy 1954:445). Thus, the degree of "stemness" was an important secondary criterion.

Wheeler (1954) further complicated the issue by identifying Duncan and Hanna types which Mulloy had included as part of the McKean complex. Both the

Duncan and Hanna types are lanceolate forms with shoulders, but the two types are differentiated on the presence of straight stems and no flaring of the base as opposed to corner-notching and flaring of the base. Wheeler's illustrations (1954, Plate 1) give one the impression that he was only considering lanceolate forms with pronounced stems in defining his Duncan and Hanna types.

During the late 1950's, other researchers published reports that contained artifacts that could be considered within the McKean type as conceptualized by Mulloy. Bliss (1950) found two basal fragments in the lower levels of Birdhead Cave, northwestern Wyoming that might be stemmed McKean points. These basal fragments seem to me to fall within the range of variation of Wheeler's (1954) Duncan type. Wettlaufer (1955) identified a Thunder Creek culture, based on three Duncan-like projectiles, in the lowest levels of the Mortlach site, south central Saskatchewan. These levels contained one Duncan specimen, one probable Duncan specimen and a third which he could not definitely type.

From Danger Cave in northeastern Utah, Jennings (1957) identified over 40 point types of which W3, W5, W6, W8, W9, and W11 seem, to this writer, to represent variations of Mulloy's McKean type. Types W6, W8 and W9 could be included within Wheeler's McKean Lanceolate type.

During the 1960's, reports on sites containing McKean type points became more numerous. As the reports became more numerous, the range of variation in style increased considerably. The Bentzen-Little Bald Mountain Site (Bentzen 1963), the Bentzen-Kaufmann Cave Site (Grey 1962), and the Wedding of the Waters Cave Site (Frison 1962) represent excavated sites in which a few projectile points of the McKean type were found. At the Powers-Yonkee Bison Trap, Bentzen (1962)

identified what he considered as a distinctive variant of the McKean type. Stal-
lup (1966) tended to include a wide range of squat, triangular points under the
rubric of McKean and identified the Powers-Yonkee Eared type as a variant of
Mulloy's McKean type. Neuman (1962) identified some of his South Dakota
materials as McKean. The ultimate expansion for the definition of the McKean
type came when Husted (1968, personal communication) hypothesized that the
McKean type is part of the McKean complex which includes Duncan, Hanna, and
Ox-bow types as well as Pinto Basin and any other types with morphological sim-
ilarities on the Plains, Great Basin, and Plateau areas.

The researcher who is interested in studying artifacts of the McKean
complex is faced with conflicting typologies that are the result of two polar
orientations. Some researchers looked for supra-areal relationships by com-
paring points on their outlines alone. Others such as MacNeish (1958) identified
local "cultures" on the basis of a few points. Both groups of writers frequently
compared and equated projectiles on the basis of similarity of photographs and
often fail to make clear whose definition of McKean is being used.

The time period in question, between the Paleo-Indian and ceramic periods,
has been given several names. The term, Middle Prehistoric Period, was used
by Mulloy (1952; 1958). Champe (1946) used the phrase, Intermediate Lithic
Period, and the term, Archaic has been used by Wedel (1959) and Neuman (1967).
Wormington and Forbis (1965) coined the expression Meso-Indian Period. I pre-
fer the term Middle Prehistoric Period.

The time span of the Middle Prehistoric Period has been given a variety
of arbitrary dates. Authors such as Mulloy (1959) considered the beginning of

the Middle Prehistoric Period as the latter part of the Altithermal, about 3000 B. C. The terminal date chosen is generally about A. D. 400 or 500. The dividing period between the Early Middle and Late Middle Prehistoric Period is also arbitrary and is sometimes considered to have been about A. D. 0.

For the purpose of this research I place the beginning date for the Middle Prehistoric Period at about 4000 B. C. which enables me to include all carbon-14 dates associated with McKean assemblage artifacts. The terminal date shall be about A. D. 400. The Early Middle Prehistoric Period shall be that period of time when the individuals who manufactured the variants of the McKean assemblage existed. The terminal date for this Early Prehistoric Period shall be 1250 B. C. By choosing this date, I was able to include most carbon-14 dates for sites containing artifacts of McKean assemblages and to exclude later assemblages or components represented by tanged types such as the Pelican Lake type projectiles in Saskatchewan (Wettlaufer 1955; Wettlaufer and Mayer-Oakes 1960).

D McKean Projectiles in Manitoba Prehistory

In Manitoba, the McKean type was first reported by Vickers (1948, 1949, 1950) in his description of the pre-ceramic Lake Shore culture. The diagnostic artifacts for this "culture" were "crude stemmed and base notched projectile points some of them slightly fluted" (Vickers 1949:13).

The Whiteshell Focus which contained McKean Lanceolate points as one of the diagnostic artifacts was defined at the Cemetery Point site (MacNeish 1958) and the United Church site (MacNeish and Capes 1958). The Whiteshell Focus and Lake Shore culture were considered to be related because both were represented

by "McKean Lanceolate points, concave based points reworked into end scrapers, flat-topped snub-nosed scrapers, as well as the more general choppers, ovoid blades, and flake side-scrapers" (MacNeish 1958:74). MacNeish (1958) assigned a date of 3000 B. C. to 1500 B. C. to the Whiteshell Focus because J. B. Griffin had obtained carbon-14 dates of 2280 B. C. and 1780 B. C. with McKean projectiles from a site in the Angostura Basin, and because he believed that the Whiteshell Focus was stratigraphically earlier than his Larter Focus.

MacNeish (1958) also included McKean Lanceolate points as diagnostic artifacts for the later, transitional Larter Focus which he dated from 1500 B. C. to 500 B. C. He felt that the artifact inventory from the Larter site was similar to such components as the Pelican Lake culture of the Mortlach site, the upper level of the McKean site, as well as three other sites in the vicinity of the McKean site. The diagnostic projectiles for the Larter Focus are McKean Lanceolate, Anderson Corner-notched, large triangular, and ovoid projectiles.

The material from the lowest levels at the Tailrace Bay site was assigned to a McKean Phase because of a predominance of McKean Lanceolate projectiles (Mayer-Oakes 1967). This component was defined on typological grounds because the materials of several components had undergone some mixing.

Walter Hlady (1967) made a map of the "Distribution of McKean Points in Manitoba," indicating the finds that had been reported by MacNeish and Vickers and those that had been found by members of the Manitoba Archaeological Society working with Mr. Hlady. The illustrated specimen accompanying the map was a McKean Lanceolate projectile, although the sites on the map that were referred to for dates included sites that contained the total range of types of the McKean

complex.

Dennis Joyes (1967, 1969) reported a McKean-Duncan-Hanna Phase from the Avery site. This site is an unstratified, multi-component site excavated by Mr. Chris Vickers during the years 1944-48. Joyes identified five Duncan and three Hanna projectiles, and dated them tentatively at 1000-1500 B.C. (Joyes 1969:216).

McKean types, foci, phases, and complexes were being defined for Manitoba and the Northern Plains. However, researchers generally failed to define their types and concepts. As a result, comparative analyses were rare and superficial. In order to clarify my analysis, I have included my theoretic framework, including definitions, techniques, and typology.

CHAPTER II

DEFINITIONS, TECHNIQUES AND TYPOLOGY

A. Concepts and Definitions

This section on concepts and definitions was included to present the conceptual scheme which served to give internal consistency to the analysis of the thesis materials and to enable the reader to follow the discussion according to this scheme. Undue confusion resulting from reading a term and associating with it a meaning different from what was intended has hopefully been eliminated.

1. Definitions of Classificatory Units

A) Artifact

The term, artifact, has been defined in general terms such as "things of any kind that have been altered or constructed by man" (Hole and Heizer 1965:8) or has been frequently used without being defined. According to the above definition, archaeological site reports often ignore many phenomena that should be considered as artifacts, e.g. concentrations of chipping debris and faunal remains, which were not only altered by man but also yield evidence of cultural values and the resultant institutionalized patterns of behaviour of the members of a social group. The definition of artifact used in this report is slightly narrower in scope because it is being used only for Middle Prehistoric Period archaeology, but shall be more internally consistent with the analysis. Artifacts are those objects or materials which can be recognized as having been altered as the result of an intentional action of a human in the process of achieving a desired end. Concentrations of detritus and faunal remains can be important sources of information

on the cultural behaviour of members of a group. By including such phenomena as chipping debris within the definition of artifacts, researchers may be more likely to study these phenomena and thus obtain valuable information about lithic technology and raw materials distribution that would otherwise remain unstudied.

B) Attribute

An attribute is any distinguishable characteristic of an artifact. Attributes may be discrete, such as the presence or absence of a basal concavity or stem, or they may be continuous variables such as colour or length that must be arbitrarily subdivided.

C) Type

Types are arbitrary classifications based upon certain discrete attributes and/or a defined range of variation in continuous attributes. A type refers to "the attributes which artifacts of a given kind have in common, not to the artifacts themselves" (Rouse 1939:11). The number of types recognized is a function of the research problem at hand. Certain classes of artifacts, e. g., scrapers, have been subdivided into numerous types in order to make more meaningful comparisons among sites.

2. Units of Interpretative Social Patterns

A) Component

A component consists of the remains from a site that represent the artifact inventory of one community or part of a community whose members have retained a relatively consistent pattern of activity. A component can, presumably, be distinguished from older, younger or contemporaneous components by some

distinctive part of the artifact inventory. It may represent a brief camp site or an occupation of some duration in which no major events or inventions have brought about a change in the artifact inventory. Deetz (1967) feels that components can represent successive occupations by the same social group, but the lack of stratigraphic separation in many Manitoba sites may mitigate against such fine distinctions.

B) Assemblage

An assemblage is a group of artifacts that represents the tool kit and activities of a particular community. An assemblage includes all tools and other materials that belong to one community in one or more sites, depending upon the seasonal or activity pattern.

C) Phase

A phase is the artifact inventory of a number of similar assemblages which were produced by one or more social communities which shared certain technological patterns. The geographical distribution of a phase at any point in time may coincide with the boundaries of bands and may contain some minor local variations in certain attributes such as size, presence of distinct stems, or depth of basal notches on a projectile point, but certain diagnostic traits such as the presence of basal concavity and lanceolate form will be found throughout the geographical and temporal ranges. However, the boundaries of ethnic groups¹ such as bands or

¹ An ethnic group is a "hereditary group... which is defined by its members and by others as a separate people, socially, biologically, and culturally; it need not be distinguishable in objective fact by any unique complex of cultural or biological traits" (Sinha quoting Marriott 1967:92-93).

tribes may be difficult to discern. Also, there is not necessarily a perfect correlation between a social unit and a particular tool kit (Chang 1967:41).

D) Complex

A complex represents a combination of phases which share a sufficient number of traits to be considered the remains of related communities. This concept is used in a similar manner to McKern's culture complex as defined in 1940 (Taylor 1948:132).

3. Geographical Units

The geographical units are defined in a similar manner to Willey and Phillips (1958). The definitions used here are more specific because they are designed only for artifacts that were left by small groups of hunters in a geographical area in which few correlations have yet been made between cultural and physiographic boundaries.

A Site

A site is a relatively small area that has a fairly continuous coverage of remains representing an occupation by only one community or part thereof at any specific time. It may vary in size and composition from a temporary camp to a village. The boundaries are determined, at least in part, by the interests of the researcher. For this research, artifacts of the same type or assemblage scattered more or less evenly over a section of land were considered as one site, but if there appeared to be distinct clusters of different types, e. g. projectiles of different periods, then two or more sites were identified.

B) Locality

A locality is slightly larger. It may vary in size and form from the space surrounding a settlement that was utilized by the members of that community, to a small physiographic unit such as part of a drainage basin occupied by members of several neighbouring communities who produced related tool kits.

C) Region

A region is a larger unit that is determined by the research being carried on (Willey and Phillips 1958:19). Examples of regions include map areas such as the Swan River Region which have served as the limits for research problems. The regions utilized in this report vary in size, from 2,376 to 5,280 square miles.

4. Integrative Units

The terms, horizon and tradition, are used in a manner similar to that of Willey and Phillips. The concept of horizon style is not being used. A horizon is a primarily spatial continuity of certain types, modes, or assemblages that appear to indicate a broad and rapid dispersal. However, unlike Willey and Phillips, the archaeological units linked by a horizon need not be considered approximately contemporaneous. As a particular artifact inventory is transported rapidly from one area to another, the inventory may be displaced or modified in the "hearth" area while the inventory remains unchanged in the peripheral region.

A tradition is a "(primarily) temporal continuity represented by persistent configurations in single technologies or other systems of related forms" (Willey and Phillips 1958:37). Willey and Phillips stress the arbitrary and relative nature of these opposed concepts and admit that what one researcher considers as a

horizon may be classified by another as a tradition.

The concept of "area co-tradition" as used by Bennett (1948) is also particularly useful because this is a unit in which the cultures of social groups in an area have been interrelated for an extended period of time. Although Willey and Phillips discard the concept of co-tradition, it seems to be a useful concept on the Northern Plains for the Middle Prehistoric Period when various local groups were relatively independent. Contrary to Willey and Phillips (1958) who view the concept of area co-tradition as a larger and more unwieldy unit than the concept of tradition, I see it as a lower level of generalization in which traditions covering large geographic areas are subdivided into sub-traditions as the archaeology of an area is understood more clearly.

B. Measurement Techniques

The descriptive terms that have been defined here do not differ markedly from other sets of terms currently being used as Binford (1963), or institutions as the Upper Colorado River Basin Archaeological Project (Anonymous 1963).

1. Descriptive Terminology for Projectile Points

- Body --That part of the artifact from the stem to the tip. If no stem is present, the body includes all of the artifact from the base to the tip.
- Tip --The constricted end that is usually pointed.
- Stem --The narrower portion between the base and the shoulder.
- Shoulder --That part along the outer edges that shows an angle of deflection different from the overall orientation of the edge.
- Base --That blunt, straight, or concave portion that is opposite the tip and generally perpendicular to the medial axis.

Tang --A shoulder in which the outer edge is lower than a plane perpendicular to the medial axis that passes through the juncture of the shoulder and stem.

Stem Height

--The distance between the most distal part of the base and the most distal shoulder.

Basal Notch Height

--The distance between the most distal part of the base and the most proximal part of the concavity.

Basal Thinning

--The removal of several small flakes immediately above the basal notch, presumably for ease of hafting.

Lateral Grinding

--Smoothing along the projectile point edges of the stems or lower parts of the body. Its presence is frequently difficult to determine.

Lanceolate vs. Triangular Form

--The lanceolate form tends to have convex sides or parallel sides with convex orientations towards the tip and base and a maximum width generally somewhere along the body edge in the mid-section or above; the triangular form is more likely to have straight to slightly convex sides with the maximum width generally at the base. There is a whole range of intermediate forms between these forms.

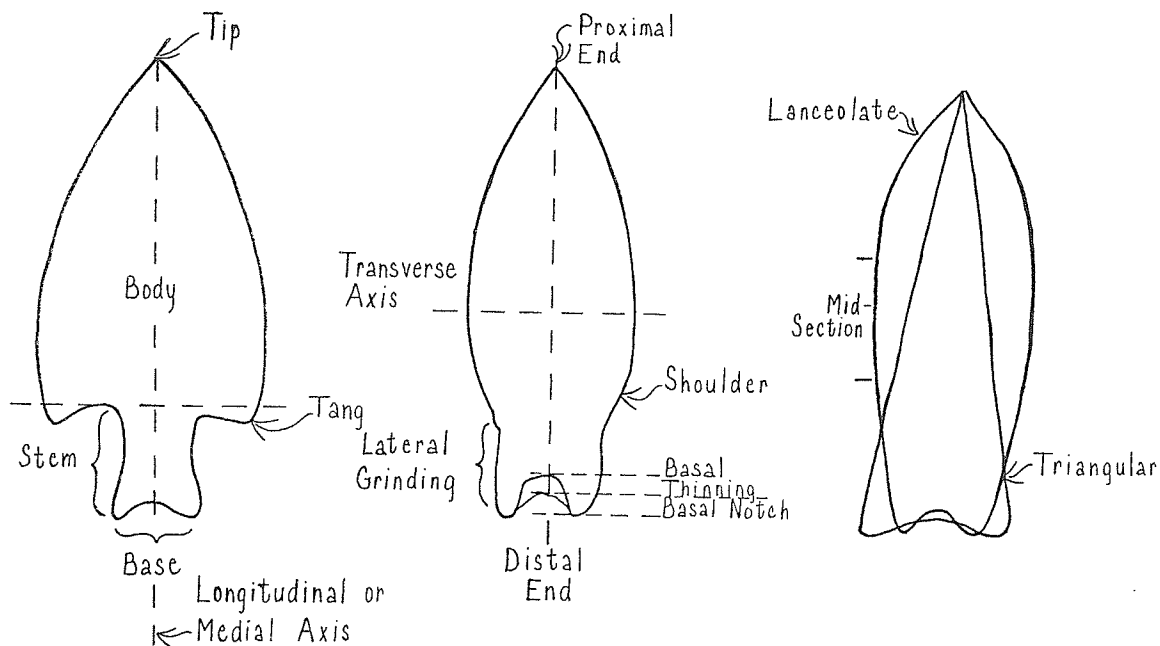


TABLE 1

EXPLANATION OF ABBREVIATIONS USED IN THE TABLES

Abbreviations For, and Measurements of, Attributes

L.	Maximum Length (millimeters)
W.	Maximum Width (millimeters)
Th.	Maximum Thickness (millimeters)
Wt.	Weight (grams)
Lat. Gr.	Lateral Grinding
Stem Ht.	Stem Height (millimeters)
Stem W.	Stem Width (millimeters)
Notch Ht.	Notch Height (millimeters)
Notch Th.	Notch Thinning (millimeters)

2. Measurements

All measurements were taken with calipers to the nearest tenth of a millimeter. The maximum length (L.) and width (W.) were measured parallel to and perpendicular to the longitudinal axis. The maximum thickness (Th.) was measured by holding the calipers parallel to the plane through the longitudinal axis.

The basal notch was measured from the maximum extremity of the base to the depth of the concavity. Basal thinning was measured from the edge of the concavity to the end of the thinning flakes. If the thinning flakes on both sides were of unequal length and they were readily discernible on both sides, two measurements were taken. All measurements for these two attributes were taken with the prongs of the calipers perpendicular to the medial axis of the point.

The measurements of the stem were frequently more difficult, particularly when there were no distinct shoulders or tangs. If there was a distinct shoulder, the stem height was measured from the maximum extremity of the base to the shoulder. If the shoulders were not directly opposite, then the side with the most distal shoulder was chosen for the measurement. When there was not a distinct shoulder, a point of maximum deflection from the line along the edge of the stem, parallel to the longitudinal axis, was chosen (see Figure 2).

For stems with nearly parallel sides, the greatest stem width was chosen. When flared stems were present, the maximum and minimum widths were measured.

These measurement techniques were applied to all artifacts that were in my possession. Measurements were made on life-size drawings and photographs

of some specimens. I was able to measure most of the Manitoba artifacts referred to in this thesis, but I had to depend upon reports or personal communication for artifacts from sites outside of Manitoba.

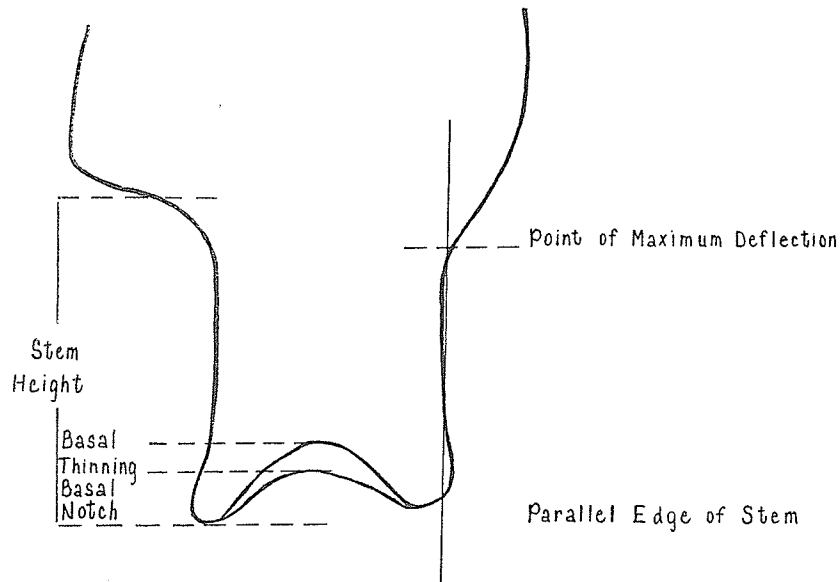


Figure 2: Measurements of Stem Attributes

C. Projectile Types of the McKean Complex

The definitions of the McKean type by Mulloy (1954) and Wheeler (1952; 1954) are both useful if the researcher remains aware of the level of analytical generalization that is desired. Each of Wheeler's McKean Lanceolate, Duncan, and Hanna types has been found in sites in the absence of one or both of the other types. However, when the projectiles from a larger sample of sites are compared, it becomes impossible to distinguish among these types on the basis of any absolute criteria. The measurements of the traits that are used to distinguish these artifacts fall on a continuum.

We can use Mulloy's (1954) definition of the McKean type when we wish to distinguish between the McKean complex and other complexes. This general definition is henceforth referred to as the McKean type and is used to refer to projectiles that share the traits of medium length, approximately 25 to 60 millimeters, narrow lanceolate outline, and concave base.

Wheeler's (1952; 1954) definitions for the McKean Lanceolate, Duncan, and Hanna types form the basis for the writer's definitions (Figure 3), but some modifications were necessary because of the larger sample involved. These types are useful when McKean components are being compared and more refined analysis is desired.

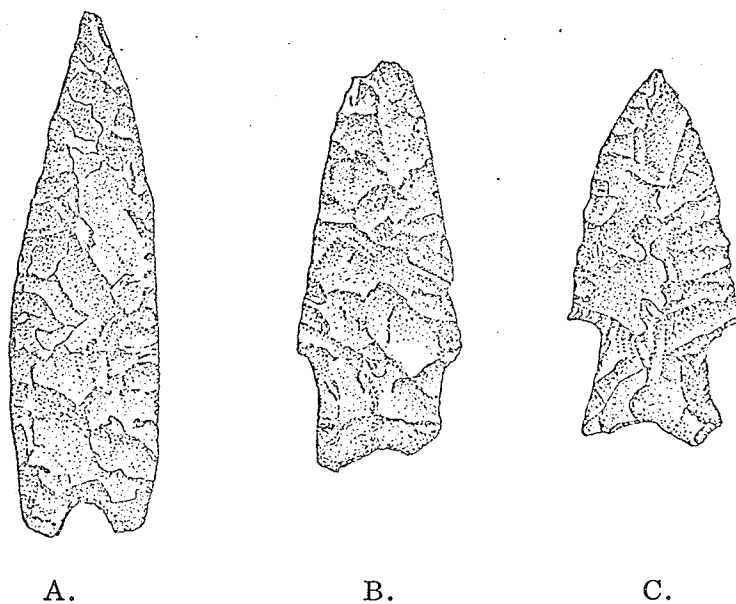


Figure 3: Idealized Representations of Wheeler's: A) McKean Lanceolate, B) Duncan, and C) Hanna Types (Wedel 1961:251)

1. McKean Lanceolate Type

A) Outline

The specimens are lanceolate with a variety of forms. The edges may be:

1) parallel-edged and curving to the tip and base, 2) widest near the midpoint and curving towards the tip and base, 3) widest in the upper third and curving to the tip and base, and 4) widest in the lower third and incurved toward the tip and base. Other variations may include a slight flared appearance at the base. Another variation is short and squat. Some of these variations may be used to indicate regional variations or temporal shifts, but the variation found even in small samples such as at Tailrace Bay (see Plate 22) gives some indication that such problems will be solved only when numerous large samples with detailed measurements are available.

B) Basal Concavity

The variety of depths and shapes of basal concavities in the present sample of all sites appears to be irrelevant for determining regional type varieties. The amount of variation within a sample from one site also indicates that basal concavity probably cannot be used for plotting regional or temporal differences.

C) Lateral Grinding

This attribute is difficult to determine because the lateral grinding on the McKean complex projectiles is frequently impossible to see with the naked eye and difficult to discern by drawing a finger along the edge. The evaluation of this attribute was therefore quite subjective. The difficulty in perceiving this attribute may account for reports in which it has been stated that no McKean points indicated grinding (Mulloy 1954:445; Johnson 1967:5).

Numerous specimens from Manitoba were found to have lateral grinding along the lower edges of the projectile. On some specimens this phenomenon was readily discernible.

D) Size

Wheeler (1952) defined the range of variation in length of the McKean Lanceolate projectiles as 33.0 mm. to 60.5 mm. On the basis of a larger sample, I would suggest that the lower limits should be reduced to 25.0 mm. (Figure 4). Size alone is not adequate for identifying McKean Lanceolate projectiles because the upper limits overlap with the size range of the earlier lanceolate forms such as the Lovell Constricted and Pryor Stemmed types found in the region of the Big Horn Canyon (Husted 1969).

The mean or modes of the length of a total sample from a site may be a useful criterion. When means or modes of projectiles are compared between McKean sites and sites with earlier types, there is an observable difference. When there is a sufficient number of samples with detailed measurements, the use of lengths for determining temporal and geographical measurements may become important.

Width, thickness, and weight appear to be of little use in determining variations of the McKean Lanceolate type on the basis of the present sample. There does not appear to be any significant relationship between these attributes and the attribute of length. There is insufficient evidence to indicate that these attributes can be plotted to form any distribution clusters that make useful criteria for defining a type or sub-type.

The McKean Lanceolate type includes projectiles that have a narrow lanceolate outline, concave base, widest cross-section above the base, and a medium length. The length varies between 25 mm. and 60 mm., but is generally shorter than 50 mm. It is distinguished from the other types of the McKean com-

plex by the absence of a stem.

2. Duncan Type

The distinguishing attribute of the Duncan type is the presence of a stem and "insloping, non-barbed shoulders" (Wheeler 1954:7). The size range for specimens of the Duncan type is the same as for the McKean Lanceolate type.

Two distinct variants can be distinguished when only a few sites are being compared. One is a pseudo-shouldered variant that has a stem width only slightly narrower than the width of the body above the shoulder and has shoulders which often lack a distinct point of deflection (see Plate 25, D and I). Another variant has a stem that is at least 0.2 mm. narrower than the body of the projectile and has shoulders with a point of deflection ranging from being barely perceptible to 90°. When a large sample of sites is being compared, the attribute of "stemness" forms a continuum.

Lateral Grinding is more frequent on Duncan projectiles and may, in some cases, account for the presence of a stem. This attribute is absent on a small part of the sample.

3. Hanna Type

The distinguishing attributes of the Hanna are "straight or insloping and slightly barbed shoulders . . . an expanding stem with shallowly notched or straight, thinned base . . . and the stem . . . from one-fourth to one-half of the total length" (Wheeler 1954:8). The size range is the same for the McKean Lanceolate type, and lateral grinding is more frequent than on the McKean Lanceolate type.

This type presents some very difficult problems in terms of identifying specimens that are out of context. The barbed, straight-based variant can be

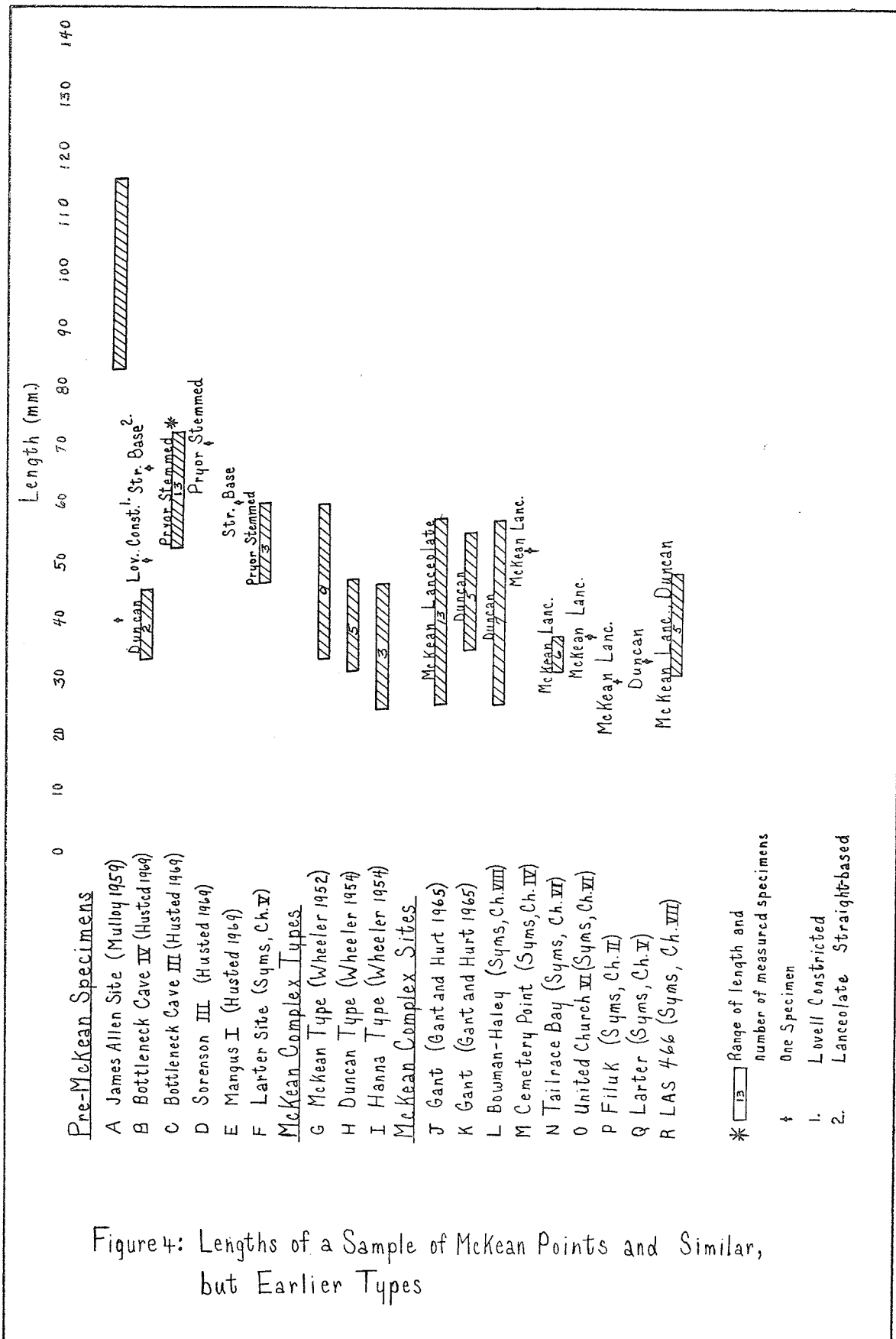


Figure 4: Lengths of a Sample of McKean Points and Similar, but Earlier Types

confused with later types. There is no distinct break between an expanding stem and a corner-notched specimen with a wide notch such as some Pelican Lake specimens. The degree of stem flaring forms a continuum with a parallel stem at one pole and a side notch at the other pole.

When McKean projectile types are defined according to distinguishing attributes, these attributes are few in number and are frequently difficult to measure. Because many attributes, e.g. stemness, do not cluster around certain values, they must be arbitrarily categorized. Although there are limitations to typology, particularly for lithic artifacts, it is still the most useful method of classifying Middle Prehistoric Period artifacts and is used in the following chapters for analyzing the artifacts from McKean components at sites in Manitoba and the Northern Plains.

CHAPTER III

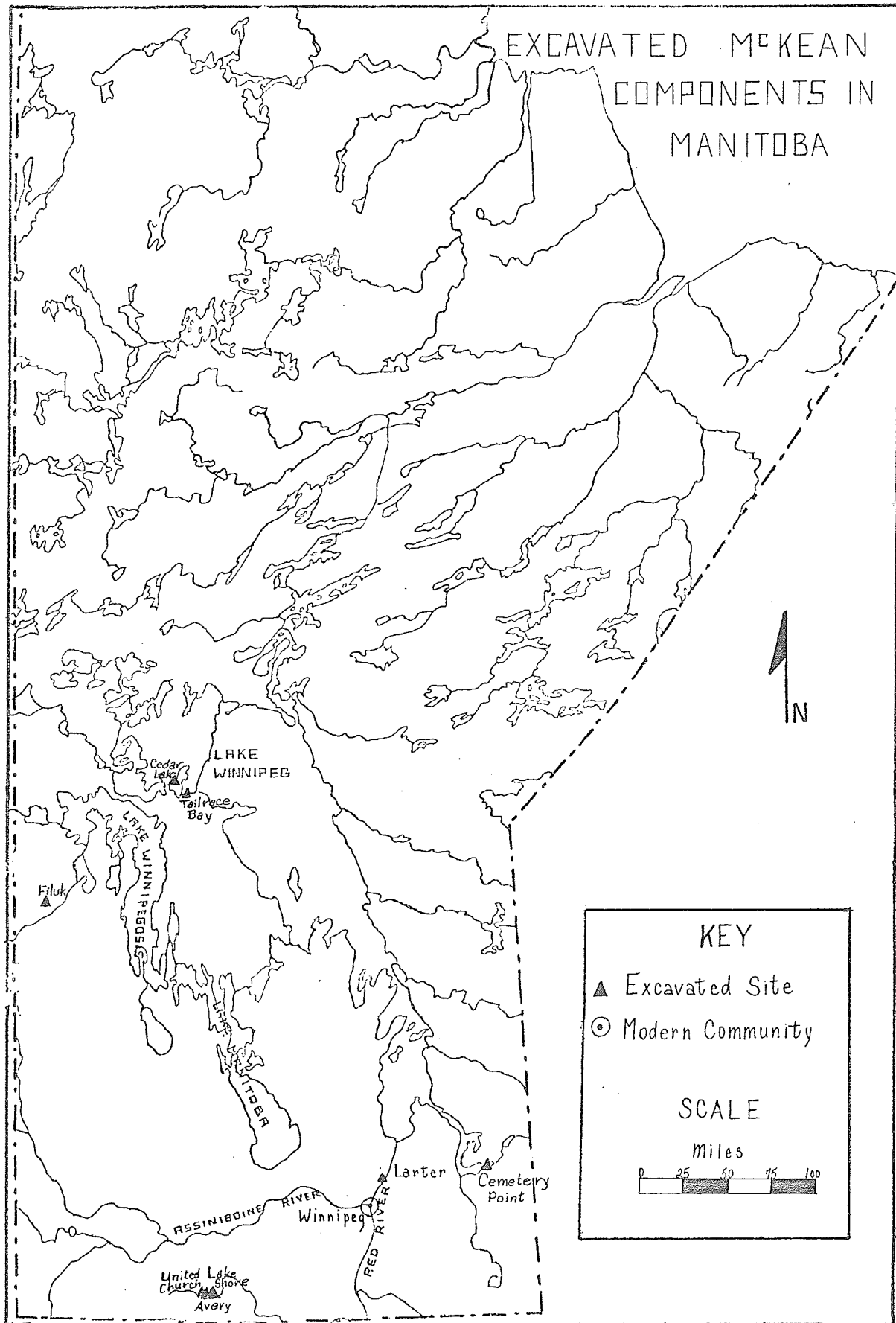
THE FILUK SITE

The Filuk Site¹ has been archaeologically surveyed on four occasions, and excavations have been carried out on three of these occasions (Map 1). In 1966, a Lake Agassiz Survey crew of the University of Manitoba Department of Anthropology, surveyed one field and dug one 2 x 2 meter test pit on the top of a morainic ridge which yielded only unworked flakes. In 1967, a Lake Agassiz Survey crew surveyed an adjacent field to the west. In May of 1968, a crew under the leadership of Leo Pettipas carried out more thorough tests in an adjacent field along the north edge of the morainic ridge (Figure 5). The writer dug one 1 x 1 meter square adjacent to Pettipas' excavations of May 1968. Although all of these materials have been given the same site designation, the data from Pettipas' excavation is described separately.

A. Site Description

The Filuk Site is located on top of a morainic ridge northwest of the town of Swan River which has been referred to as the "Campbell Island" (Tamplin, personal communication). In the vicinity of the site, the moraine has a flat surface and steep slopes dropping sharply to the surrounding flat to gently undulating Manitoba Lowland. The ridge forms a promontory extending into the surrounding

¹Designated as LAS 253 by Morgan Tamplin, Director of the Glacial Lake Agassiz Survey crew, AG-15 by Leo Pettipas.



area of low relief (Figure 5).¹

Numerous large boulders were protruding from the soil over the ridge and large piles of rocks collected from the nearby cultivated slopes were found along the fence lines on the ridge. Many of these boulders were of limestone or granite but large boulders of chert were also seen.

Prior to settlement, "it is assumed that aspen, (Populus tremuloides) and white spruce, (Picea glauca) predominated" (Ehrlich, Pratt and LeClaire 1962:50). Aspen (Populus tremuloides) had the greatest areal extent on the well drained, upland Mixedwood Section of which this moraine would be part, but it mixed with "jack pine (Pinus banksiana) . . . and black spruce (Picea mariana) on the plateau-like tops of higher hills" (Rowe 1959:23).

The vegetation of the surrounding Manitoba Lowlands Section probably consisted of "aspen (Populus tremuloides) and balsam poplar (Populus balsamifera) . . . in pure associations or mixed with white spruce (Picea glauca) and white birch (Betula papyrifera)" (Ehrlich, Pratt and LeClaire 1962:24). Both this section and the mixed Woodland section lie within the Boreal Forest Region (Ehrlich, Pratt and LeClaire 1962:24; Rowe 1959).

This area was not covered entirely with forest vegetation prior to settlement. On the poorly drained land, forest patches with intervening swamps and meadows prevailed (Rowe 1959:21). Tyrrell (1892) reported belts of poplar and low meadow land.

¹This schematic diagram is based upon a tentative map constructed by John Elson and Morgan Tamplin. This map consists of 1:50,000 field map in the Laboratory of Anthropology, University of Manitoba.

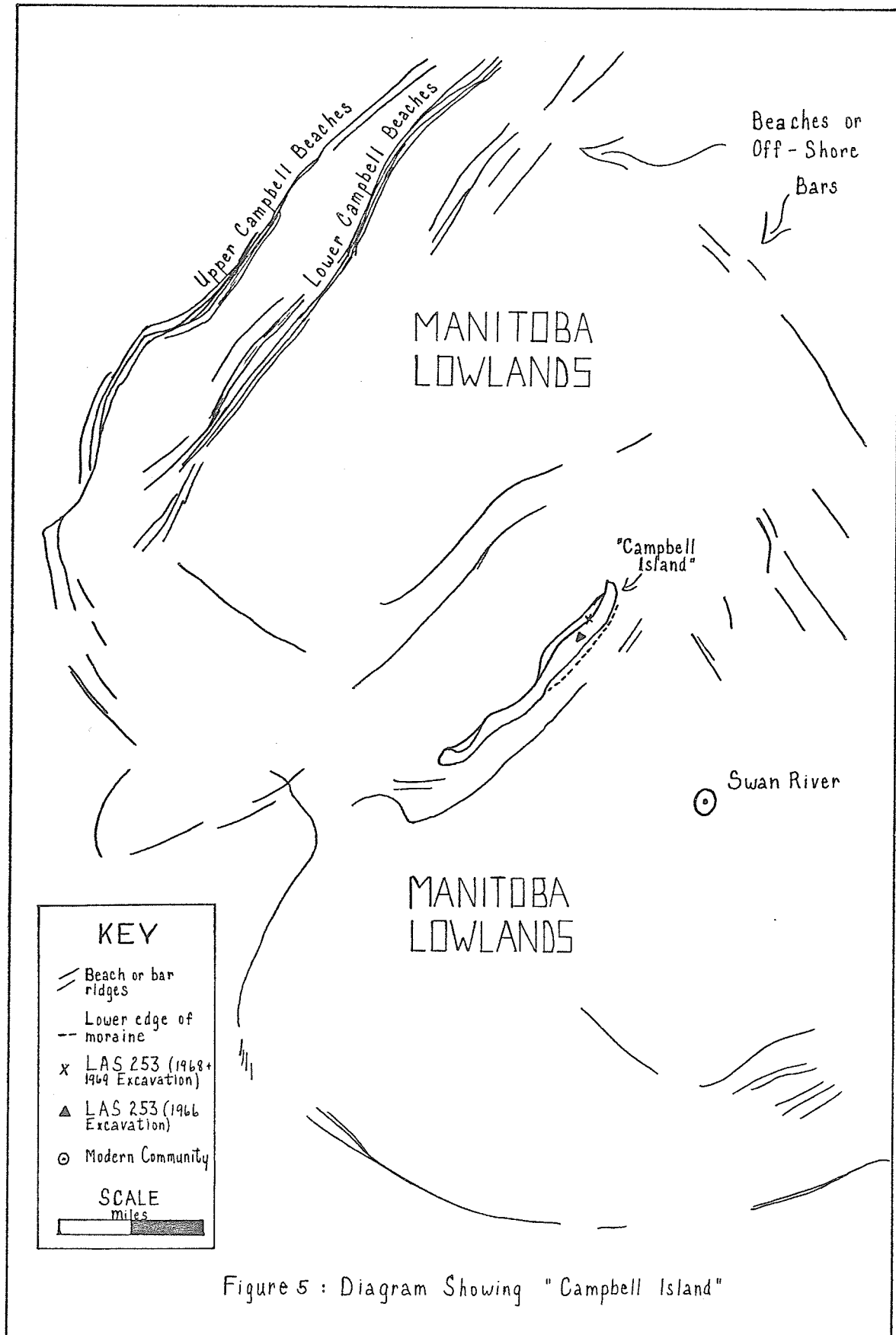


Figure 5 : Diagram Showing "Campbell Island"

The soil on top of the ridge consists of about 30 centimeters of lacustrine loam and clay over calcareous till (Figure 7) and Appendix A). The top 15 centimeters consists of sod and plow zone (Ap)¹. Beneath the plow zone there is a dark brown Bt horizon or remnants of an Ae horizon which is lighter in colour and more granular than the Bt horizon. At a depth of about 82 centimeters, a stratum of solid boulders which had undergone some cementing to form a pseudo-conglomerate exists. The soil development was identified as a dark-grey wooded (luvisolic) soil profile.

Evidence of rodent activity was common on the top of the ridge. Pettipas (1968) reported that rodent disturbance had been noted in the excavations and that in Square D the material from a rodent mound was excavated separately from the rest of the materials.

This site is unusual in that no recognizable source of water was found nearby. The nearest bodies of flowing water are the Woody River which is about two miles to the northwest and the Swan River which is about three miles to the southeast. There have been no ponds, bogs, or springs observed in the surrounding vicinity by the members of the archaeological parties who surveyed the vicinity.

During the late spring and summer when archaeological investigations were being carried out at the site, the fields in the surrounding lowland were dry. The owner, Mr. Peter Filuk, reported that in the early spring, the fields along the northern base of the ridge were covered entirely with water which slowly drained to the southwest. It was impossible to determine if a similar drainage pattern

¹The site had been cultivated for 3 years during the 1930's.

existed before the land was cultivated and drainage ditches were constructed.

B. Pettipas' Excavation

Pettipas excavated several squares in an uncultivated area at the edge of the ridge (Figure 6). The squares were excavated in arbitrary 5 or 10 cm. levels to a depth ranging from approximately 10 to 40 cm. The excavation levels did not correspond with the natural levels because the soil horizons were too irregular.

The overburden was removed by shovelling and screening until artifacts were found. The soil was then trowelled and screened to a level where no further artifacts appeared.

Pettipas (personal communication) believes that the greatest artifact concentration was found in what he described as a thin yellow-brown sand layer, or the Ae horizon which was found at an average depth of 10 cm. (Figure 7)¹. However, artifacts were found on the surface and in all excavation levels above the Ae horizon as well as in some levels beneath the Ae horizon.

C. Excavations by Tamplin and Syms

During the 1966 Glacial Lake Agassiz survey, a crew excavated a 2 x 2 meter square along the south edge of the moraine a short distance to the west of the location of Pettipas' excavation. A few flakes were found scattered throughout the levels to a depth of about 40 cm. (see Appendix B).

The members of the 1966 crew also collected large quantities of lithic material from the surface of the cultivated field about the site. This material has

¹This soil profile was obtained from a colour slide photographed by Pettipas.

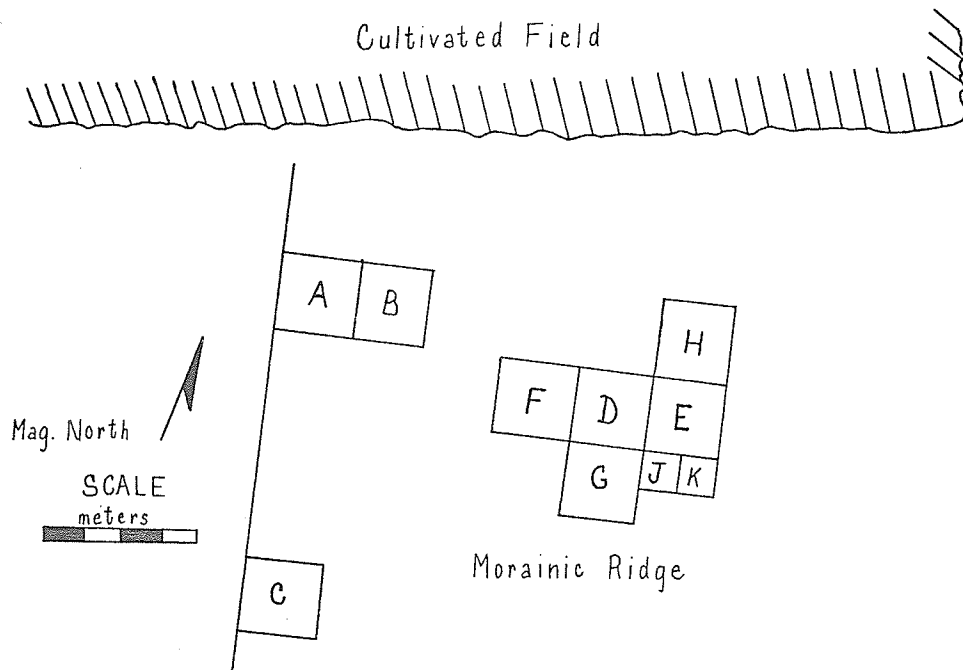
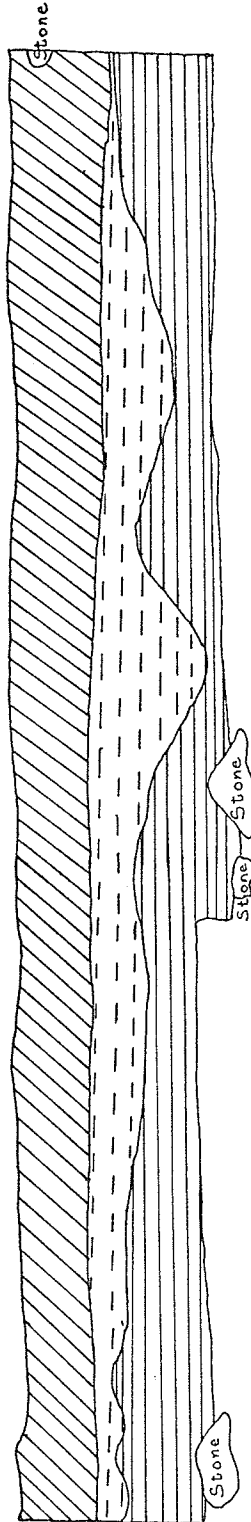


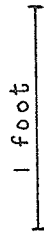
Figure 6: Excavations at the Filuk Site (LAS 253) by Pettipas (Pettipas 1968:57) and Syms.

SOIL PROFILE SQUARE G, EAST WALL

LAS 253



SCALE






-  Ap Dark grayish brown loam (Plow Zone)
-  Ae Light brown, coarse-textured loam
-  Bt Dark grayish brown clay

Figure 7: Soil Profile Showing the Strata Excavated by Pettipas

not yet been analyzed, but several unifaces and bifaces were found, including one probable Pelican Lake and Ox-bow projectile.

The 1969 excavation by the writer was carried out to obtain a deeper soil profile and soil samples, and to develop greater familiarity with the site. A 1 x 1 meter square, test pit K, was excavated adjacent to Pettipas' excavation. Level one, from 0 - 7 centimeters, represented the sod level. Successive levels were each 5 centimeters thick to a depth of 22 centimeters when no further artifacts were encountered. Level 5, 22 - 85 centimeters, was removed by shovel (Figure 8¹ and Appendix B).

The greatest concentration of the 1969 artifact sample (Appendix B) appeared to be at a depth of about 7 centimeters. The artifacts in Levels IV and V were associated with a disturbed area in one corner.

All flakes, regardless of the material, were kept for further analysis. The people who occupied this site had relied mainly upon chert, but had also utilized granite, limestone, silicified sediment, and limonite.

None of the artifacts represented finished tools. The only artifact that approached a finished tool was a crude biface blank.

D. Description of Pettipas' Data

The data taken into consideration in this section are the materials excavated by Pettipas, excluding surface materials collected by him. The total sample

¹This soil profile was traced from colour slides taken in the field.

of excavated materials consisted of 17,484 pieces.

Most of this sample was made up of unworked flakes, platform rejuvenation, flakes and cores. There were 17,418 or 99.62% unworked artifacts which represented 33,554 grams or 97.28% of the total weight of excavated material. Only 66 or 0.38% were worked artifacts which represented 940 grams or 2.72% by weight.

1. Raw Material

Over 99 per cent of the unworked flakes and all of the worked artifacts were made from Swan River chert. A few unworked flakes of quartz, possibly Cathead chert, limestone and an unidentified dark rock were found.

Swan River chert is a material category which includes microcrystalline to cryptocrystalline quartz in a wide range of colours and textures (Leonoff, personal communication). Much of the material contained flaws in the form of geodes of quartz crystals dispersed throughout the flakes.

The most abundant sources of Swan River chert in the area of the Swan River Valley seemed to have been fluvially deposited cobbles or boulders on terraces and glacially deposited materials on moraines. The chert utilized at this site appeared to have been taken from the ridge. There is not yet adequate evidence to determine the distribution of all sources that were available to pre-historic hunters. Most of the materials found in archaeological sites in the southern parts of the province do not appear to be the same material. Joyes (1969: personal communication) stated that materials similar to Swan River chert were found in Montana and Wyoming.

2. Artifact Categories

The artifact categories and sub-categories were classified according to degree of alteration, material, resultant form, and inferred function (Figure 9). The functional differentiation was made only at the lowest levels of classification because it was impossible to state confidently the function, or functions, of many of the artifacts. Also, many of them may have been preforms, i.e., "artifacts which are still generalized and have not taken on the characteristics of finished tools ... characterized by the almost exclusive use of percussion flaking ... and they generally do not show signs of wear" (Fitting 1966:39). Therefore it was difficult to classify certain specimens.

The classificatory scheme illustrated in Figure 8 was designed for the description and analysis of the raw data utilized in this report, particularly for the materials from the Filuk and Cemetery Point sites. The Filuk artifacts were divided into unworked and worked artifacts and then subdivided into numerous sub-categories.

A) Unworked Lithic Artifacts

This group included those artifacts that were produced as a result of raw materials being modified to produce finished artifacts. Any artifacts that were not in some stage of manufacture toward a recognizable object as an end result were included. This category has been subdivided into unworked flakes, cores, and platform rejuvenation flakes.

1) Unworked Flakes -- These 17,471¹ specimens included all flakes that show modifications for use or signs of use. Flakes of a wide range of sizes from those smaller than thumb nail size to those large enough to be considered as core flakes were included.

2) Cores -- Cores were those masses of rocks that appear to be the remnants of boulders which have had one or more flakes intentionally struck off. They were classified as cores with prepared striking platforms and those without prepared platforms. Much of the raw material had flaws such as geodes of quartz crystals scattered throughout. A cursory study of the excavated materials and materials picked off the surfaces of the nearby fields indicated that the boulders were generally chipped to remove the weathered surface rock and the remaining pieces were broken into large flakes presumably with the intention that certain fragments would contain few enough flaws to be usefully worked into a finished tool.

a) Cores with prepared striking platforms (2 specimens) (Plate 1) --

Cores with prepared striking platforms were cores which appear to have a fairly flat surface on which to strike off flakes.

b) Irregular cores (5 specimens) -- These were irregular masses of rock which were battered from many different directions. They were extremely difficult to distinguish from large core flakes which had been chipped from other cores.

¹See Appendix C for a summary of artifacts from Pettipas' excavation.

c) Discoidal cores (2 specimens) -- Discoidal cores were cores which have had flakes removed in such a manner that the shape was circular to elliptical with a thickness equal to or less than the maximum diameter of the cross-section (see Table 2). These discoidal artifacts were differentiated from other discoidal artifacts on the basis of irregularity of edge, absence of pressure flaking, and relative thickness of the midsection.

3) Platform Rejuvenation Flakes (4 specimens) (Plate 2) -- These flakes had triangular cross-sections and exhibited evidence of numerous small flake scars along one edge. These flakes were probably produced when the artisan had chipped the core in such a manner that: A) the side of the core formed an angle of approximately 90° with the platform and, B) a flake had to be removed to form an acute angle where the side and platform of core met (Tamplin, personal communication) (Figure 10).

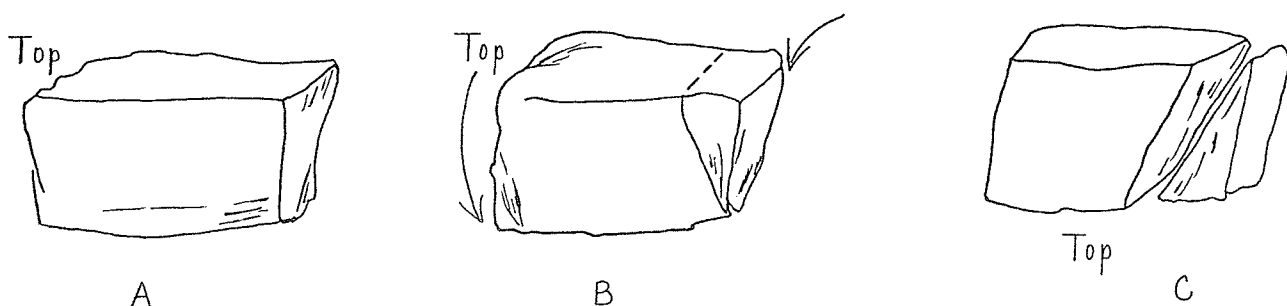


Figure 10: Removal of a Platform Rejuvenation Flake

Four specimens were identified. Specimens A, B, and C (Plate 2) were positively identified as platform rejuvenation flakes by Morgan Tamplin. Tamplin believed that Specimen D (Plate 2) was too small to be a platform rejuvenation

Table 2

MEASUREMENTS OF COMPLETE DISCOIDAL BIFACES

Provenience	Maximum Length	Maximum Width	Maximum Thickness	Weight	L/W	L/Th
F1	10.6 cm.	7.05 cm.	3.1 cm.	242 gms.	1:1.5	1:3.4
E2	8.1 cm.	4.7 cm.	2.3 cm.	82 gms.	1:1.7	1:3.5
D2	7.1 cm.	6.0 cm.	2.5 cm.	114 gms.	1:1.2	1:2.8
J5	6.9 cm.	4.0 cm.	1.3 cm.	38 gms.	1:1.7	1:3.0
E2	2.2 cm.	2.2 cm.	1.2 cm.	9 gms.	1:1.0	1:1.9
E1	6.1 cm.	5.5 cm.	3.8 cm.	126 gms.	1:1.1	1:1.6
C2	3.95 cm.	3.2 cm.	2.1 cm.	28 gms.	1:1.2	1:1.9
J1	6.3 cm.	3.5 cm.	1.7 cm.	40 gms.	1:1.8	1:3.7

flake. However, since it exhibited all of the attributes of the other three specimens, I have included it in the same category.

B) Worked Lithic Artifacts

This class of specimens includes all lithic materials that show evidence of having been utilized or modified in order to produce a recognizable tool. Tools that have been constructed according to some preconceived scheme, preforms which represent some stage of manufacture of the above, and retouched flakes are included in this category.

1) Bifaces -- Bifaces are artifacts that show working on both faces of an edge. This sub-category of artifacts includes a wide variety of forms.

a) Elongate bifaces include: (1) forms that have pointed tips and/or have notched bases (Plate 3; A-E, and Table 4) and, (2) forms having rounded or pointed tips and square or rounded bases (Plate 3; F-K).

Artifacts were classed as projectile points if they: 1) were bifacially flaked, 2) showed evidence of secondary pressure flaking to form a thin, regular edge, 3) had a thin and narrow, biconvex or plano-convex body, and, 4) were pointed and/or showed a pattern or basal flaking that is commonly identified as part of a projectile point. Five examples (Plate 3, A-E), can be identified with reasonable certainty as projectile points. The smaller forms, specimens A, B, C, and D may be arrow or atlatl points, and specimen E is probably a knife or spear point because of its size. These artifacts were subdivided into types on the basis of one or more differentiating attributes.

Five specimens (Plate 3; F-J) are probably basal fragments of knives. All of these specimens were reasonably symmetrical, thin, and had a square or round

base. The sides have been worked to sharp, thin edges, but the edges frequently lacked the refined pressure flaking exhibited on the projectiles.

Specimen F, seen as a whole unit in Plate 6; and A¹, is an example of a tool that was broken in the finishing process. The problem was to determine what the manufacturer had in mind as a finished tool.

Pettipas (personal communication) identified it as a possible unfinished Agate Basin point. Two Paleo-Indian artifacts were found to the west on the same moraine by the owner. Pettipas identified these points as examples of the Meserve and Plainview types, respectively.

On the other hand, specimen A (Plate 6) may have been McKean knife. Mulloy (1958) identified large, thin bifaces with pointed tips, convex bases, and parallel to convex sides as diagnostic artifacts at some McKean components. Since most site reports containing McKean assemblages lack adequate analysis of artifacts other than projectiles, it could not be definitely stated that this artifact was or was not a knife, spear, or Paleo-Indian projectile point.

b) Discoidal bifaces (Plates 3; J-O, 4; A, B, D and 5; A-D) all shared a discoidal outline and ranged from very thin forms with regular edges that may be knives to thick forms with irregular edges that may be choppers. The artifacts in this sub-category have been divided into three groups mainly on the basis of the regularity of the cutting edge and the relative thickness (Plate 6).

At one end of the range were the choppers which had thick cross-sections and ripple-patterned edges which had peaks protruding perpendicular to the orientation of the cutting edge. This ripple pattern was produced by means of large

Table 3

MEASUREMENTS OF ARTIFACTS IN PLATE 3

Specimen	Designation	L mm.	W mm.	Th mm.	Wt. gm.	Lat. Gr.	Notch		Prov.
							D.	Thin.	
A	McKean Lanceolate	29.8	15.8	5.0	2.6	-	2.2	2.2	E-3
B	McKean Lanceolate	30.6*	18.4	7.0	4.2	-	2.0	5.3	D-1
C	McKean Lanceolate	21.2*	18.8+	6.0	2.9	-	3.2	4.0	D-1
D	Projectile	31.7 ⁺	21.0	7.8	5.9				J-1
E	Lanceolate Biface	37.0 ⁺	28.0 ⁺	9.6	8.1				E-2
F	Biface frag.	29.0 ⁺	23.5	8.7	7.0				F-3
G	Biface frag.	28.4 ⁺	24.0	9.0	8.8				D-1
H	Biface frag.	23.2 ⁺	28.0	12.0	8.8				H-3
I	Biface frag.	25.5 ⁺	30.6	10.4	10.0				D-1
J	Biface-knife?	35.0 ⁺	40.0	10.0	15.8				J-2
K	Biface-knife?	41.0	40.0	12.4	21.3				J-3
L	Biface-knife?	31.0 ⁺	32.0	8.5	11.2				D-1
M	Biface-knife?	34.0 ⁺	23.8	6.4	6.0				A-1
N	Biface-knife?	31.5	28.0	7.4	8.7				G-2
O	Biface-knife?	69.5	42.0	13.3	38.0				J-5

* Estimated lengths -- 38 mm.

flakes being removed with few, or no smaller flakes being removed. The edges appeared to be sufficiently sharp to cut objects if the tool was directed only in a direction perpendicular to the orientation of the edge.

At the other end of the continuum were the discoid knives which had thin cross-sections and straight edges which would be suitable for cutting materials by means of a sawing motion. These even edges were produced as the result of the secondary removal of small flakes.

A third group of two artifacts has been listed as indeterminate between knives and choppers because of the degree of irregularity along parts, or all, of the cutting edges. Since I have not attempted to cut materials nor skin animals with stone artifacts, I am not qualified to determine the crucial index of edge irregularity at which an artifact can no longer be used as a knife. Nor was I able to determine any crucial width/thickness ratio that would separate knives from choppers. The problem of differentiation between choppers and knives was further complicated by the possibility that some of the artifacts under consideration may have been preforms of knives, or some of these discoidal knife-like artifacts may have been preforms for smaller elongate forms such as knives or spears.

2) Unifaces --This category included all plano-convex tools with beveled working edges. The plano face appears to be made generally as a result of the flake being struck from the parent material or as a result of a small degree of modification.

a) Scrapers (11specimens) -- Scrapers tend to have straight to convex working edges. This class has been subdivided into types on the basis of thickness, angle of the working edge, number and position of the sides that had pressure flaking

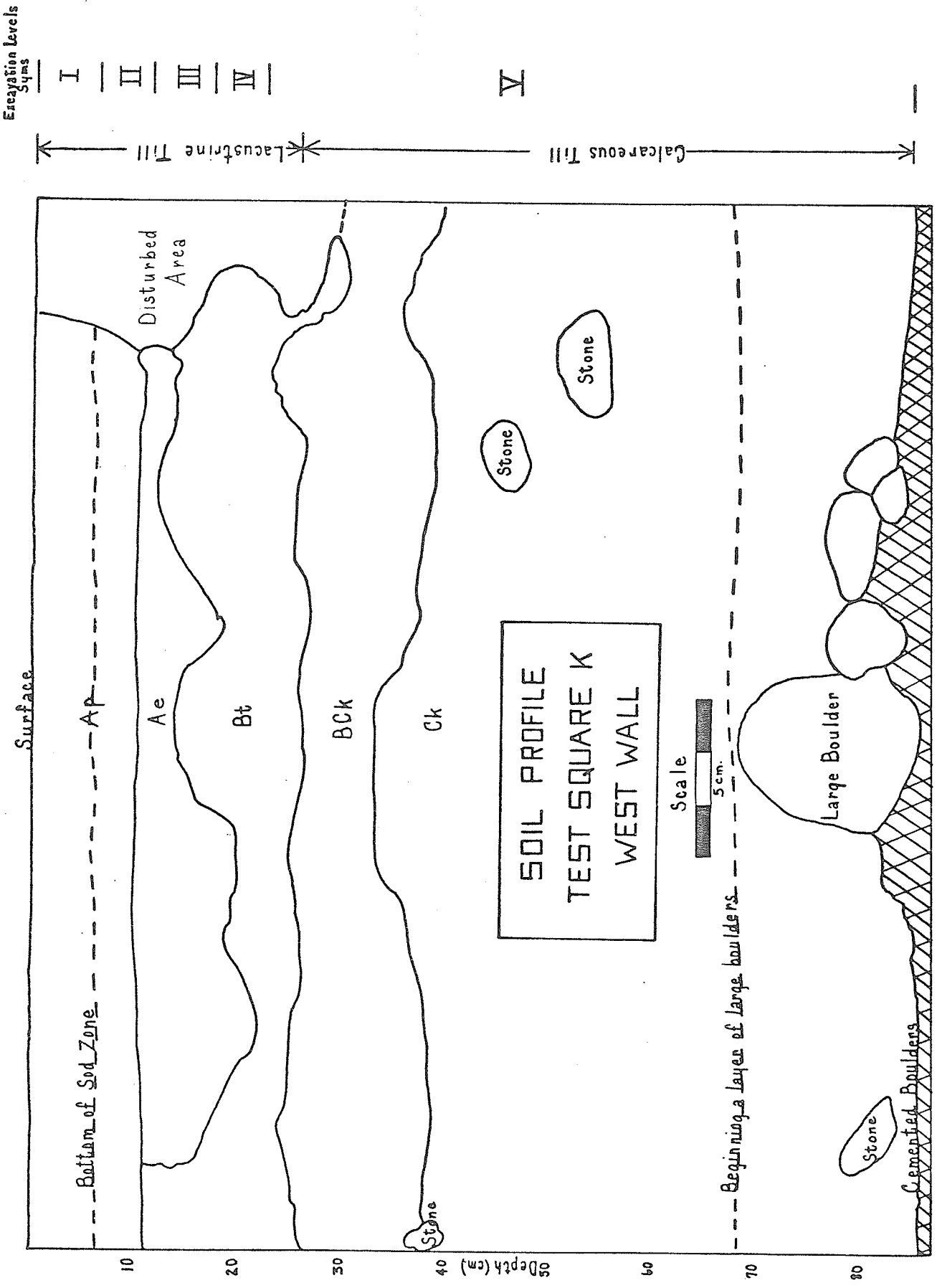


Figure 8: Soil Profile of Test Square K, LAS 253

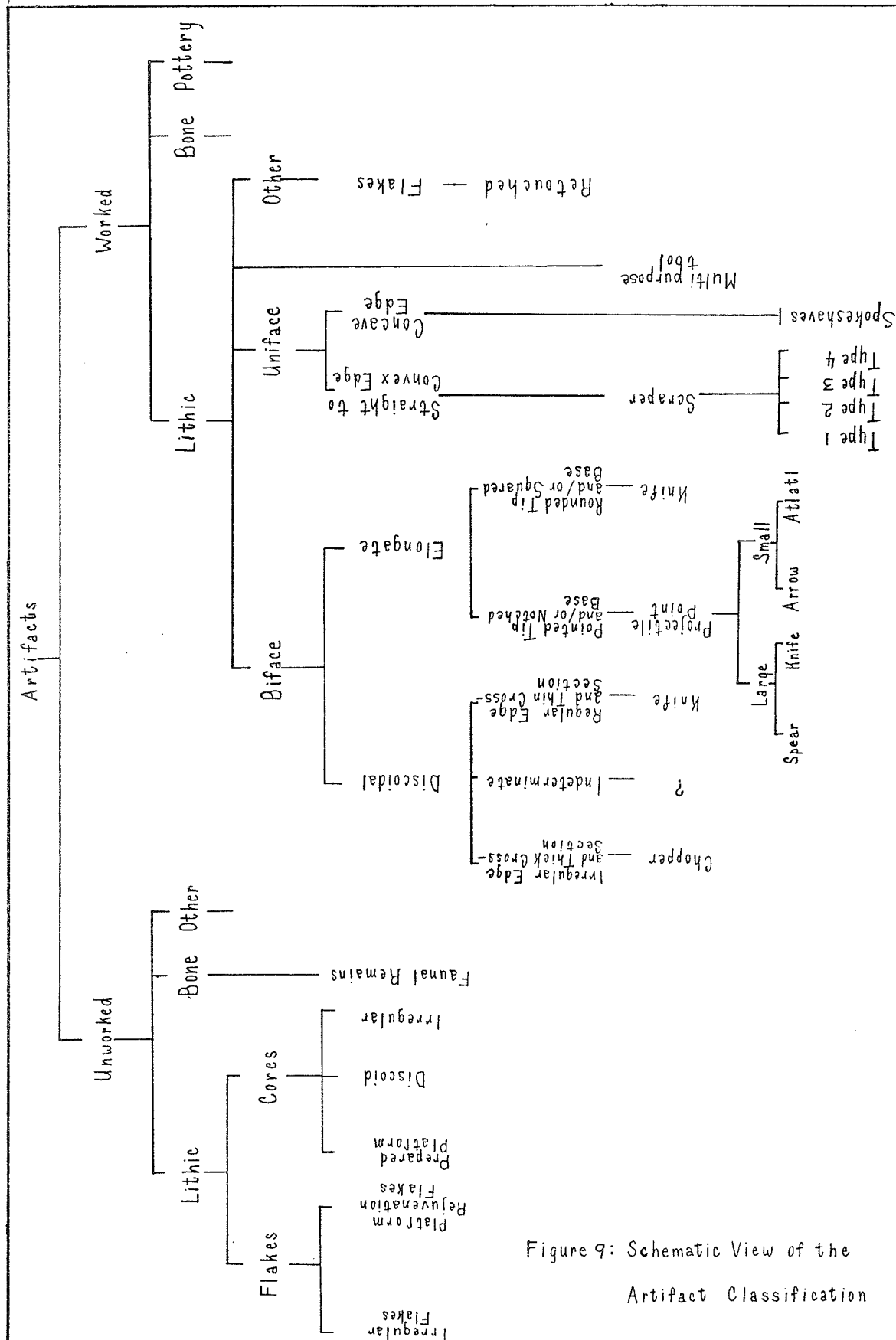


Figure 9: Schematic View of the Artifact Classification

(Table 4). It was impossible to distinguish between end and side scrapers because it was frequently impossible to determine the orientation of the flake due to material being used and because there was frequently very little secondary pressure flaking to trim the original flake other than along the working edges.

Type I (5 specimens) (Plate 7; A, B, D, F, G) -- These scrapers are made from thick, irregular flakes and generally have steep angles. There is one working edge and the back is generally tapered. Some specimens, e.g. (Plate 7; I), are so irregular in form that they might be preforms.

Type II (1 specimen) (Plate 7; C) -- These specimens are worked on two opposite edges. The working edges often has different angles. There is generally a ridge down the center of the flake as a result of the original percussion flaking that formed the flake.

Type III (5 specimens) (Plate 7; E, H, I, J, K) -- Pressure flaking occurs along at least segments of a broad edge. The two ends indicate evidence of some pressure flaking. The working edge has a low angle. These specimens might be classed as retouched flakes.

b) Spokeshaves (2 specimens) (Plate 8; A, B) -- Spokeshaves are uniface tools with the working edge forming a sharply concave arc. Both specimens are made from irregular flakes that lacked any other retouch. They were probably used for smoothing shafts.

3) Multipurpose Tools -- These artifacts consist of flakes that have two different modified areas, each serving different functions (Plate 8; C, D). Specimen C shows very fine retouch between four protrusions which may have

been gravers. This same specimen is reworked along the other side to form a scraper.

Specimen D has one end worked for use as an end scraper. A narrow, deep concave notch probably used as a spokeshave is chipped along one side.

4) Other Worked Artifacts -- This residual category includes 23 flakes that indicated some retouch. There were specimens that indicated both bifacial and unifacial retouch.

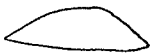
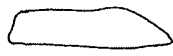









E. Interpretations

This site was used primarily as a workshop because over 99%, by weight of the excavated materials are detritus. The percentages by weight for the large volume of surface material collected by Tamplin and Pettipas are probably as high. Furthermore, it was located on one of a limited number of sources of the preferred local raw material, Swan River chert. Finished tools were rare. Many artifacts may have been preforms or remnants of tools that broke during manufacture, e. g. (Plate 3, F). Very few tools showed refined pressure flaking. There was no evidence of occupation features such as hearths or storage pits and only 3 unidentifiable faunal remains were found in the surface collections.

All of the excavated projectiles were McKean Lanceolate specimens or knives and were very similar (Plate 3). Three projectiles which were found on the surface (Figure 11) may represent other components. All of these specimens were made from Swan River chert. Specimen A, found near Pettipas' excavation, may have been an arrow or knife. It was asymmetrical and thinner on the edge with the greatest length and had lateral grinding in the notches. This specimen

TABLE 4

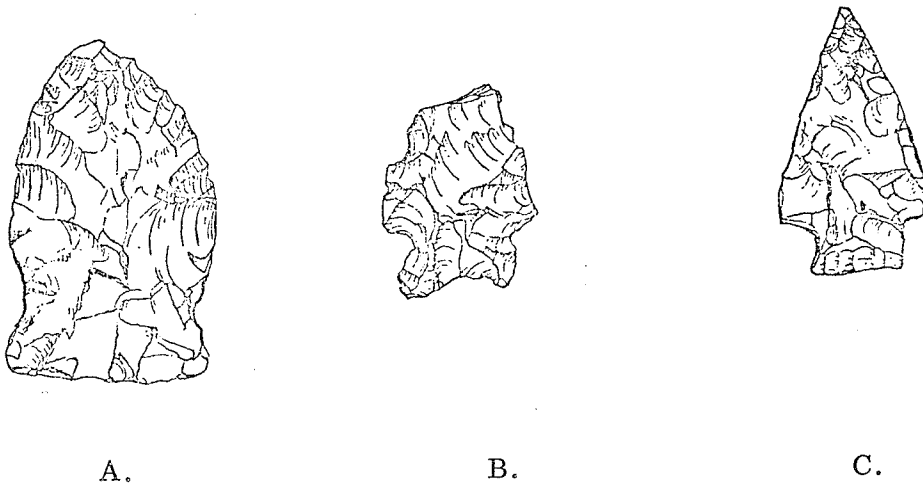
DIMENSIONS OF THE SCRAPERS FROM THE EXCAVATIONS
AT THE FILUK SITE (LAS 253)

Spec.	Type	Angle	No. of Worked Edges	d mm.	W mm.	Th mm.	Profile	Provenience
A	I	55°	1	21.0	26.0	18.0		D1
B	I	38°	1	25.5	36.6	8.8		E2
C	II	42°	2	29.3	41.4	13.2		D1
D	I	57°	1	22.0	30.2	18.6		H2
E	III	62°	1	20.9	38.2	11.0		E1
F	I	39°	1	32.6	41.8	14.2		J1
G	I	57°	1	29.0	43.0	16.0		J2
H	III	31°	1	33.9	39.6	13.0		C2
I	III	66°	1	37.0	56.4	25.0		J4
J	III	62°	1	47.0	74.0	18.4		G1
K	III	50°	1	36.5	61.0	11.8		J3

may have been an early form comparable to finds at Steeprock Lake (Simpson 1968) in the Porcupine Mountain, north of the Swan Lake Valley.

Specimens B and C were found by Tamplin on the opposite side of the ridge from specimen A. These projectiles had tangs, corner-notches or flaring stems, and concave or straight bases. The following dimensions were:

	Length (mm.)	Width (mm.)	Thickness (mm.)	Weight (gm.)
Specimen A	44.0	26.2	9.3	11.9
Specimen B	25.2 ⁺	19.4	5.9	3.0
Specimen C	34.5	19.6	4.8	2.9



J. Bu.

Figure 11: Surface Finds from the Filuk Site, LAS 253.

¹J. Bu. are the initials of the illustrator, John Buckner.

On the basis of all reported artifacts the site appears to have been occupied several times or during different periods. All of the excavated artifacts probably belong to the Early Middle Prehistoric Period. Surface finds in the vicinity represent Paleo-Indian and Early Middle Prehistoric Period projectiles.

Excavated materials by Pettipas and Syms may represent a single component. There was no typological nor natural stratigraphy. The projectiles that demonstrated typological attributes, particularly the projectiles, were very similar. Therefore, these materials were treated as a single component.

This component includes McKean Lanceolate projectiles thin ovoid bifaces tentatively identified as knives, ovoid choppers, crude scrapers that illustrated a relatively high degree of modification only along the working edge, spokeshaves, and graters. Several biface fragments possibly representing bases of lanceolate bifaces with pointed tips and square to convex bases were also found.

In the process of preparing tools, prepared platform cores and ovoid cores were used. However, the chert contained so many geodes, that many of the cobbles appeared to have been broken into large core flakes without trying to make cores.

CHAPTER IV

CEMETERY POINT SITE, THE WHITESHELL FOCUS

A. Excavation

The Cemetery Point Site (EaKv-1) was excavated by R. S. MacNeish in 1953 (MacNeish 1958:27). He found cultural debris scattered for 600 feet along a sandy ridge on the southeast shore of Nutimik Lake (Map 1) near the mouth of the Whiteshell River.

Part of the ridge was laid out in 5 foot squares and excavated in arbitrary 6-inch levels. Test squares were laid out over an area, 155 feet by 45 feet. Excavations were concentrated in a block 40 feet by 10 feet (Figure 12). Three zones of occupation were distinguished by a combination of soil and artifact differences. The earliest occupation, Zone C, was reported to be readily distinguishable from the dark sand stratum of Zone B and the whitish brown sterile sand stratum below.

Walter Hlady and I visited the site in June, 1969. The bank had eroded back so that only the western edge of the main area of excavation was discernible. A sample of artifacts was gathered from the eroded bank when the surface was being trimmed to study the soil profile. One of MacNeish's test pits, probably NOE5, was extended approximately one and one-half feet to the west and was excavated in 6-inch levels for an artifact sample (see Appendix D).

B. Environment

The site is situated on a sand ridge ranging from 15 to 30 feet above the 1953 water level of Nutimik Lake, a widened portion of the Winnipeg River. The

immediate vicinity is covered with a mixed conifer-hardwood forest, but much of the Whiteshell area is poorly drained bog. Rapids occur in both the Winnipeg and Whiteshell rivers near the site.

C. Artifact Analysis

MacNeish defined the Whiteshell Focus on the basis of the artifact inventory from Zone C, (Levels 4, 5, and 6) at Cemetery Point. Tools of the Whiteshell Focus at Cemetery Point consisted of "concave-based projectile points (McKean Lanceolate, Sturgeon Triangular, and Nutimik types), one large unilateral multibarbed antler point, thick and thin side-scrappers, ovoid blades, some large crude fleshing scrapers, a few scrapers with stemmed bases, flake and large plano-convex end-scrappers, and a spokeshave" (MacNeish 1958:28). On the basis of this tool assemblage, MacNeish identified "a nomadic camp site ... at 3,500 to 5,000 years old" (MacNeish 1958:55).

Because this assemblage contained McKean Lanceolate points and was tentatively dated during the same period as McKean points elsewhere, it originally appeared to be an excellent opportunity for determining the tool kit of McKean hunters in Manitoba. However, this opportunity could not be completely realized because materials from Zone B were intrusive.

D. Re-Evaluation of the Artifacts

Dr. Roscoe Wilmeth of the National Museum of Man kindly loaned to me all of the available excavated materials from Levels 4, 5, and 6 (Zone C) of the Cemetery Point site. The sample was initially divided according to levels and sorted according to lithic, bone, and pottery (Table 5). Lithic materials were further analyzed following the procedures described for the Filuk site (Chapter III).

EXCAVATIONS AT THE CEMETERY POINT SITE

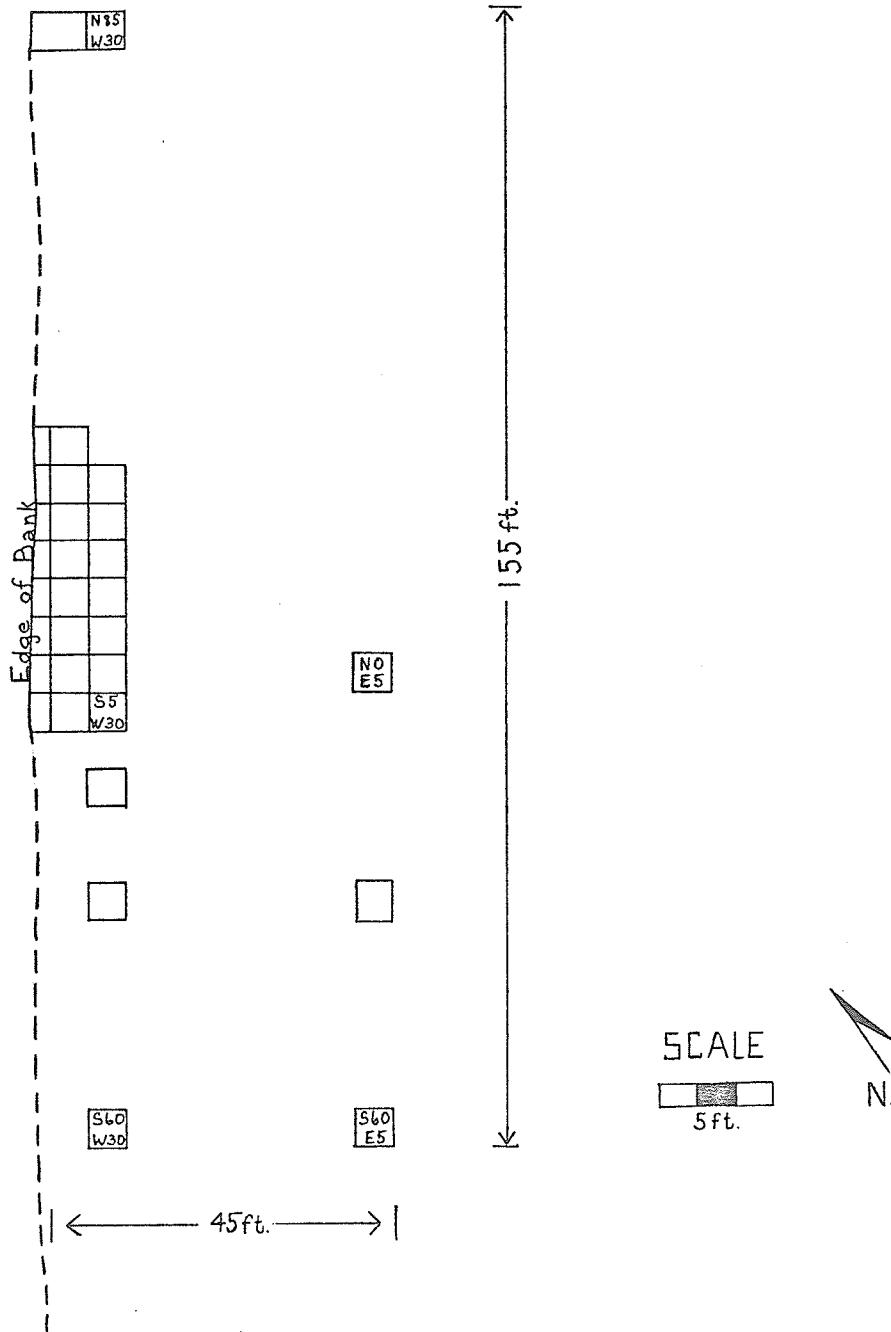


Figure 12: Test Squares Excavated by MacNeish at the Cemetery Point Site

1. Lithic Classes

Some of the point types recognized by MacNeish are retained in this report, although in view of more recent work on the Northern Plains, certain other types have been utilized. In some cases, the author has created new types. Samples that could not be identified with a particular type or were too few to create a new type, are described separately (Table 5).

A) Projectile Points

1) McKean Lanceolate Type (1 specimen) (Plate 9, A) -- This specimen is lanceolate with a deeply indented base. Fine pressure flaking is evident around the edge except for a 16.8 mm. length on one side which forms a squared edge, .20-.36 mm. thick, rather than a sharp edge (Table 6).

2) Duncan Type (1 specimen) (Plate 9, B) -- A single specimen with a re-worked tip was identified by MacNeish as a stemmed end-scraper (MacNeish 1958:106, Pl. VIII, No. 7). However, the bifacially worked tip and the thin edge are indicative of a projectile point.

3) Nutimik Concave Type (Plate 10, A) -- This specimen was illustrated by MacNeish as a diagnostic type for the Whiteshell Focus (MacNeish 1958:28, 91, 93, 98; Pl. VI, No. 7). He based this assumption on the presence of two such points, of which only one can now be located. However, four additional specimens have been located on the surface of the site.¹

¹The four surface finds belong to Jack Brown of Winnipeg.

TABLE 5
ARTIFACT INVENTORY FROM THE CEMETERY POINT SITE
ZONE C, (LEVELS 4, 5, 6)

LEVELS	LITHIC						BONE				POTTERY							
	Bifaces		Other		Unifaces		Totals											
	Projectiles				Scrapers		Other											
Level 4	1	1 1 1 1	4	2	3	5 3 1 5	9	1	4	22	76	98	1	8	4	13	18	
Level 5		1 1	5	1	4	7 4 1 1 1 1	17	2	2	31	48	79	1*	7		9	17	
Level 6	1 1 1		4	1	1	4 1 1 5	7			15	22	37		2				
Totals	1 1 1 1 1 1 1 1 2 4	13	2 2 2 2	8	16	8 3 21 1 33	1	5	6	68	146	214	2 1	17	4	22	2 2 5	35

* Identified as moose

All five specimens tended to be triangular with broad, concave bases.

Although most of the specimens were broken, the presence of rapidly converging edges was evident. The specimens exhibited the maximum width at the base.

A few other Nutimik Concave points have been recorded for Manitoba, but their association with other artifacts remains unclear. The excavated specimens from Cemetery Point could not be associated with any other artifacts. Mayer-Oakes (n.d.) found several specimens at the Tailrace Bay site which were frequently found in association with Laurel pottery. Pettipas (personal communication) believes there might be some relationship between the Nutimik Concave and Plainview types.

4) Whiteshell Side-Notched Type (Plate 12, A) -- This type was identified by MacNeish (1958:102, 103, Pl. VII, No. 18) who considered it to be intrusive from the Nutimik Focus remains of Level 3 (Zone B). The illustrated specimen probably represents a type which had a wide distribution. It was similar in appearance to various Plains Side-notched type varieties found in Saskatchewan (Kehoe 1967) and to the Radditz Side-notched type found in Wisconsin (Steinbring personal communication).

5) Selkirk Side-Notched Type (2 specimens) (Plate 10, B; Plate 12, B) -- This type was identified by MacNeish as being confined to the Selkirk Focus found in Level one at Cemetery Point (MacNeish 1958:89, 104-105, Pl. VII, 1-3). These points were probably intrusive as well.

6) Hanna Type ? (Plate 12, C) -- This specimen has all the attributes of the Hanna type, however, it was found in Level 4 with a body sherd of Laurel Pottery and may be a much later corner-notched variety with a broad corner notch.

TABLE 6
MEASUREMENTS OF THE PROJECTILES FROM ZONE C,
CEMETERY POINT SITE

Cat. No.	Designation	illus.	L. mm.	W. mm.	Th. mm.	Wt. gm.	Material	D	Notch	Thin	Ht.	Stom	W.	Lat. Gr.	Other
<u>Level 4</u>															
X-A-1720	Side-Notched	Pl. 10, A		24.8	6.6		Quartz		4.1 4.6					-	
X-A-1792	Side-Notched	Pl. 12, B	16.0	13.1	5.3	1.1	Quartz	2.4 2.3						-	Reworked tip
X-A-1774	Hanna	Pl. 12, C		20.8	4.6		Green Quartzite	1.2	4.8	8.4	11.2	12.7		+	
X-A-1969a	Fragment	Pl. 12, D					Argillite							-	
<u>Level 5</u>															
X-A-1637	Nutimik Concave	Pl. 10, A	30.3 ⁺	26.0	5.0	4.9	Argillite	2.0	5.5					-	
X-A-1872c	Side-Notched	Pl. 10, B	25.0	14.2	5.0	1.9	Argillite								
X-A-1765a	Stemmed & Shouldered	Pl. 10, C	39.5	20.5	5.4	5.1	Argillite			10.0	15.1			+	Plano-convex
X-A-1937	Fragment	Pl. 10, D					Quartz								
X-A-1675b	Fragment	Pl. 10, E		24.0	17.7		Quartz								
<u>Level 6</u>															
X-A-1757a	McKean Lanceolate	Pl. 9, A	52.7	17.4	5.7	5.2	Lockport Chert	3.8	2.0					+	
X-A-1724	Duncan	Pl. 9, B	30.5	18.6	5.3	3.0	Lockport Chert	2.0	2.0					+	Reworked tip
X-A-1889a	Lanceolate	Pl. 9, C	43.0 ⁺	19.8	8.0	7.9	Lockport Chert	0						-	May be unfin- ished
X-A-1757b	Fragment	Pl. 9, D					Argillite								

7) Lanceolate, Straight-Based Projectile (Plate 9, C) -- This specimen did not correspond to any type that has been generally identified on the Northern Plains. It is lanceolate in form and has a straight base. Although there is only one such specimen from this site, two other specimens have been found by MacNeish on the surface of the Larter Site¹ (Plate 22; K, L) and the writer has observed several in various collections. These projectiles are generally larger than the McKean complex variants, but have a thicker cross-section, and exhibit less refined flaking than many of the Paleo-Indian projectiles. Similar specimens have been found at Mangus I and Bottleneck Cave I with dates of 6740 \pm 100 B. C., 6650 \pm 100 B. C., and 6320 \pm 180 B. C. (Husted 1969).

8) Stemmed, Shouldered Projectile (Plate 10, B) -- This specimen could not be satisfactorily assigned to any type. It was made from a thin plano-convex flake of argillite. Other attributes included a stem, convex base, and lateral grinding.

B) Other Bifaces

1) Trapezoidal Biface (Plate 10, I; Plate 11, C) -- These two tools consisted of thin bifaces, assymetrical in form, that show pressure flaking along two converging edges to form a rounded point. The opposite edges are square and show no evidence of pressure flaking. Maximum thickness is along one of the square edges. There is a resemblance between the outline of these bifaces and Cody knives.

¹This specimen has the letter "P" printed on it, and Walter Hlady believes that it may have been found by himself at the Larter site because he used this symbol for marking specimens from that site.

2) Lanceolate Biface (Plate 9, N; Plate 11, A) -- Both specimens showed rough percussion flaking and very little pressure flaking. They are thin, lanceolate, and slightly pointed. Other attributes are parallel convex edges and some indication of a squared base. Both specimens may have been crude knives or unfinished projectiles. MacNeish classified these two examples as Sturgeon Triangular points and as being diagnostic for the Whiteshell Focus (MacNeish 1958:28). He also stated that they may have had a wide range of functions and in some cases may have been quarry blanks (MacNeish 1958:99).

3) Ovoid Biface (Plate 13, A, B) -- These specimens are flat, fairly symmetrical, and show fine pressure flaking. One specimen (Plate 13, A) has been pressure flaked along one edge and both ends. The other edge has only crude percussion flaking and is thicker. The other specimen (Plate 13, B) has been pressure flaked on two edges and one end.

4) Tapered-Back Biface (Plate 9, M; Plate 11, G) -- These two specimens are classed as bifaces but may have been used as scrapers because they possess steep, bevelled edges similar to scrapers. They are tapered as though they may have been hafted in the same manner as the tapered-end scrapers (described below), and when they were held with one surface along a flat plane, the surface of the bevelled edge formed an angle similar to the bevelled edges of the steep-sided end-scrapers (Figure 13).

5) Irregular Bifaces -- This category of 8 specimens included a variety of shapes from thin flakes with edge wear or retouch to thick flakes that have percussion and pressure flaking. Some may be flake knives; others may be parts of other artifacts such as projectile points.

TABLE 7

MEASUREMENTS OF BIFACES, OTHER THAN PROJECTILE,
CEMETERY POINT SITE

Cat. No.	Designation	Illust.	L mm.	W. mm.	Th. cm.	Wt. gm.	Material
X-A-1913	Trapezoidal Biface	Pl. 9, I	59.3	33.0	12.0	23.1	Argillite
X-A-1938c	Trapezoidal Biface	Pl. 11, C	41.0	29.5	6.0	6.2	Argillite
X-A-1889d	Lanceolate Biface	Pl. 9, N	59.1	29.0	8.2	14.0	Lockport Chert
X-A-1850c	Lanceolate Biface	Pl. 11, A	85.3	36.6	8.0	34.0	Argillite
X-A-1867	Ovoid Biface	Pl. 13, A	82.0	46.0	10.0	47.0	Argillite
X-A-1721	Ovoid Biface	Pl. 13, B	34.8	23.6	5.4	7.1	Argillite
X-A-1797a*	Tapered Back	Pl. 9, M	27.6	33.0	11.2	10.0	Quartz
X-A-1680a**	Tapered Back	Pl. 11, G	30.8	35.6	11.8	13.4	Argillite

*Th. at back = 6.0 mm.

W. at back = 12.8 mm.

**Th. at back = 6.0 mm.

W at back = 9.4 mm.



Figure 13: Cross-section (A) and Schematic Diagram (B) of a Tapered-Back Biface.

C. Scrapers

The scrapers from Cemetery Point were completely reclassified. Types 1 and 2 are the same as those used for the Filuk data; type 4 is a new type.

1) Scraper, Type 1 (Plate 9, P; Plate 10, J, K, M; Plate 12, I, M, N) -- These seven scrapers were thick, amorphous, and generally larger than other scrapers (Table 8). The bevel is rounded and difficult to measure (Figure 15). Measurements in Table 8 represented the angle at the scraping edge. The thickest section, which ranged from 9.0 to 15.0 mm., was generally located at the dorsal end. The median thickness was 13.0 mm. The angle of the scraping edge ranged from 37° to 78°, with a median value of 55°. The weights ranged from 5.0 grams to 24.0 grams, with a median value of 9.0 grams. Some of these specimens may be fragmented.

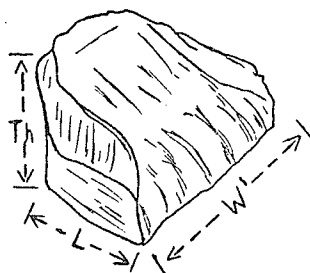


Figure 15: Schematic Diagram of Scraper, Type 2.

2) Scrapers, Type 2 (Plate 9, L; Plate 11, F; Plate 12, L) -- These three scrapers have scraping edges on two opposite sides. The angles of most of the scraping edges tend to be shallow, less than 55° , and the bevels to lack intentional chipping to form a scraping edge. All specimens are made from quartz. These scrapers may represent flakes that broke a long cleavage planes and were utilized with minimum modification.

3) Scrapers, Type 4 (Plate 9, F, G, H, I, J, K; Plate 10, F, G, H, I, L, N, O, P; Plate 11, H, I, J, L; Plate 12, E, F, G, J, O) -- These 23 scrapers are small, thin, tapered, and generally flat on both faces. Thicknesses range from 2.2-10.0 mm. with a median of 7.0 mm. (Table 8). The width across the working end, W_1 , (Figure 14) ranges from 14.3 mm. to 34.6 mm. with a median of 22.7 mm. Eight specimens are tapered to a point; the other 15 specimens have a dorsal width (W_2) ranging from 10.0-19.8 mm. with a median of 14.0 mm. These scrapers appear to have been tapered for hafting.

Bevel angles were measured on the slope that represented the greatest part of the scraping edge. The angle of the scraping edge ranges from 33° to

78° with a median angle of 63°.

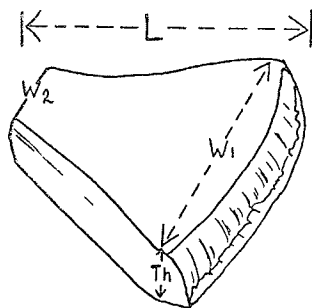


Figure 14: Schematic Diagram of a Tapered Scraper.

4) Scraper, Square (Plate 10, Q) -- This unique specimen is thin, flat, and almost square. It has a scraping edge on three sides (Table 8).

D) Other Unifaces

1) Spokeshave (Plate 12, R) -- One spokeshave was found in Level 5. It is made from an irregular flake. The concave edge has a diameter of 17.4 mm.

2) Retouched Flakes (Plate 11, D, E; Plate 12, H, Q; Plate 13 C) --

These specimens are irregular flakes that showed evidence of pressure flaking along one or more sides. MacNeish identified one specimen (Plate 11, E) as a flake knife.

2. Lithic Raw Materials

Most of the worked artifacts and unworked flakes were made from quartz and an argillaceous material which occur locally. Small amounts of other raw materials may have been imported. Quartz and argillite existed in approximately equal quantities in all levels (Table 9). Light-brown limestone chert increased in quantity in the upper levels. The other raw materials existed in insufficient quantities to make any generalizations about trends.

A) Quartz

The quartz specimens varied from transparent to faintly translucent. It represented 79 specimens or 32.7% of the total sample.

B) Argillite¹

Argillite rocks appear to be "low-grade metamorphosed argillaceous rocks, such as shales, mudstones, and claystones . . . massive, fine-grained rocks, usually thinly and evenly laminated, containing feldspar, quartz, chlorite, and some clay minerals" (Huang 1962:396). Argillite exhibits a lesser degree of re-crystallization, coarseness, and luster than slate or phyllite, but it is not always possible to distinguish these rocks in hand specimens (Huang 1962:396).

There was a sample of 90 pieces or 42.7% of the total. Most of the bifaces, particularly the ovoid and trapezoidal bifaces, were made from this material.

C) Selkirk Chert

Selkirk chert is a term used for an off-white limestone chert that is found locally along the Red River in Manitoba in a geological formation of the same name (Leonoff: personal communication). It is not known whether this material occurs locally at Cemetery Point.

This chert lacks any luster and on a superficial appearance looks like limestone. However, it appears to be harder than most limestone and can be pressure flaked to a thin edge that will not readily break or split.

¹This material was identified as argillite or an argillaceous material by C. T. Shay.

TABLE 9

DISTRIBUTION OF RAW MATERIALS FROM ZONE C (LEVELS 4,5,6) AT CEMETERY POINT

	LITHIC MATERIALS									POTTERY	BONE	
	Quartz	Argillite	Selkirk Chert	Limestone chert: Light brown	Chert: light smoky grey	Cathead Chert	Brown Chalcedony: medium brown	Brown Chalcedony: blackish brown	Green Quartzite			
LEVEL 4												
	$\frac{9}{25}$	$\frac{8}{33}$		$\frac{5}{14}$	$\frac{1}{2}$		$\frac{0}{2}$		$\frac{1}{0}$		$\frac{18}{0}$	$\frac{0}{8}$
LEVEL 5												
	$\frac{15}{18}$	$\frac{13}{14}$		$\frac{2}{6}$	$\frac{1}{1}$	$\frac{0}{1}$	$\frac{0}{3}$	$\frac{0}{1}$		$\frac{17}{0}$	$\frac{0}{7}$	
LEVEL 6												
	$\frac{4}{8}$	$\frac{8}{12}$	$\frac{4}{0}$	$\frac{0}{2}$							$\frac{0}{1}$	
TOTALS	79	93	4	27	4	1	5	1	1	35	17	

KEY

Worked artifacts

Unworked artifacts

$\frac{9}{25}$ No. worked
No. unworked

SCALE

units

This material was found only in Level 6 and was used in artifacts assigned to the McKean complex. The single specimen of the possibly earlier lanceolate straight-based projectile was also made from this material.

D) Light Brown Chert

This chert demonstrated some similarities to Selkirk chert but exhibited a brown colour and a dull lustre.

E) Light, Smoky Grey Chert

This material occurs in all levels and increased from Level 5 to Level 4. It represents only 4 pieces or 2.0% of the total sample. This chert may fall in the Swan River chert category but the sample is too small to determine this. It has a dull lustre and indicates some variation in shades of grey.

F) Cathead Chert

The specimen of Cathead chert is mottled grey with a distinctive, dull, lustre. One source for this material is the west side of Lake Winnipeg.

G) Brown Chalcedony

Brown chalcedony is a brown cryptocrystalline rock commonly known as Knife River Flint. Its source may be western North Dakota, or the Souris River area in western Manitoba (Hlady 1965).

There seems to be two varieties of brown chalcedony present at this site. One variety is coloured various shades of brown; the other is a dark blackish-brown. Distribution studies of these materials are still in progress, but I believe that the blackish-brown variety has a different distribution pattern in southern Manitoba than the more common brown variety. This impression is based upon the perusal of private collections of artifacts and debris from numerous

sites.

Brown chalcedony appeared only in Levels 4 and 5. This material was generally found in the same squares as pottery and bone fragments (Table 10). The presence of the brown chalcedony, pottery, and in some cases the bone fragments, is evidence of mixing of materials from Level 3 and/or arbitrary excavation units cross-cutting the levels of deposition.

3. Bone

Dr. George Lammers, Curator of Geology and Paleontology at the Manitoba Museum of Man and Nature, studied the faunal remains. He identified the bone fragments to family and species when the fragments contained sufficient identifiable characteristics (Table 11).

A) Worked Bone

Only one tool, a multibarbed antler harpoon, was made from bone (Plate 15). It has been ground flat on one side and showed evidence of grinding on the other side. It appears to have had a hole drilled in it. The species of the antler could not be identified.

B) Unworked Bone

Sixteen fragments were found in Levels 4, 5, and 6. More than half of the remains were small, unidentifiable fragments less than three inches in length. The identifiable specimens were jaw fragments with teeth, and tooth fragments.

In Level 6, one upper-right molar of a beaver (Castor canadensis) was found. This specimen was the only evidence of faunal remains other than the antler harpoon.

TABLE 10

ASSOCIATION OF BROWN CHALCEDONY, POTTERY AND BONE IN
 ZONE C, CEMETERY POINT SITE

Level	Square	S5W35	N0W30	N10W30	N15W30	N20W30	N25W35	N30W35	Totals
<u>Level 4</u>									
Pottery		0	1	1	0	0	0	16	18
Brown									
Chalcedony		0	1	0	0	0	1	0	2
Bone		2	0	0	0	0	0	6	8
<u>Level 5</u>									
Pottery		15	0	1	1	0	0	0	17
Brown									
Chalcedony		3	0	1	0	0	0	0	4
Bone		6	0	0	0	1	0	0	7

In Level 5, there was one unerrupted milk tooth of a cervid, probably moose, deer, or elk, and six small fragments that could not be identified. The other six fragments were found mixed with ceramics and brown chalcedony in square S5W35 that contained faunal remains in the Level 4 above. The milk tooth was found in a square lacking faunal material in Level 4. The six fragments are probably intrusive from Level 3, but the milk tooth may not be.

Level 4 contained five unidentifiable fragments, two jaw fragments with the second and third molars of a moose, and a tooth fragment of moose. These teeth were from an older individual. The faunal remains from Level 4 occurred only in two squares and probably belonged with the faunal remains from Level 3.

This re-evaluation of the faunal remains does not correspond with MacNeish's findings. There were problems of different quantities in the various levels and different identification of animal families. The different results imply different subsistent patterns.

All available faunal remains were received from Ottawa.¹ There was no record of the large number of bison bones nor any of the mollusca (Table 11) reported by MacNeish (1958:176-177). This discrepancy cannot be explained.

The faunal remains analyzed here indicate that the hunters at this site probably hunted woodland game during the early occupations. The faunal remains

¹Both Dr. Roscoe Wilmeth and Miss Susan Whipps of the Archaeology Division, National Museum of Man re-checked the storage facilities but could find no other faunal remains for Zone C nor any other catalogue list of faunal remains.

TABLE 11
 COMPARATIVE ANALYSIS OF FAUNAL REMAINS FROM
 ZONE C, CEMETERY POINT SITE

Species Level	MacNeish (1958:176-177)				Syms* (1969)				
	Buffalo (Bison)	Clam Shell (Mollusea)	Elk (Cervus)	Total	Moose (Alces americana)	Beaver (Castor canadensis)	Cervidae	Unidentifiable	Total
4	187	7	1	195	3	-	-	5	8
5	-	-	-	-	-	-	1	6	7
6	-	-	-	-	-	1	-	1	2

*Identified by Dr. George Lammers.

that were not intrusive represented beaver and moose. The harpoon represented evidence of fishing. Most, or all, of the remains from Levels 4 and 5 were intrusive from Level 3. These materials were concentrated in two squares which also contained pottery and brown chalcedony intrusive from Level 3. The identifiable species from Levels 4 and 5 represented moose and a cervid which could be associated with the remains from Level 3. The remains from Level 3 also represented woodland animals, e.g., "beaver, deer, fox and bear ... a few fish bones" (MacNeish 1958:28).

4. Pottery

A total of 35 fragments of pottery were found in Levels 4 and 5. Pottery was found in 3 squares of Level 4 and in 3 squares of Level 5 (Table 10) although MacNeish (1958) made no reference to pottery in these levels. Most of the sherds were classifiable as types of Laurel ware of MacNeish's Nutimik Focus found in Level 3 at Cemetery Point. Specimens that could not be identified with one of MacNeish's types were placed in a category with a descriptive title.

The pottery sample was too small to distinguish any typological trends. Although Table 5 gives the impression that there may have been some stratigraphic distinctions, this impression is due to the small number of specimens.

A) Nutimik Oblique Type (Plate 14, A, B) -- This type was identified by MacNeish (1958:150-151, Pl. XV, 4, 6-10). The specimen illustrated in Pl. XV, No. 8 of MacNeish's work was found in Level 5 of Cemetery Point. Three of the four specimens consisted of rim sherds with a flat edge on the lip. The lip width converged from 6.2 millimeters to 3.5 millimeters (Figure 16A).

B) Laurel Plain Type (Plate 14, C, F) -- This type comprised 22 out of 35 specimens. All specimens were body sherds, and one specimen which exhibited an extreme degree of concavity may have been a basal sherd (Figure 16B). It was not possible to determine whether all of these sherds represented a distinctive pottery type or whether they may have represented body sherds below the level of decoration of other pottery types.

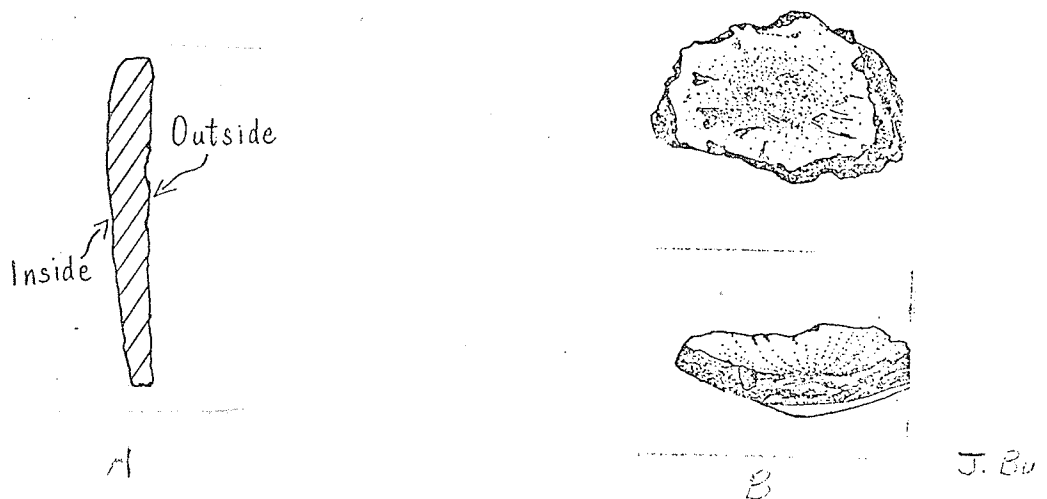


Figure 16: Pottery Drawings showing: A) Profile of Nutimik Concave Rim sherds and B) possible basal fragment.

C) Dentate Stamped (Plate 14, H, I) -- The five specimens of this category were all body sherds. None of these sherds had a motif identical to any of MacNeish's illustrations so they were not assigned to a particular type. The design appeared to be similar to an illustrated example of a dentate stamped sherd of the Saugeen Focus ceramics at the Donaldson Site in Ontario (Wright 1967:95; Pl. XIV, No. 1, p. 173).

D) Smoothed-Over (Plate 14, E) -- The original motif could not be discerned on the sherds in this category because it had been obliterated by being smoothed over. There were only two specimens which were from the same vessel and fitted together.

E) Push-and-Pull Grooved (Plate 14, D, G) -- One sherd of this style was found in each level. The motif was so similar that the sherds may have come from the same vessel.

The decoration consisted of broad, shallow, parallel grooves. The edges were not sharp as is common when wet clay has been incised. Neither the depth nor the width of any groove was consistent for the entire length of the groove. In experiments using plasticine, aimed at reproducing the pattern, the most satisfactory results were obtained by using a bone fragment that had been ground to a rounded point and edge. When drawn with a back and forth motion, this bone fragment produced an identical decorative motif.

E. Interpretation

The site appears to have been used primarily as a camp site during several different periods. The presence of faunal remains at all levels and the relatively large percentage (32.39%) of lithic tools, compared to all lithic debris for Zone C can be interpreted as evidence for an occupation zone. No hearths were reported by MacNeish and none were found by me, although I did find numerous charcoal fragments in the eroded bank and several fire-cracked rocks in the test pit.

Zone C at Cemetery Point was a multi-component zone. There were one, possibly two, Early Middle Prehistoric Period components and remains from two or more components represented in the upper levels which had become mixed probably as the result of arbitrary excavation levels cross-cutting irregular deposition strata.

There was ample evidence that no distinct typological division existed between Zone B and Zone C. An examination of the soil profile indicated that there was no distinct break such as a buried horizon between the soils of Level 3 and Level 4. In addition, projectile types associated with Levels 1 and 3, e.g., the Whiteshell Side-notched and Selkirk Side-notched types, were also found in Levels 4 and 5.

The McKean complex was minimally represented by one McKean Lanceolate and one Duncan projectile (Plate 9, A, B). The one possible Hanna type could not be positively identified as such and must be ignored. It is possible that all of the tools in Level 6 formed part of the McKean assemblage¹ because there was no evidence of more recent definitive tools in the level.² Furthermore, the materials from those squares which contained no materials such as late projectiles, pottery or brown chalcedony may be used to make some tentative comments about the possible tool kit of the hunters who produced the artifacts of the McKean component at this site.

These hunters tended to utilize local raw materials. From these materials, a variety of scrapers and bifaces were manufactured. The scrapers were crude and generally demonstrated delicate pressure flaking only on the working edge. Most of the scrapers appeared to have been intentionally tapered opposite

¹The presence of the lanceolate projectile (Plate 9, C) is attributed to admixture and therefore was not included in these generalizations.

²An alternate argument is that only specimens A, B, and N represent remains of the McKean assemblage because only these tools are made from the non-local Selkirk chert and because no debris of this material was found, suggesting imported tools.

the working edge. These early technicians appeared to have had a sophisticated understanding of the cleavage planes of the various raw materials and made maximum use of these cleavage planes to minimize the required amount of stone knapping. The paucity of artifacts might be interpreted as evidence of small social groups occupying the site. However, only part of the site was excavated and the most productive part of the site may have eroded into the lake before the site was excavated.

The limited number of faunal remains yield evidence that woodland game has always been important during all occupations. Woodland game was found in all levels; at least moose, beaver, and fish were obtained during the earliest occupation.

The presence of spokeshaves and gravers are indicative that wood and possibly bone working may have been fairly important to McKean hunters. Very little can be said regarding these activities because there were too few examples of each of these tools found. The numerous skinning tools, e.g., the scrapers and possibly tapered-back scrapers, indicate that hide working was important.

Fishing may have been an important addition to hunting for these early, pre-ceramic populations. One multibarbed antler harpoon was found in Level 6. The site is located near two sets of rapids which are now, and may have been, good fishing locations.

F. Comparison with the Filuk Site

Zone C at Cemetery Point and the Filuk workshop are the only two sites

in Manitoba that have a tool kit that can be isolated from other components associated with McKean projectiles. Both tool kits contained McKean Lanceolate projectiles, spokeshaves, and crude scrapers with one or two working edges. Even though the raw materials at the two sites were quite different, the similarities of certain tool types were quite close. Type I scrapers were very similar and numerous at both sites. Type II scrapers were similar but only a few were found and this type may represent reworked flakes. All scrapers tended to have pressure flaking primarily along the working edge.

The McKean projectiles from both sites indicated variations that might be indicative of manufacture by members of different social groups. The specimens from the Filuk site were smaller, squatter, and demonstrated a different basal configuration.

The Cemetery Point site lacked the large choppers, knife bases, and numerous ovoid bifaces. The absence of these tools may be due to the nature of the site; Cemetery Point being a habitation site rather than a workshop.

CHAPTER V
THE LARTER SITE

A. Environment

The Larter Site (EaLg-1) is situated on the upper terrace along the Red River (Map 1) in an area that was aspen parkland at the time of the settlement. The aspen parkland contained "two major plant communities, forest and grassland, which are intermingled in a mosaic of irregular isolated patches and more or less solid stands, as well as numerous aquatic communities" (Bird 1961:3). The forest areas were predominantly aspen (Populus tremuloides), but Manitoba maple (Acer negundo), lance-leaved ash (Fraxinus pennsylvanica), bur Oak (Quercus macrocarpa), cottonwood (Populus sargentii), and floodplain species such as basswood (Tilia Americana), and sand bar willow (Salix interior) were common along the Red River (Bird 1961:13-14).

The animal population was highly varied. In the grassland communities, there were, prior to settlement, buffalo (Bison bison), pronghorned antelope (Antilocarpa americana), elk (Cervus canadensis), as well as numerous smaller animals such as the buffalo wolf (Canis lupis), coyote (Canis latrans), badger (Taxidea taxus), red fox (Vulpes fulva), white-tailed jack rabbit (Lepus townsendii), and several species of squirrels, gophers and mice. Several species of birds and insects also inhabited the grassland. In the forest communities, the snowshoe rabbit (Lepus americanus), mule deer (Odocoileus hemionus), elk (Cervus canadensis), moose (Alces americana), beaver (Castor canadensis) as well as varieties of predators such as timber wolf (Canis lupis), coyotes, and red

fox existed. Several species of rodents and numerous species of birds inhabited the forest communities (Bird 1961).

B. Excavation

Debris from prehistoric occupations was scattered over an area some 1,200 feet long and 100 feet wide. MacNeish concentrated his excavation in an area 15 by 25 feet in a cultivated field where test excavations had yielded the greatest concentration of artifacts. The squares were dug in four arbitrary 6-inch levels.

Two soil strata were identified. A hard, artifact-bearing grey clay was underlain by a sterile yellow clay (MacNeish 1958:34). An occupation floor consisting of a thin grey 1/2 - 1 inch thick zone was found in the sterile clay and was separated from the above grey clay by a one to two inch strata of yellow clay (Figure 17). This kill floor, Floor 1, blended in with the above artifact-bearing zone along its western edge.

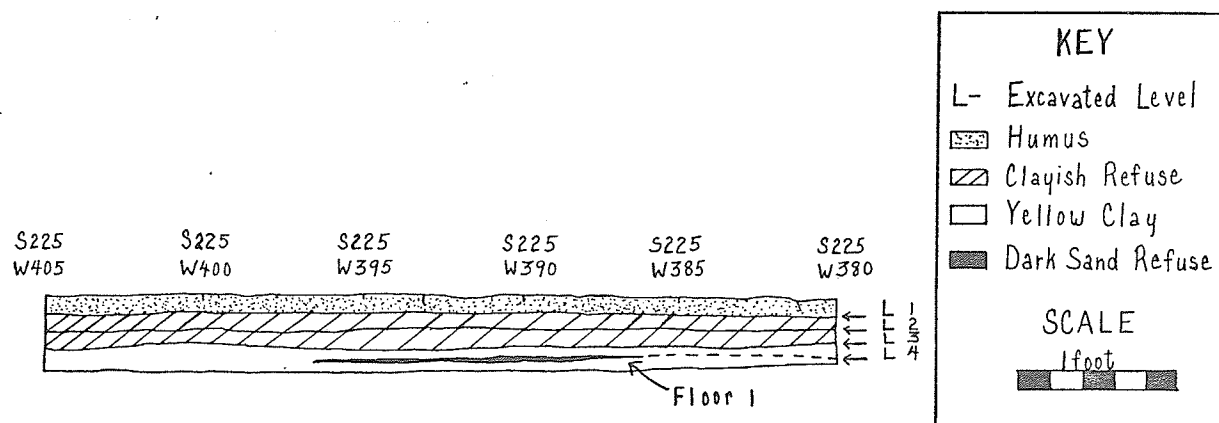


Figure 17: Cross-section of the Larter Site (MacNeish 1958:35)

C. Analysis of Artifacts

The Larter Focus was defined as transitional between the Whiteshell Focus and the later ceramic Anderson Focus. The artifact assemblage was considered homogeneous throughout the four levels, and no distinction was made between soil layers. The Larter assemblage included "a wide variety of types of projectile points, the most common being corner-notched points (Larter Tanged and Anderson Corner-notched), but side-notched (Parkdale-eared), fish-shaped (McKean Lanceolate), ovoid (Winnipeg Ovoid), and triangular (Sturgeon Triangular) were present" (MacNeish 1958:38).

Because the McKean Lanceolate type was also considered diagnostic for the Larter Focus, some of this material was also re-analyzed.¹ MacNeish interpreted the materials as representing the remains of a single cultural level. A more plausible interpretation is that the materials represent the remains of several groups who inhabited the area during different periods.

In my re-analysis, all of the artifacts catalogued by MacNeish as projectile points were studied and photographed (Table 12 and 13 and Plates 16 - 21). The specimens were separated according to levels and the materials from the various levels were subdivided according to what I considered to be possible projectiles and what I considered to be artifacts other than projectiles. If the artifacts lacked certain attributes such as bifacial edges, they were re-classed as unifaces and

¹Dr. Roscoe Wilmeth kindly loaned to me all artifacts from the Larter Site that had been catalogued as projectile points.

TABLE 12

DISTRIBUTION OF PROJECTILES BY LEVELS
AT THE LARTER SITE

Excavation Levels	Depth (inches)	Projectile Types ¹														
		Lanceolate, Straight-based	Pryor Stemmed	Side-Notched	Oxbow	McKean Lanceolate	Duncan	Hanna	Larter Tanged	Besant	Avonlea	Whiteshell Side-Notched	Prairie Side-Notched	Plains Side-Notched	Plains Triangular	Unidentifiable
Surface		1	1		2	1	1	1	1	1	1	2	1		3	16
Level 1	0 - 6							1	1	1				1	3	7
Level 2	6 - 12			2				2								4
Level 3	12-18			1	1		2								2	6
Level 4	18-24						1	3							1	5
Floor 1	26-28						1									1

¹These types were listed according to a possible chronological sequence for the Northern Plains with the earliest type first

TABLE 13

81

SOME MEASUREMENTS OF THE PROJECTILE POINTS FROM
THE LARTER SITE

Illust.	Type	L. mm.	W. mm.	Th. mm.	Wt. gm.	Basal Depth mm.	Notch Thinning mm.	Grind- ing	Material	Other
1. Pl. 16	A Larter Tanged								Lockport Chert	
2. Pl. 16	B Avonlea	24.0	16.0	4.8	2.0	1.0	3.4		Grey Chert	
3. Pl. 16	C Besant	30.0	20.3	4.8	4.1				Green Quartzite	
4. Pl. 16	D Plains Triangular								Lockport Chert	
5. Pl. 16	E Fragment								Brown Chalcedony	
6. Pl. 16	F Fragment								Grey Quartzite	
7. Pl. 16	G Fragment								Lockport Chert	
8. Pl. 16	H Larter Tanged	29.0	24.0	5.0	3.0				Lockport Chert	
9. Pl. 16	I Larter Tanged	29.0	28.6	4.2	1.6				Lockport Chert	
10. Pl. 16	J Side-Notched	27.6 ⁺	19.7	4.8		1.5			Lockport Chert	
11. Pl. 16	K Side-Notched	41.8	29.3	6.8	5.4				Lockport Chert	
12. Pl. 17	A Larter Tanged	33.6	26.6	6.2	6.0				Grey Quartzite	
13. Pl. 17	B Larter Tanged	34.4 ⁺	23.0	6.3	5.9				Green Quartzite	
14. Pl. 17	C Side-Notched	35.0	20.6	4.8	3.2				Green Quartzite	
15. Pl. 17	D McKean Lanceolate	39.4	21.0		3.1	3.7			Grey Chert	S. Notch = 3.0 Deep
16. Pl. 17	E Type Unknown	36.3	23.1	6.2	4.9				Lockport Chert	
17. Pl. 17	F Fragment				12.0				Lockport Chert	
18. Pl. 17	G Larter Tanged	31.8 ⁺	25.5	6.0	5.1				Lockport Chert	
19. Pl. 17	H Hanna	31.2	25.4	8.9	5.9	1.0	2.4	+	Argillite	Stem Ht. = 10.5 Stem W. = 12.6-17.0
20. Pl. 17	I Fragment				6.1				Lockport Chert	
21. Pl. 17	J Biface	69.1	28.7	6.2	15.0				Argillite	
22. Pl. 17	K Larter Tanged	38.4		5.7	4.0				Green Quartzite	
23. Pl. 17	L Larter Tanged ?	37.7		5.0	3.1				Lockport Chert	
24. Pl. 17	M Larter Tanged	26.5	20.6	4.3	1.9				Lockport Chert	
25. Pl. 17	N Fragment				1.0				Lockport Chert	
26. Pl. 21	A Larter Tanged	27.8	21.0	5.0	2.2				Lockport Chert	
27. Pl. 21	B Fragment	32.7	18.7	6.6	4.0				Brown Chalcedony	
28. Pl. 21	C Fragment								Brown Chalcedony	
29. Pl. 21	D Prairie Side-notched	33.0 ⁺	18.8	5.0	3.2				Lockport Chert	
30. Pl. 21	E Plains Side-notched	22.0	18.4	4.4	1.8				Lockport Chert	
31. Pl. 21	F Whiteshell Side-notched		22.0	5.0					Quartz	
32. Pl. 21	G Avonlea ?	24.6		5.2	2.1				Lockport Chert	
33. Pl. 21	H Fragment		21.3	5.5					Lockport Chert	
34. Pl. 21	I Prairie Side-notched	28.8		4.3					Argillite	S. Notch = 1.9 Deep
35. Pl. 21	J Pryor Stemmed	46.4	21.0	10.4	8.0			-	Lockport Chert	
36. Pl. 21	K Pryor Stemmed	60.0	21.2	8.0	9.9			+	Lockport Chert	
37. Pl. 21	L McKean Lanceolate	32.2	20.5	5.2	4.6	3.8	7.7	+	Lockport Chert	
38. Pl. 21	M Duncan	33.4	16.8	6.2	5.2	2.6	3.8	+	Lockport Chert	
39. Pl. 21	N Oxbow	30.1	24.5	7.4	5.0	4.0		+	Lockport Chert	Grinding in the notches
40. Pl. 21	O Oxbow ?	33.0	16.8	7.5	5.0	2.8	3.0	-	Lockport Chert	

sometimes designated as scrapers, scraper fragments, or knife-scrapers, depending upon the shape and patterning of the flaking. Some of the specimens were so fragmentary and/or exhibited such coarse flake scars, that they were called biface fragments. These biface fragments included a range of variation that can be subdivided into preforms (Plate 19; E), crude knives (Plate 19; G), knife-scrapers (Plate 20; B, C, H), or fragments.

The variety of points was relatively consistent in the lower levels but materials in the upper levels were apparently mixed (Table 12). Larter Tanged points were found in all levels and on the surface. One McKean Lanceolate point was found in Level 3¹, and one on the surface. One possible Hanna² point was found in Level 4, and one Duncan point was found on the surface. Points resembling Besant, Avonlea, and Plains Triangular types were found in Level 1 (Table 12 and Plate 16).

The variation of point types found on the surface increased the total range of point styles. Other point styles included one Pryor Stemmed point (Plate 21; K), one Lanceolate, Straight-Based point (Plate 21; J), two Oxbow points (Parkdale Eared)³ (Plate 21; N, O), one Plains Side-notched point (Plate 21; E), and a

¹This squat, wide-based form of the McKean Lanceolate point is frequently found in Oxbow components in low frequencies (Nero and McCorquodale 1958; Meyer and Dyck 1968).

²This Hanna point could also be an unusually thick Larter Tanged Point which had not been pressure flaked as finely as the other points.

³MacNeish assigned Oxbow points in Manitoba to the Parkdale Eared type.

Whiteshell Side-notched point (Plate 21; F). These point types covered a long temporal period and represented a number of different components.

The lowest levels, which would probably represent uncultivated depths¹ of the Larter site, contained a predominance of Larter Tanged projectiles and three early side-notched projectiles which may be earlier than the Prairie, Plains, and Whiteshell Side-notched variants. Most of the Larter Tanged sample, 6 to 8 of the 10 specimens, came from these lower levels. Therefore, it seems likely that Levels 2, 3, 4 and Floor 1 contained artifacts representing only two components.

The typology of side-notched projectiles is not clearly understood. Side-notched variants were thought to be fairly recent on the Northern Plains (Kehoe 1967), but recent work by Husted (1968, 1969) and Kivett (Hurt 1966) has yielded evidence that an early horizon of side-notched projectiles existed on the Central and Northern Plains.

One specimen found in Level 3 (Plate 17; C) resembled early side-notched forms found at Logan Creek, Nebraska, at Steep Rock Lake (Simpson 1968), and at a site in the Swan River Valley (Gryba 1968; Pettipas, personal communication). Two other specimens with shallow notches and distinct basal notches found in Level 2 (Plate 16; J, K) resembled forms found at Sorenson IV (Husted 1969).

¹Floor 1 was definitely undisturbed because most of it had been covered by a layer of sterile yellow clay. The artifacts from this level consisted of one Larter Tanged projectile (Plate 17; G) and several other worked artifacts (Plate 20; B-J).

If these specimens are temporally related to the published forms, they may predate the McKean Complex component.

The artifacts from Level 1 and the surface represented a large number of components that pre-date and post-date the Larter component. The presence of earlier components represented by the Pryor Stemmed and Lanceolate Straight Based points (Husted 1969: 14, 31, 46, 51-52) and McKean Complex types found above the Larter component could possibly have been caused by erosional agents carrying the artifacts from a higher terrace or they might have been found some distance from the main excavation.

The projectile types that represent components later than the Larter component may also have been found over a large area although a few types appeared in Level 1. Therefore, none of these projectiles can be associated with any of the other tools or faunal remains from this site.

The evidence for a McKean component can be deduced only from the presence of one McKean Lanceolate and one Duncan projectile found on the surface and one McKean Lanceolate projectile found in Level 4. The specimen in Level 4 could have come from a disturbed context. None of the associated tool kit could be determined.

On the basis of my reanalysis, it is clear that the concept of a Larter Focus must be revised or discarded. This concept could be properly revised only if all excavated materials were available. With the available artifacts, the only possible revision was to exclude Oxbow (Parkdale Eared), McKean Lanceolate, Winnipeg Ovoid and Sturgeon Triangular types as diagnostic artifacts of the Larter

Focus because they represent surface finds and artifacts in a disturbed context in a multi-component site. The Winnipeg Ovoid projectile type (MacNeish 1958: 99-100, Pl. VI, 12-13) probably represents quarry blanks or preforms. The one specimen available for personal observation (see Plate 19, E which is the same as Pl. VI, 12 in MacNeish) was thick, irregularly chipped along the edges and lacked basal thinning and fine pressure flaking to form a thin bifacial edge. The Sturgeon Triangular projectile type (MacNeish 1958:99, Pl. VI, 14-16) has been attributed to such a wide range of artifacts from preform rejects (Plate 9, N and Plate 11, A) to finely-chipped, thin bifaces (Plate 17, J) that it is useless for analysis. The Oxbow and McKean Lanceolate types have been found to be much earlier at stratified sites on the Northern Plains.

The Larter Focus probably has only Larter Tanged projectiles as a diagnostic type. The Larter Focus is probably a variant of the tanged projectile components such as the Pelican Lake component at Mortlach (Wettlaufer 1955) and at Long Creek (Wettlaufer and Mayer-Oakes (1960). The associated assemblage can only be determined if all of the artifacts are available.

D. Raw Materials

Most of the artifacts from the Larter site were made from Selkirk chert which occurs locally. However, argillite, grey chert, Swan River chert, green quartzite, grey quartzite, and brown chalcedony were also present.¹ Most of

¹Les Leonoff aided in identifying the lithic materials.

the earlier point types, e.g., Pryor Stemmed, McKean Lanceolate, Duncan, Hanna and Ox-bow specimens, were made from Selkirk chert. The other raw materials may not have come into use until later types such as Larter Tanged points were manufactured (Table 14). The sources for grey quartzite, grey chert, and green quartzite are not known, but the argillite and quartz were probably imported from the Whiteshell area of eastern Manitoba. The brown chalcedony which was imported from the Souris or the Knife River area was used for 3 unidentifiable fragments found in Level 1 and on the surface.

TABLE 14

DISTRIBUTION OF RAW MATERIALS OF PROJECTILES AND PROJECTILE
FRAGMENTS AT THE LARTER SITE

Projectile Types	Raw Material							Totals
	Selkirk Chert	Grey Quartzite	Grey Chert	Green Quartzite	Argillite	Quartz	Brown Chalcedony	
Unidentifiable	5				1		3	9
Plains Triangular	1							1
Plains Side-notched	1							1
Prairie Side-notched	1				1			2
Whitshell Side-Notched						1		1
Avonlea	1		1					2
Besant				1				1
Larter Tanged	6			3	1			10
Hanna	1							1
Duncan	1							1
McKean Lanceolate	2							2
Oxbow	2							2
Side-Notched	1	1	1					3
Pryor Stemmed	1							1
Lanceolate, Straight-based	1							1
Totals	24	1	2	4	3	1	3	38

CHAPTER VI

OTHER EXCAVATED McKEAN COMPONENTS IN MANITOBA

A. Grand Rapids Locality

1. Tailrace Bay Site (GRS-3)

The Tailrace Bay site was excavated under the direction of Dr. W. J. Mayer-Oakes in the summers of 1961 and 1962. This camp site is located near the shore of the Saskatchewan River at the foot of the Grand Rapids (Map 1). At the time of this writing, the data have not been published: the archaeological information is based upon personal communications with Dr. Mayer-Oakes plus (Mayer-Oakes 1967, n.d.).

A) Excavation

The site was excavated in ten-foot squares. Excavations during the first year were dug in arbitrary levels, but during the second season the natural soil levels were followed. These levels consisted of a plow zone, grey clay layer, and the gravel layer (Figure 18). The grey clay was frequently absent in some test squares and occurred irregularly in other squares.

The cultural components could not be correlated with a high degree of accuracy with specific soil strata because the strata were thin, irregular, and lacked sterile zones between the strata. The soil stratigraphy was further complicated by past cultivation.

B) Environment

The site was located about fourteen feet above the 1962 water level of the Saskatchewan River and close to the shoreline. The land surface is a "gently

undulating till plain in which local relief is under twenty feet" (Lukens 1967:315). The surrounding locality is dotted with lakes and bogs.

The site was located within the Boreal Forest Zone (Weir 1967:21). The predominant native vegetation is spruce and jack pine, but there are localized areas where a mixture of broadleaf species such as poplar and conifers are found.

C) Artifact Analysis

Three cultural layers were distinguished on the basis of typological distinctions and modest stratigraphy (Mayer-Oakes n.d. 18). The earliest cultural layer was identified as the McKean Phase which was considered similar to MacNeish's Whiteshell focus since there was a predominance of McKean Lanceolate projectile points (Mayer-Oakes 1967:355). This cultural layer was found predominantly in the gravel level and the lower part of the grey soil level (Figure 18)¹.

At present, detailed information is available for only the projectile points of the earliest cultural level. There were eight whole or partial projectile points and five basal fragments (Plate 22). The majority of the points are unquestionably of the McKean Lanceolate type. Specimen G has pseudo-shoulders and is probably a Duncan specimen. All basal fragments appear to be parts of McKean Lanceolate points. Considering the total sample of projectile points, there is good evidence to consider this site as representative of a pure McKean Lanceolate component. All of the projectiles exhibit a close similarity in size, but the outline

¹Figure 18 is atypical; most squares lacked such a clear stratigraphy. The grey zone was frequently absent or patchy.

TAILRACE BAY SITE
30580E, NORTH WALL

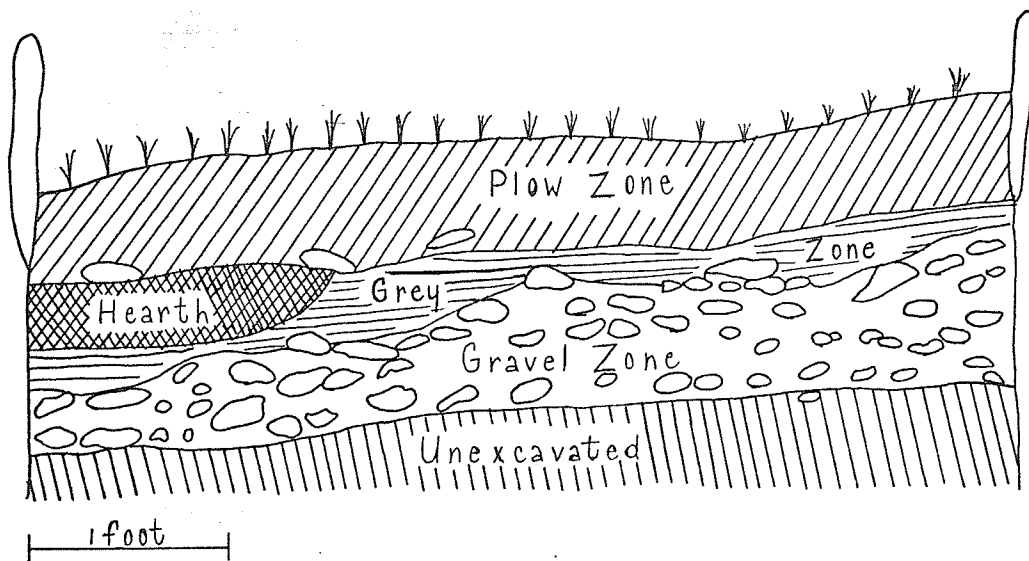


Figure 18: Profile from the Tailrace Bay Site (from a display in the Laboratory of Anthropology, University of Manitoba)

is quite variable (Table 15 and Plate 22). The range in length is 32.0-37.0 millimeters, and the range in width is 14.3-19.0 millimeters. It seems quite conceivable that these projectiles represented artifacts made by members of a single group, particularly when the range of length is so narrow compared to other samples (see Figure 3).

Since this component was not located in a single, unmixed soil stratum, the related assemblage could not be determined. However, there were end and side scrapers associated with these points (Mayer-Oakes 1967:355).

D) Raw Materials

All but one of the illustrated artifacts were made from Cathead chert which appears to be a distinctive form of chert that occurs along the west shore of Lake Winnipeg. This chert is easily distinguished by its various colours of grey and appears to be limited mainly to sites in the region immediately along the west shore of Lake Winnipeg. This material appears to have been used only rarely in sites farther south or west in Manitoba.

One specimen was made from a reddish-brown chert which could best be classified as Swan River chert. This material was rare at the Tailrace Bay Site and may have been imported.

E) Faunal Remains

The faunal remains as a whole indicated that woodland animals had been the primary source of game for at least the later cultural occupations (Table 16). These remains from the grey zone were associated with the later Laurel ceramic occupation (Mayer-Oakes, personal communication), and the remains in the gravel

TABLE 15

ATTRIBUTES OF MCKEAN PROJECTILES FROM THE
TARRACE BAY SITE

Type	L.	W.	Th.	Wt.	Notch		Stem		Lat. Gr.	Material
					D.	Thin	Ht.	W.		
A. McKean Lanceolate	36.5	17.0	5.8	4.0	3.8	3.5	-	-	+	Cathead Chert
B. McKean Lanceolate	37.0	16.7	5.4	3.1	1.4	?	-	-	+	Cathead [*] Chert
C. McKean Lanceolate	36.1	14.3	4.0	2.1	3.9	2.3	-	-	-	Cathead Chert
D. McKean Lanceolate	35.8	17.2	6.0	3.8	3.0	2.1	-	-	?	Cathead Chert
E. McKean Lanceolate	37.6	15.0	5.5	3.0	3.1	?	-	-	-	Cathead Chert
F. McKean Lanceolate	32.0	19.0	5.6	3.2	4.9	?	-	-	-	Cathead Chert
G. Duncan ?	35.4	18.6		3.9	5.0	3.0	?	16.6	+	Orange Chert

*This material may also be Selkirk Chert

may also have been associated with the ceramic component. However, the presence of sturgeon (Acipenser fulvescens) and northern pike (Esox lucius) in the gravel and associated with a site located near rapids may indicate the importance of fishing to the early McKean hunters.

2. Cedar Lake Site (C3-UN-28)

The Cedar Lake site was excavated during the summer of 1965 by members of the Manitoba Archaeological Society. This site was located on the shore of Cedar Lake to the west of the Tailrace Bay site (Map 1).

It was a multi-component, unstratified site. There were a total of 11,231 artifacts (not counting chipping debris), but only a few of these were projectiles. Only four specimens could be classed as specimens of the Early Middle Prehistoric Period (Figure 19). The four specimens were:

- i) A possible McKean Lanceolate point of multi-coloured-Swan River chert.
- ii) A possible McKean Lanceolate preform or reject.
- iii) A stemmed variant of grey chert.
- iv) A Nutimik Concave fragment of brown chert.

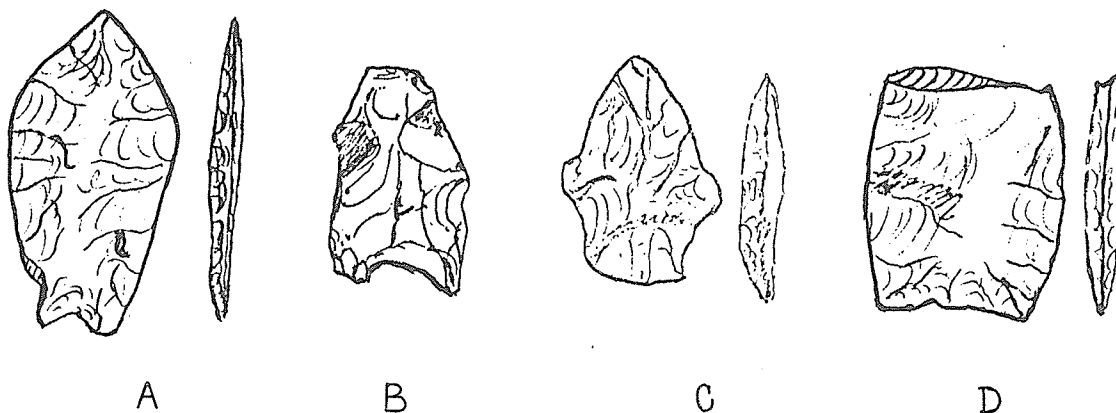


Figure 19: Artifacts from the Cedar Lake Site (Hlady n. d.)

TABLE 16

VERTEBRATE FAUNAL REMAINS* FROM THE GREY AND
GRAVEL ZONES OF THE 1962 EXCAVATION AT THE
TAILRACE BAY SITE

FISH	GREY	GRAVEL
Lake Sturgeon (<i>Acipenser fulvescens</i>)	103	10
Northern Pike (<i>Esox lucius</i>)	28	3
Identified	131	13
Unidentified	91	2
Total Bones	222	15
Percent Identified	59%	86.6%
MAMMALS		
Snowshoe Hare (<i>Lepus americanus</i>)	2	24
Least Chipmunk (<i>Eutamias minimus</i>)	5	0
Beaver (<i>Castor canadensis</i>)	17	2
Porcupine (<i>Erethizon dorsatum</i>)	1	0
Dog (<i>Canis familiaris</i>)	2	0
Black Bear (<i>Ursus americanus</i>)	7	1
Mink (<i>Mustela vison</i>)	1	0
Moose (<i>Alces alces</i>)	10	0
Woodland Caribou (<i>Rangifer tarandus</i>)	1	0
Bison (<i>Bison bison</i>)	4	0
Identified	50	27
Unidentified	1176	103
Total Bones	1226	130
Percent Identified	4.2%	20.8%
BIRD		
White Pelican (<i>Pelecanus erythrorhynchos</i>)	1	0
Canada Goose (<i>Branta canadensis</i>)	2	0
Mallard, Black Duck, or Pintail (<i>Anas</i> sp)	1	0
Sandhill Crane (<i>Grus canadensis</i>)	1	0
Passenger Pigeon (<i>Esotipistes migratorius</i>)	1	0
Identified	6	0
Unidentified	41	0
Total Bones	47	0
Percent Identified	12.8%	0
Fish	222 (14.8%)	15 (10.3%)
Mammal	1226 (82.0%)	130 (89.7%)
Bird	47 (3.2%)	0 (0.%)
TOTAL	1496 (100%)	145 (100%)

* Analyzed by LUKENS (1966)

The McKean Lanceolate specimen had the widest medial cross-section on the upper one-third of the body, like three specimens (Plate 22; A, B, G) from the Tailrace Bay site, and was only a few millimeters longer. Specimens B and C were too deviant for fruitful analysis.

The presence of the Nutimik Concave specimen raised certain questions. Nutimik concave projectiles have also been found at Tailrace Bay, but they were considered to be associated with Laurel pottery (Mayer-Oakes, n.d.). Until specimens of this type are found in a distinctly stratified site, no further analysis can be attempted.

B. Rock Lake Locality

1. United Church Site (DhLS-3)

A) Excavation

The United Church site was excavated by Richard S. MacNeish and Kathryn Capes (1958). They dug in "arbitrary 6 inch levels or by actual soil zones when they were discernible" (MacNeish and Capes 1958:120). The material was trowelled except when the soil became clayish as in Level 4 (Figure 20), at which time

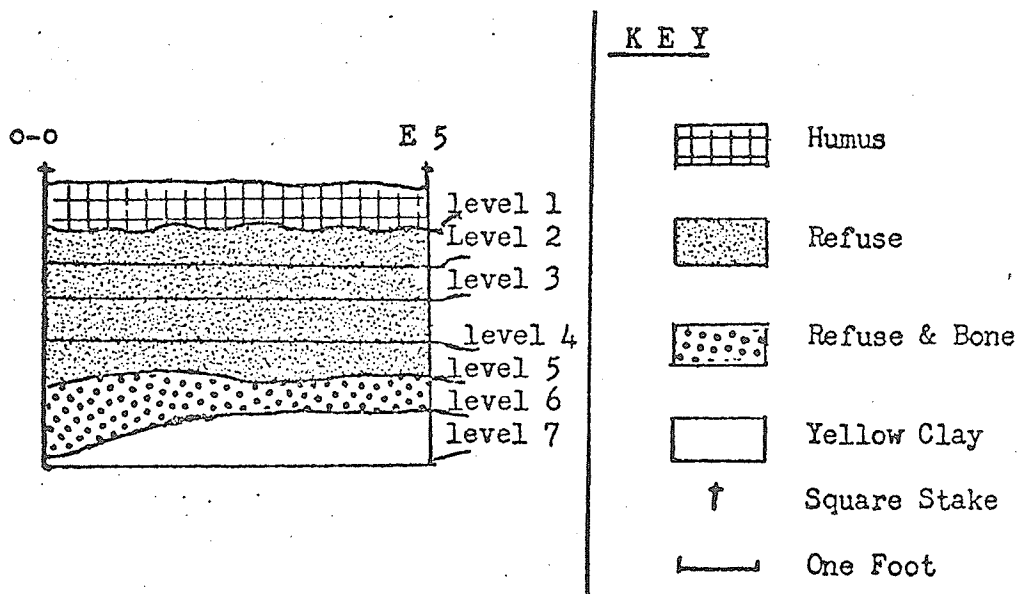


Figure 20: Cross-section of a Typical Square at the United Church Site (MacNeish and Capes 1958, Plate 1).

shovels were used. All material was screened.

B. Environment

The site is located on a high terrace above Rock Lake, along the north bank of the Pembina channel, (Map 1). At this point, the channel is approximately 1.5 to 2.0 miles wide and 200 feet deep (Ellis and Shafer 1943:23). Above the terrace to the north, there is the flat Marringhurst Plain which is in turn flanked by the Pembina Hills and Tiger Hills (Ellis and Shafer 1943:19-22). These hill areas vary from strongly undulating and rolling to moderately hilly topography and are formed as a result of morainic deposits.

The natural vegetation within the channel varies from oak and poplar woods on the banks to a floor covering of woods of elm, Manitoba maple, ash, birch, poplar and willow (Ellis and Shafer 1943:24). The Marringhurst Plain was predominantly grassland prior to settlement, and the hilly areas varied from grassland to woodland vegetation.

C. Artifact Analysis

McKean Lanceolate points were identified from Levels 5 and 6 (MacNeish and Capes 1958:120). Two specimens came from Level 5 and four specimens, of which two were lost in the field, came from Level 6. Of the remaining four specimens, one is illustrated and the measurements of one is given. The points were made from brown chalcedony and grey chert.

However, in my re-analysis,¹ I found that the one available specimen from Level 6 was a McKean Lanceolate point, but the five projectiles and fragments from Level 5 were too amorphous to be assigned to any type (Plate 23).

One specimen (Plate 23, B) might possibly be a Hanna projectile. The other specimens are either too fragmented, too crudely flaked, or lacking necessary attributes to be considered as variants of the McKean assemblage.

There were no sterile layers separating any of the levels of artifacts. There was no evidence supplied concerning the relationship between artifact levels and soil horizons and very little evidence about the soil profile. The hard, sticky clay of Level 4 (MacNeish and Capes 1958) may have been part of the B Horizon in which clay particles had accumulated.

D. Faunal Analysis

Few meaningful comments can be made about the faunal remains that were associated with the McKean Lanceolate points. These remains were not analyzed in detail nor reported according to level. The authors state that in Levels 5, 6, and/or 7, there were remains of bird, bison, rodent, beaver, bear, canines, deer, and fish. Buffalo bones predominated in all levels of the site.

¹Dr. Roscoe Wilmeth sent to me all artifacts catalogued as projectiles from Levels 5 and 6 of the Cemetery Point site. These are illustrated in Plate 23. It seems entirely likely that the various levels of artifacts underwent mixing and this argument can be supported by the presence of Hanna points, which are considered as pre-ceramic, in Levels 1, 2, and 5 (MacNeish and Capes 1958:122). There are no artifact types found in Levels 5 and 6 that are not found in at least one other level and many of the artifact types are found in all levels. Any comments about associated artifacts related to the McKean complex are of questionable validity.

The buffalo bones were represented mainly by the ends of long bones. Other bones such as pelvis, scapula and skulls were rare, and vertebrae were few in number. The authors (MacNeish and Capes 1958) interpreted the absence of these bones as evidence that the animals were killed elsewhere and only the long bones and ribs were brought to the camp site.

E. Interpretation

From the limited data that is presented for this site, I believe that this locality has been used as a camp site by several groups having different technologies. The earliest technology is represented by remains of a group who used McKean Lanceolate points. The members were predominantly oriented to hunting bison but supplemented their diet with birds, fish, and a variety of other vertebrates, such as beaver and bear that inhabited wooded localities.

2. Lake Shore Site

The Lake Shore site was situated on the north bank of Rock Lake on the southwest quarter of 14-3-13, about one quarter mile east of the United Church site (Map 1). It was discovered, tested in 1948, and reported by Mr. Chris Vickers (Vickers 1948, 1949, and 1950). Shortly after initial excavations were completed, the entire site was destroyed as a result of road construction.

A) Excavation

The occupation zone was approximately two inches thick and extended for 27 feet along an eroding bank under a roadway (Figure 21). Extensive excavation could not be undertaken because of the presence of the road, but the eroded bank was trowelled and the nearby beach surface was surveyed.

B) Environment

The site was located on a sandy beach above the summer water level of Rock Lake. The topography and vegetation of the surrounding locality is the same as described for the United Church site.

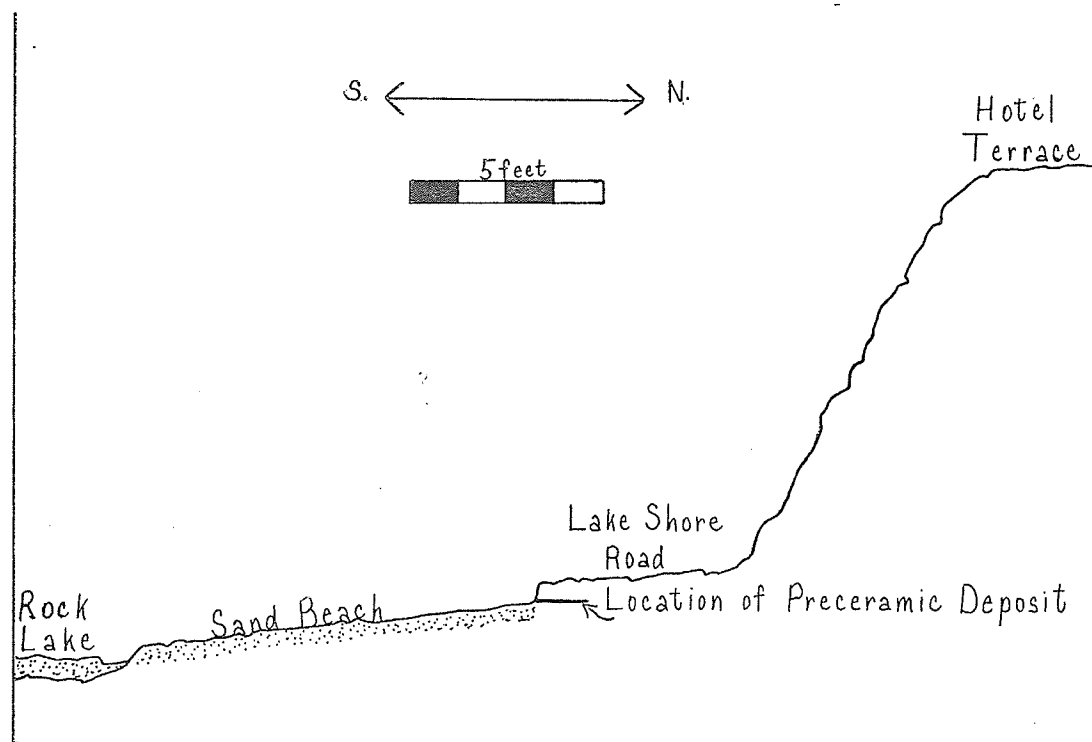


Figure 21: Profile of Lake Shore Site (Vickers 1948:4).

C) Artifact Analysis

As a result of the 1948 work, Vickers removed "7 projectile points, 2 small blades that may have been knives or scrapers ... a small end scraper ... chips of chert, small fragments of badly decayed bone and some charcoal" (Vickers 1948:3). Vickers identified five of the projectiles and two blades made from grey chert, one point made from red jasper, one from red quartz, and the end scraper made from yellow jasper. The Lake Shore site was "characterized by crude stemmed points and base notched points sometimes slightly fluted"

(Vickers 1950:6), (Figure 21).

Unfortunately, the artifacts from this brief excavation have either been mixed with the surface finds from this site or have been misplaced. The available artifacts that have been catalogued as surface finds (Plate 34) include specimens of the Duncan and Oxbow types. Most specimens are water-worn. One scraper (Plate 24, 18) is similar to a specimen found at the Filuk site (Plate 7, G).

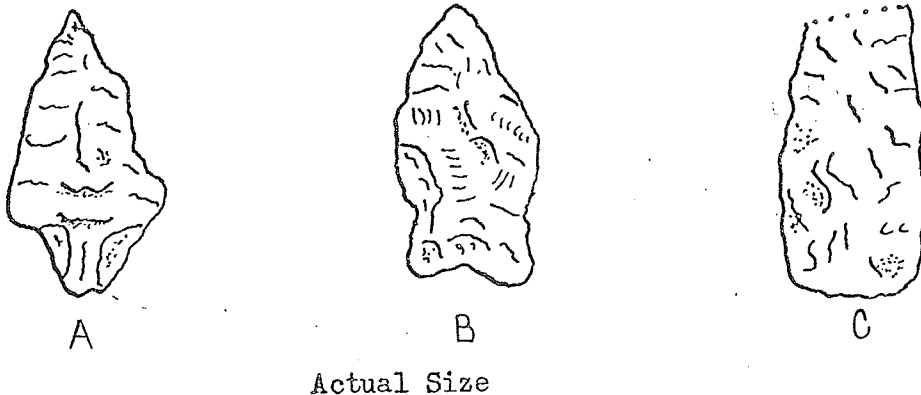


Figure 22: Two Projectile Points and Knife from the Lake Shore Site. Note: Only the Two Types of Points Sketched Above are Found on the Site (Vickers 1948:4).

3. Avery Site (DhLs-1)

The Avery site is located on the third terrace above Rock Lake on the north side of the valley. It is on the same property as, and slightly east of, the Lake Shore site. The artifacts indicated a multi-component occupation, but the components had not been separated by soil development.

A) Excavation

Excavations were originally carried out by Mr. Chris Vickers during the summers from 1944 to 1948. Test pits were excavated by members of the Glacial

Lake Agassiz Survey of the University of Manitoba Department of Anthropology crew during the summer of 1966 initially under the direction of Dr. W. J. Mayer-Oakes and later under the direction of Mr. Morgan Tamplin (Joyes 1969). The university field crew excavated in arbitrary five centimeter levels to an average depth of 42 centimeters.

B) Artifact Analysis

No typological stratigraphy could be determined on the basis of the pattern of artifact distribution because the components had been mixed, possibly as a result of multiple occupations in a situation where soil deposition was extremely slow. Joyes (1969) developed a sequence of cultural levels on the basis of typology. The earliest level was the McKean-Duncan-Hanna Phase which was identified by the presence of, what Joyes considered as, five Duncan points and three Hanna points (Joyes 1969: 40-44, Plate 3, A-D). Because the components were mixed, no attempt was made to determine associated artifacts.

After viewing Joyes' illustration (Joyes 1969: Plate 3, A-D), I re-identified the illustrated artifacts. Specimens A and B appeared to be more like Hanna points than Duncan points because the stems exhibited very pronounced flaring. Specimens C and D also appeared to be Hanna points, although specimen D might also be considered as an Oxbow point. The lowest component was probably a predominantly Hanna component.

4. Comparisons of Sites in the Rock Lake Locality

The presence of projectiles assigned to the Early Middle Prehistoric Period in the lower levels of the Avery and United Church sites, the presence

of Oxbow, Duncan, and Hanna points from the Lake Shore site, and the presence of several McKean points represented by surface finds (Chapter VII, South Central Region) suggested that this locality may have been used extensively by the hunters who made the McKean complex projectiles and the Oxbow projectiles. There does not seem to have been any preference of locality regarding terrace levels as long as the sites were near a stream or lake. Sites were found on the beach, as well as on the second and third terraces. The absence of located sites on the south side of the lake was due to the presence of a thick forest cover and inaccessibility which made a survey for sites unfeasible.

The two projectile types that were most common were the Oxbow and the Hanna types. McKean Lanceolate and Duncan points were infrequent in the excavated components, but they were present in sufficient numbers in the surface sites to indicate their importance as types.

The samples of these early projectiles were too small and/or too highly mixed with artifacts from later components to study frequency of types as related to social groups or to determine the tool kits of these early hunters. It was impossible to determine whether these sites might have represented a few groups occupying several sites over a long period of time, a few groups occupying several sites over a short period of time, or many groups occupying this locality over a long period of time.

The excavated McKean components in Manitoba are few in number and widely scattered. The distribution of McKean components in Manitoba could not be adequately understood until both excavated and surface manifestations were recorded.

CHAPTER VII

SURFACE SITES OF McKEAN COMPONENTS IN MANITOBA

A. The Sample

The sites recorded represent: a) sites recorded by Boyd Wettlaufer (n.d.) during his survey of the early 1950's, b) sites recorded by Walter Hlady (n.d.) during more than a decade of amateur archaeology, c) sites recorded by members of the Glacial Lake Agassiz survey under the direction of M. Hill in 1965 and Morgan Tamplin in 1966, 1967, and 1968, d) sites recorded by Chris Vickers (1948, 1949, 1950, 1951) and e) sites reported to the writer by various members of the Manitoba Archaeological Society. The quality of the informants among the members of the Manitoba Archaeological Society varied from professionals such as Chris Vickers to amateurs who merely collect beautiful specimens and have no interest in their importance for interpreting pre-history.

As a result of the wide range of interests of the various informants, the sample of artifacts from different sites can be compared only for a minimal number of purposes.¹ In some examples, the artifact inventory includes all re-worked artifacts and debris. At other sites, there are only the projectiles available for description and analysis. Other informants have collected only a few specimens of projectiles and have contributed only those specimens that they felt were McKean variants, thereby forcing the writer to channel his analysis through their pre-conceived orientation.

¹All measurements of attributes in the tables of this chapter were taken by me.

The writer was not able to contact all, nor most, of the collectors of the province, so it can only be hoped that the sample is reasonably representative. The possibility of achieving this end is further hampered by the fact that not all regions of the province have a comparable number of active amateur archaeologists which means that there are various parts of the province which lack archaeological data because of a lack of research and interest.

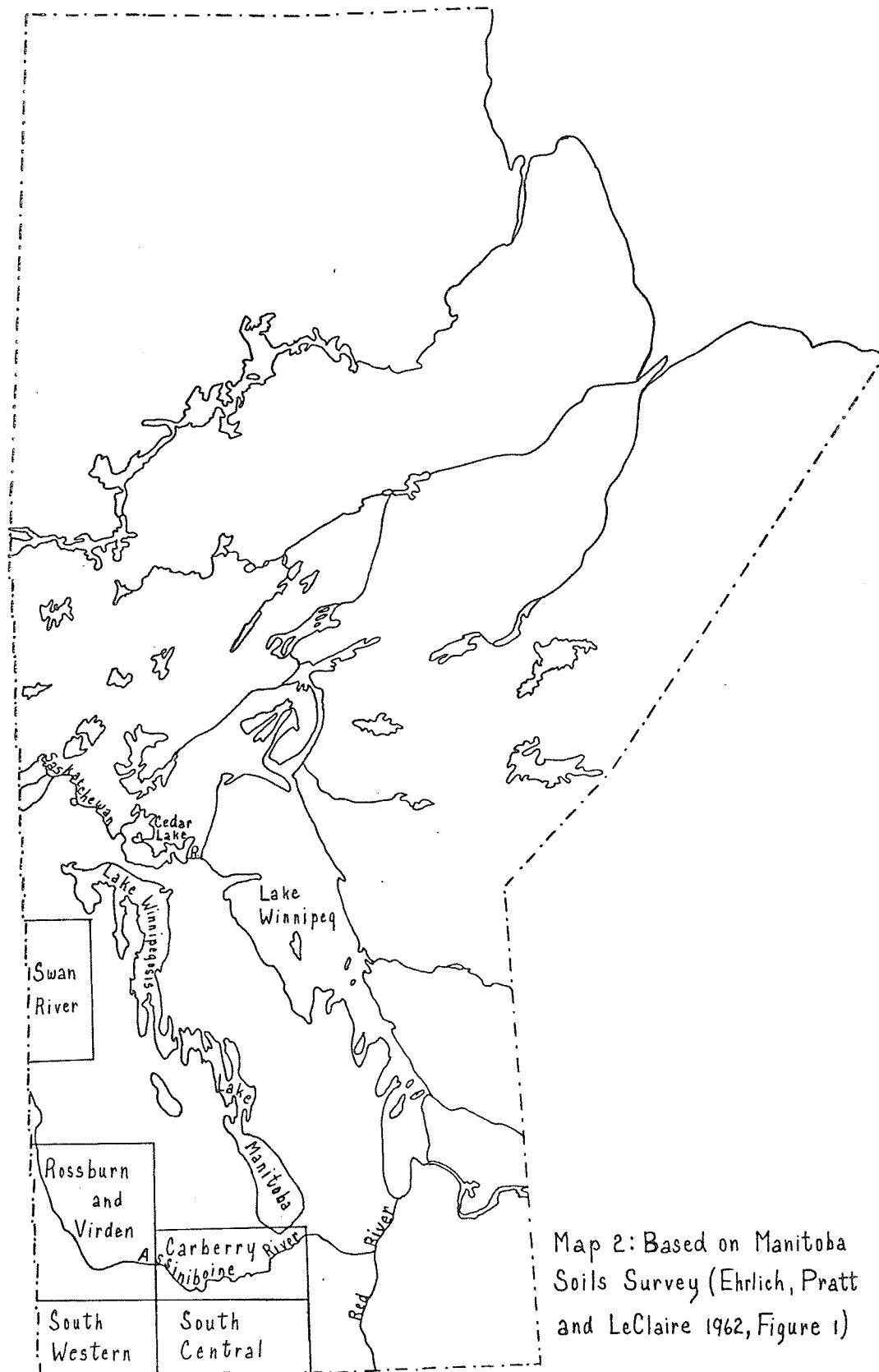
Since all of these sites represent surface finds, the artifacts from these sites may represent multi-component sites. In the regions where sites are sparse, the correlations of projectile assemblages are of limited validity. In local areas such as parts of the Swan River Valley where sites are clustered, important patterns may be discerned.

In order to illustrate the distribution of the various surface sites, arbitrary geographical units were chosen for the various regions because the number of rivers, lakes, and drainage basins are too numerous for expedient representation. The units chosen were those used in the Manitoba Soil Survey carried out by members of the Soils Department, The University of Manitoba (Map 2).

The illustrated sites represent only those that have Early Middle Pre-historic Period projectile styles. Artifacts from other periods may or may not be present. Most sites have one or more specimens of the McKean Complex,¹ but a few sites may be represented by other types that were used in the analysis of the data.

¹The entire sample could not be illustrated due to time, space, and the nature of the illustrations, e.g. colour slides of mounted collections, but a folder of data is available at the Laboratory of Anthropology, University of Manitoba.

MAP REGIONS IN MANITOBA



Map 2: Based on Manitoba Soils Survey (Ehrlich, Pratt and LeClaire 1962, Figure 1)

B. Swan River Region

1. Sample

These sites (Map 3 and Appendix E, 1) were recorded as a result of the work of members of the Glacial Lake Agassiz field crew working in the region during parts of three summers¹ and as the result of recording sites primarily from the collections of Mr. Ed Dobbyn and Mr. J. B. Norman² who have carefully catalogued and recorded the provenience of most of their artifacts. These collections represent a fairly extensive survey of the region because Mr. Norman has travelled over much of the region in his capacity as a Conservation Officer.

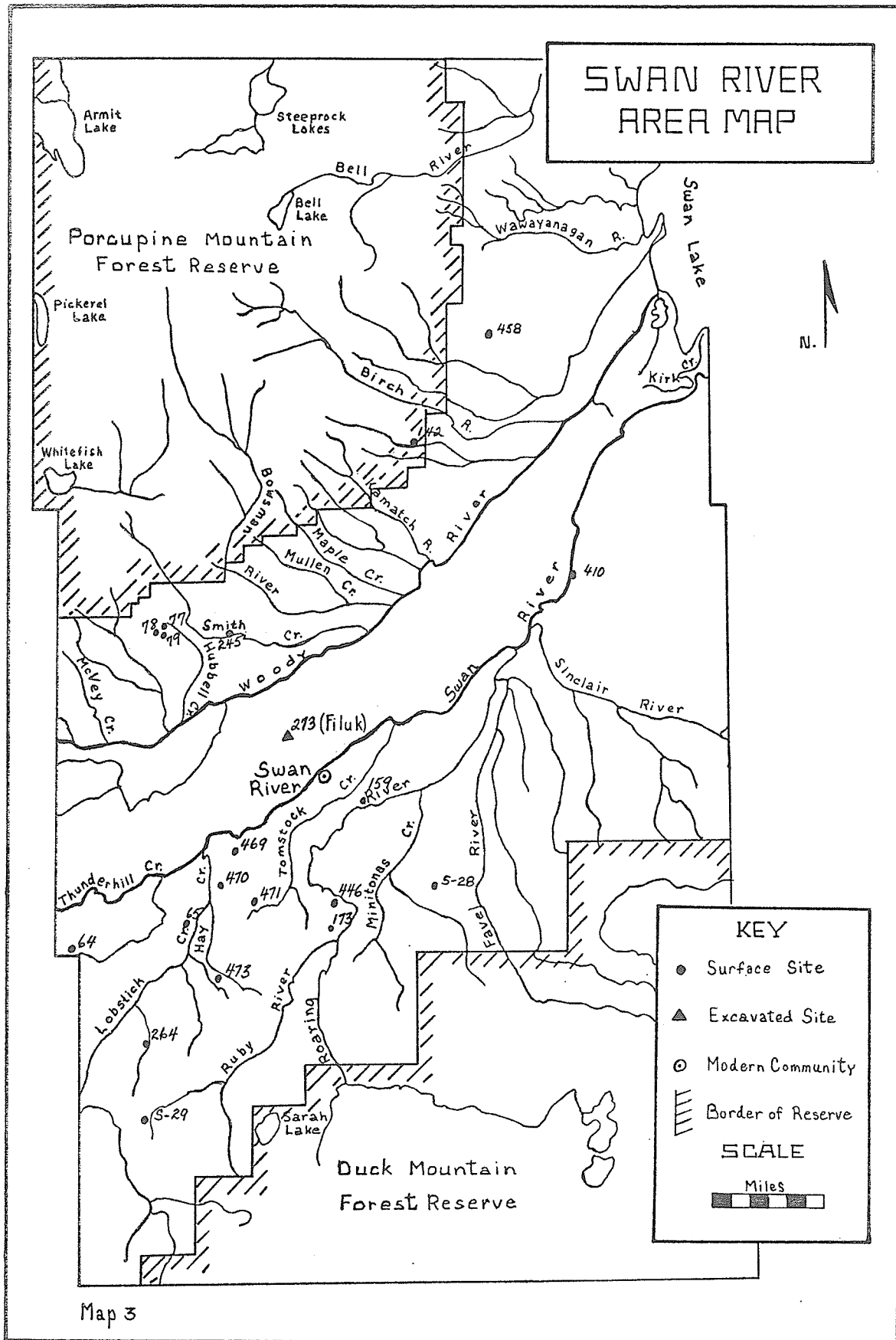
2. Summary

All of the samples represent surface finds and most of these represent mounted specimens that could not be measured.³ These severe limitations reduced the usefulness of the data. The data was useful, however, for determining distribution of sites and for deriving some understanding of the association of various types, but the data proved fruitless in determining tool kits and almost fruitless for determining patterns of social grouping by studying distribution of type varieties.

¹The site numbers on the map represent "LAS-" numbers assigned as the result of the Lake Agassiz Survey; the numbers beginning with "S-" represent sites not recorded as a result of this survey.

²The sample from Mr. Norman consisted of mounted specimens and lacked the associated artifacts and fragments.

³There were specimens from 15 other McKean components in the Norman collection, but data on land locations was not available.



The sites were found primarily along the rivers. Many of the sites were in the lowland area of the region. The McKean components had an unusually heavy concentration for Manitoba.

There tended to be a wide range of all McKean variants. Long forms of McKean Lanceolate points as found at the Cemetery Point site (Table 17) were present, but the majority of the McKean Lanceolate specimens were squat with a deep, wide basal concavity. It was impossible to plot possible relationships of the occupants of the various sites because the samples were too small and most of the specimens were not available for intensive study. However, the similarity between the basal configuration of the McKean Lanceolate projectile from LAS 458 and the two basal fragments from the Filuk site is noteworthy.

There were frequent associations of Oxbow specimens and tanged, straight-based forms (Figure 27, C, D, E in Appendix E) with McKean components (Table 18). These Oxbow and tanged specimens were present even when there was no other evidence of earlier or later components and may have been produced by members of the same social groups or contemporaneous groups.

TABLE 17

ATTRIBUTES OF MCKEAN COMPONENT ARTIFACTS
FROM THE SWAN RIVER REGION

Site	Type	L.	W.	Th.	Wt.	Notch		Stem		Lat. Gr.	Material
						D.	Thin.	Ht.	W.		
1. LAS 245	McKean Lanceolate	29.4	19.0	6.4		3.5	3.4				Swan River Chert
2. LAS 458	McKean Lanceolate	33.7	15.5	5.4	3.0	2.1	2.0				Swan River Chert
3. LAS 458	Duncan	28.6	20.0	6.6	4.0	2.0	?	10.1	15.8		Swan River Chert
4. LAS 466	Duncan	21.2	16.6	6.0	3.0	1.6	4.9	10.3	14.2	+	Swan River Chert
5. LAS 466	Duncan	28.0	20.5	5.0	3.6	3.6	3.2	11.0	17.8	+	Swan River Chert
6. LAS 466	Duncan	27.0+	21.0	6.5	4.1	3.3	5.0	9.5	15.9	+	Swan River Chert
7. LAS 466	Duncan	32.2	23.6	5.5	4.5	3.0	3.7	10.4	16.9	+	Swan River Chert
8. LAS 466	Duncan	42.8	24.2	6.8	7.5	?	?	17.5	10.0	+	Swan River Chert
9. LAS 466	Duncan	42.0	22.3	5.0	5.0	1.3	3.4	12.7	16.0	+	Swan River Chert
10. LAS 466	Duncan	25.0+	23.4	6.3	3.2	1.9	4.5	7.6	14.3	+	Swan River Chert
11. LAS 466	McKean Lanceolate	23.0+	?	4.6	2.0	6.2	6.0	-	-	-	Swan River Chert
12. LAS 466	Duncan	29.2+	20.8	6.8	4.5	2.4	5.8	10.0	17.0	+	Swan River Chert
13. LAS 466	Duncan	32.0+	20.7	7.3	4.0	6.0	?	12.0	?	?	Swan River Chert
14. LAS 466	Duncan	32.0	20.5	6.6	4.1	2.6	5.8	8.0	16.6	+	Swan River Chert
15. LAS 466	McKean Lanceolate	31.0	19.4	5.7	3.1	5.0	?	-	-	+	Swan River Chert
16. LAS 470	Duncan (reworked)	48.6	21.6	8.0		2.0	1.8	?	8.6		Swan River Chert
17. LAS 470	Fragment McKean	15.6	?	5.6		2.6	2.6	?	14.8	+	Swan River Chert
18. S 29	McKean Lanceolate	32.9+	20.6	7.8	5.0	2.9	7.0	-	-	-	Swan River Chert
19. LAS 471	McKean Lanceolate	23.6	12.4	4.8	1.3	1.9	3.0	-	-	?	Swan River Chert
20. LAS 471	McKean Lanceolate	47.2	25.2	6.5	7.0	7.8	5.3	-	-	+	Swan River Chert
21. LAS 69	Duncan	28.0	21.8	6.0		1.0	?	10.3	15.9	+	Swan River Chert
22. LAS 69	Duncan	32.9+	20.5	6.8		0.8	4.3	9.8	14.8	+	Swan River Chert

TABLE 18
 FREQUENCY OF MCKEAN ARTIFACTS
 AT SITES IN THE
 SWAN RIVER VALLEY

Site	P R O J E C T I L E S				
	McKean Lanceolate	Duncan	Hanna	Oxbow	Tanged Str.-based*
77, 78, 79	12	2	2	9	4
245	1	0	0	0	1
458	1	1	0	1	3
142	0	1	0	0	0
410	0	1	2	0	0
469	2	0	0	1	0
69	0	2	0	0	0
470	0	1	0	0	0
65	0	2	0	1	0
473	1	0	0	0	0
264	1	0	1	0	0
S29	1	0	0	0	0
159	1	0	0	0	0
466	7	10	1	2	9
62	0	2	0	0	0
173	7	10	1	5	1
S28					
471	2	0	0	0	0

*If the total sample from all of these sites had been available, the number of these specimens would probably have been greater.

C. Rosburn-Virden Region

1. Sample

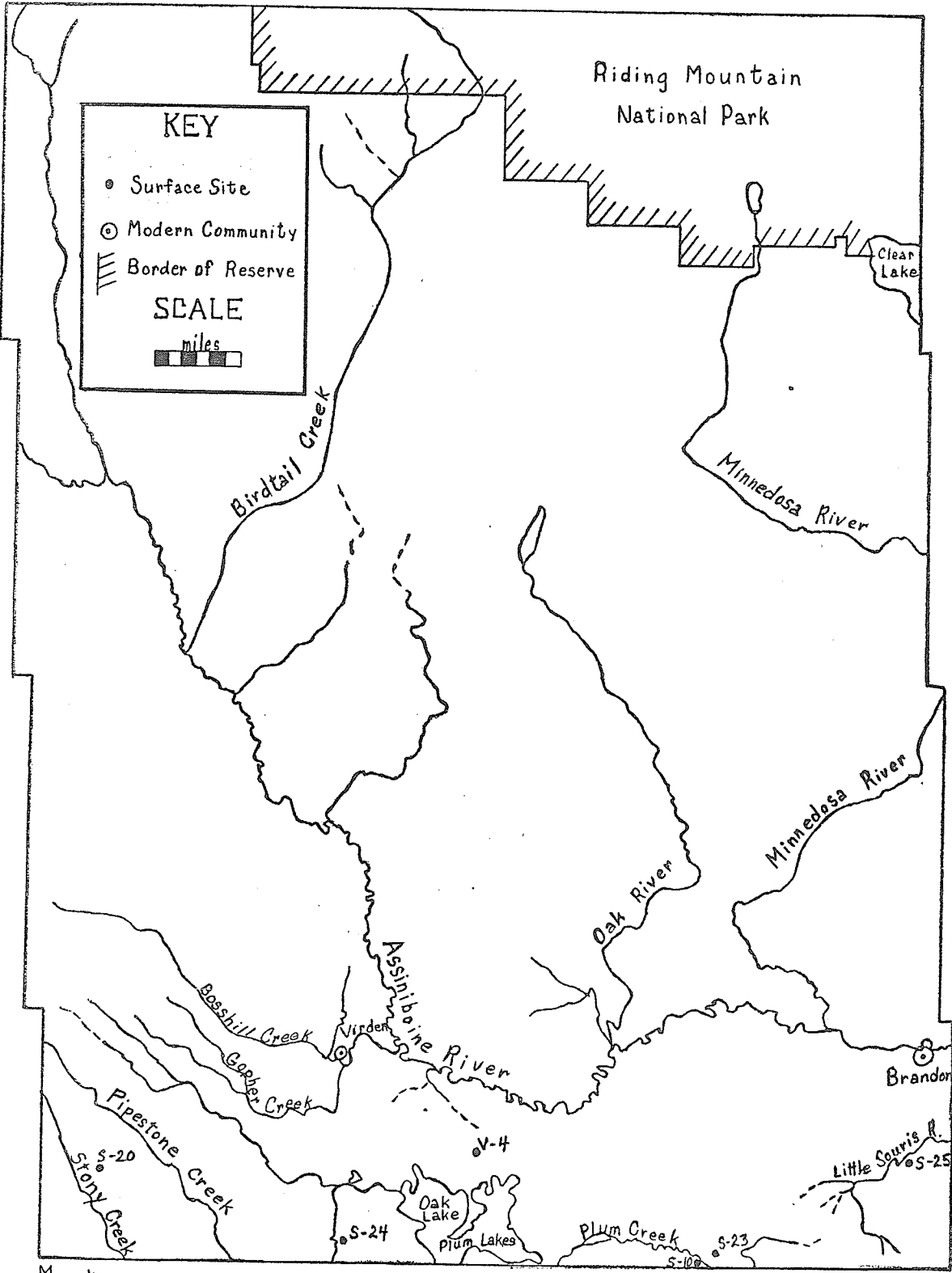
The sites (Map 4 and Appendix E, 2) represent the locations of McKean projectiles found by Chris Vickers, Dave Braddell, Clive Gonzalves and Walter Hlady. In some cases, the total sample of artifacts obtained from the site was not available and I had to rely only on a limited sample of projectiles.

2. Summary

The sites are scattered intermittently in the southern part of the region. This distribution is probably a reflection of the areas of interest of the collectors, the degree of cultivation of the land, and the accessibility of the region as a result of road construction because much of the northern part is sparsely settled.

The sample was too small and the data on the available specimens was too incomplete (Table 19) to derive any meaningful conclusions from the data. This sample merely served to give some insight into the total distribution of McKean components in Manitoba.

ROSSBURN-VIRDEN REGION



Map 4

TABLE 19

ATTRIBUTES OF MCKEAN COMPONENT ARTIFACTS
FROM THE ROSSBURN-VIRDEN REGION

Site	Type	L.	W.	Th.	Wt.	Notch		Stem		Lat. Gr.	Material
						D.	Thin.	Ht.	W.		
1. S 20	McKean Lanceolate	27.2+	17.3			4.4	6.8				
2. S 20	McKean Lanceolate	31.1+									
3. S 20	Duncan	32.0	17.6			2.4	5.7				
4. S 20	Duncan	37.7+	17.7								
5. V 4	Duncan	48.9	23.6								Brown Chalcedony
6. S 10	Duncan	46.6	15.5	6.0	4.5	1.0		11.0	13.4	+	Chert
7. S 24	McKean Lanceolate	34.2	18.6	5.0	3.1	3.5	5.0 6.2	-	-	?	Chert

D. South Western Region

1. Sample

The locations of these sites (Map 5 and Appendix E, 3) are based on the work of Dave Braddell of Reston, Manitoba and Chris Vickers. The sample obtained from Mr. Braddell consisted of projectiles selected from a much larger collection, but the writer did not see this collection. The writer did see the total artifact inventory from the sites recorded by Mr. Vickers.

2. Summary

McKean components tend to be concentrated along or near the Souris River which is the largest river channel in this region. In the Elva district, there was a clustering of sites along Graham Creek.

No McKean Lanceolate or Duncan specimens were found in the sites near Souris, e. g. S 21, S 22 and LAS 467. Hanna and Nutimik Concave specimens were found in this district (Table 20).

The frequency of raw materials indicated that brown chalcedony was important at the southern sites. Five specimens of 13 were made from this material and the remaining specimens had been made from some form of chert, of which only three specimens could be identified as the Swan River variety (Table 21).

One fragment, found at S 12 and tentatively identified as McKean Lanceolate, was made from Selkirk chert. The projected length could have been as great as 80 centimeters because at 42.0 centimeters, the sides were still parallel and showed no indication of converging. This specimen may have been a Jimmy Allen point (Mulloy 1959), and the material may have been imported from the Red River area or it may have been derived from local glacial cobbles.

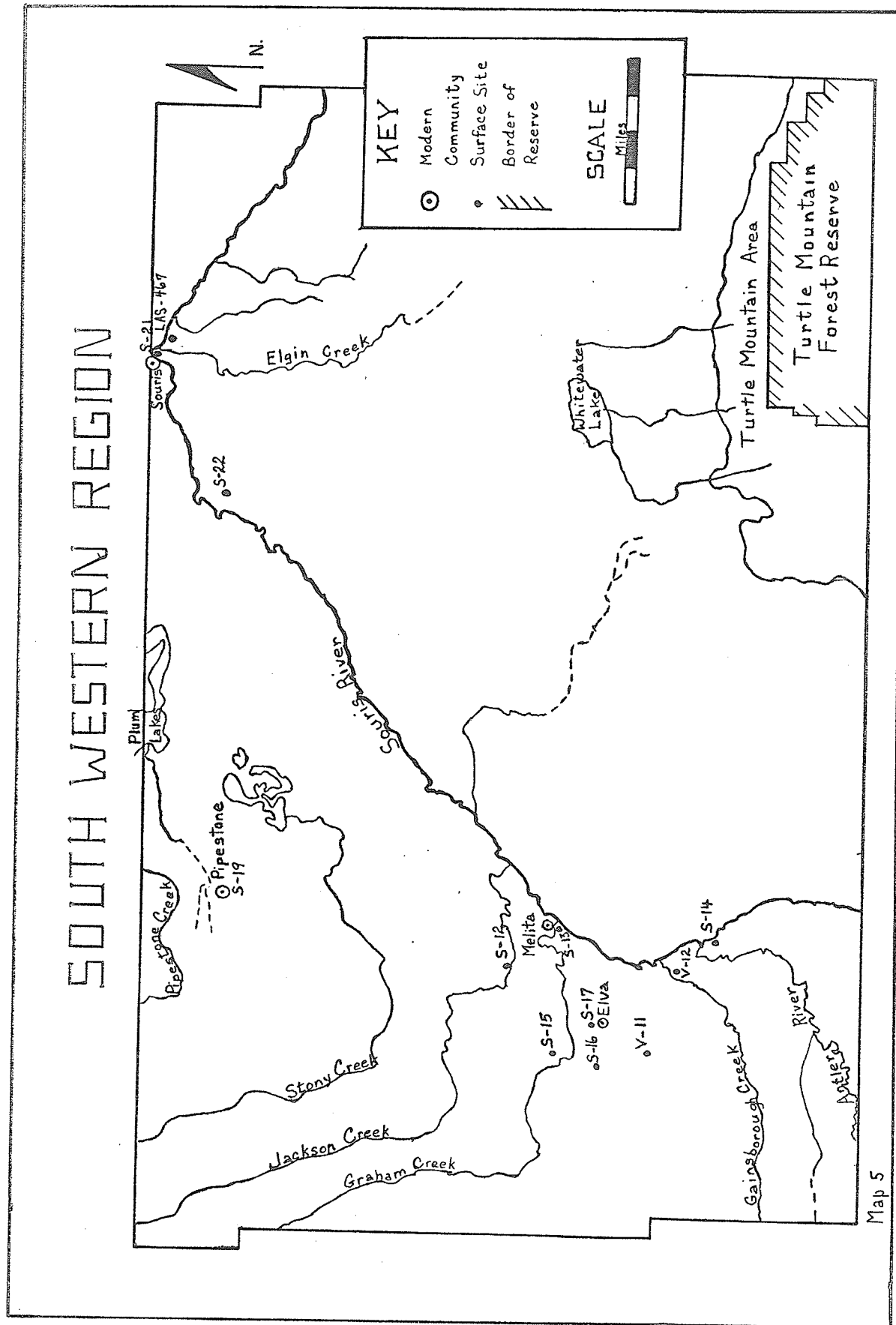


TABLE 20

DISTRIBUTION OF TYPES IN
SOUTH WESTERN REGION

Site	P R O J E C T I L E S						Total
	McKean Lanceolate	Duncan	Hanna	Ox-bow	Tanged	Nutimik Concave	
S 14	1	0	0	0	0	0	1
V 12	0	1	1	2	0	0	4
V 11	2	2	2	0	0	0	6
S 16	1	0	0	2	0	0	3
S 17	0	1	0	0	0	0	1
S 15	1	0	0	0	1	0	2
S 13	0	0	1	0	0	0	1
S 12	1	0	0	0	0	0	1
S 19	5	0	4	6	1	0	16
S 22	0	0	1	0	0	0	1
S 21	0	0	1	0	0	0	1
LAS 467	0	0	0	0	0	1	1
Total	11	4	10	10	2	1	38

TABLE 21

ATTRIBUTES OF MCKEAN COMPONENT ARTIFACTS
FROM THE SOUTH WESTERN REGION

Site	Type	L.	W.	Th.	Wt.	Notch D. Thin.		Stem Ht. W.		Lat. Gr.	Material
1. S 14	McKean Lanceolate	20.0+	13.8	4.3	1.9	1.9	2.0			+	Swan River Chert
2. V 11	Duncan	32.8+	16.1	6.0	3.2	2.6	5.0	12.2	15.0	+	Chert
3. V 11	Hanna	45.5	18.5	5.5	4.5	?	?	10.3	15.0	+	Brown Chalcedony
4. V 11	Hanna	39.2+	16.6	4.5	3.1	?	?	9.0	?	?	Chert
5. V 11	Duncan	34.0	20.0	6.8	4.1	1.1	3.8	10.0	12.8	+	Chert
6. V 11	McKean Lanceolate	45.0+	19.8	6.0	5.9	2.0	?	-	-	-	Brown Chalcedony
7. V 11	Duncan	56.7	24.6	7.5	9.9	2.0	3.0	12.5	14.0	+	Brown Chalcedony
8. V 11	McKean Lanceolate	45.5	20.8	7.2	6.2	4.7	4.0	-	-	?	Chert
9. S 16	McKean Lanceolate	35.0	13.7	6.2	3.2	2.0				+	Swan River Chert
10. S 17	Stemmed McKean	51.5	24.0	7.0	9.9	2.5	4.3	13.5	18.0	+	Brown Chalcedony
11. S 15	Lanceolate.	22.8	16.9	5.4	2.9	1.7	4.5			-	Swan River Chert
12. S 15	Tanged	32.4	20.4	5.0	3.1	0.0					Brown Chalcedony
13. S 13	Hanna McKean	32.0+	?	7.0	6.1	?	8.7	10.5	13.3?	?	Chert
14. S 12	McKean Lanceolate	42.0+	19.6	5.0	5.9	5.0	4.0	-	-	+	Selkirk Chert
15. S 22	Hanna	34.2	24.0	6.0	4.9	1.0	?	12.0	14.0?	-	Chert
16. S 21	Hanna	30.5+	17.4	5.4	2.8	0.5	5.2	10.0	13.0 14.2	+	Chert
17. LAS 467	Nutimik Concave	30.5+	26.0			2.8					
18. S 19	McKean Lanceolate	35.0	18.7			3.8					
19. S 19	McKean Lanceolate	48.0	21.4			5.5					
20. S 19	McKean Lanceolate	36.0	18.6			4.4					
21. S 19	McKean Lan- ceolate or Nutimik Concave	31.4	21.0			1.9					
22.	McKean Lanceolate	35.3	22.7			4.3					

Neither S 19 nor the sites in the Souris district contained specimens made from brown chalcedony. If the source of brown chalcedony near Souris had been known during the period when this site was being occupied, it would probably have been used more frequently than the present sample indicated because it made superior material for chipping.

All variants of the McKean type have been found in very small numbers at most sites, even though these sites had been revisited periodically. Even S 19 with a total of nine McKean Lanceolate and Hanna projectiles represented a relatively small sample. The paucity of McKean type projectiles at these sites may be interpreted as indicating that small groups occupied these sites briefly.

E. South Central Region

1. Sample

Most of the sites (Map 6 and Appendix E, 4) in this area were recorded by Chris Vickers during the 1940's. Other sources included Walter Hlady, and the forms from the Wettlaufer Survey (Wettlaufer n.d.). Most sites contained materials later than the McKean complex.

2. Summary

The greatest concentration of sites lay in or near the Pembina channel. When these sites were considered with the three excavated components north of Rock Lake, e.g. the Avery, Lake Shore and United Church sites, the sample shows that this area along the channel had been occupied frequently.

The sample of projectiles from any site was frequently no larger than three. This paucity of artifacts may be interpreted as evidence that small social groups were occupying the region when the McKean complex projectiles were being deposited.

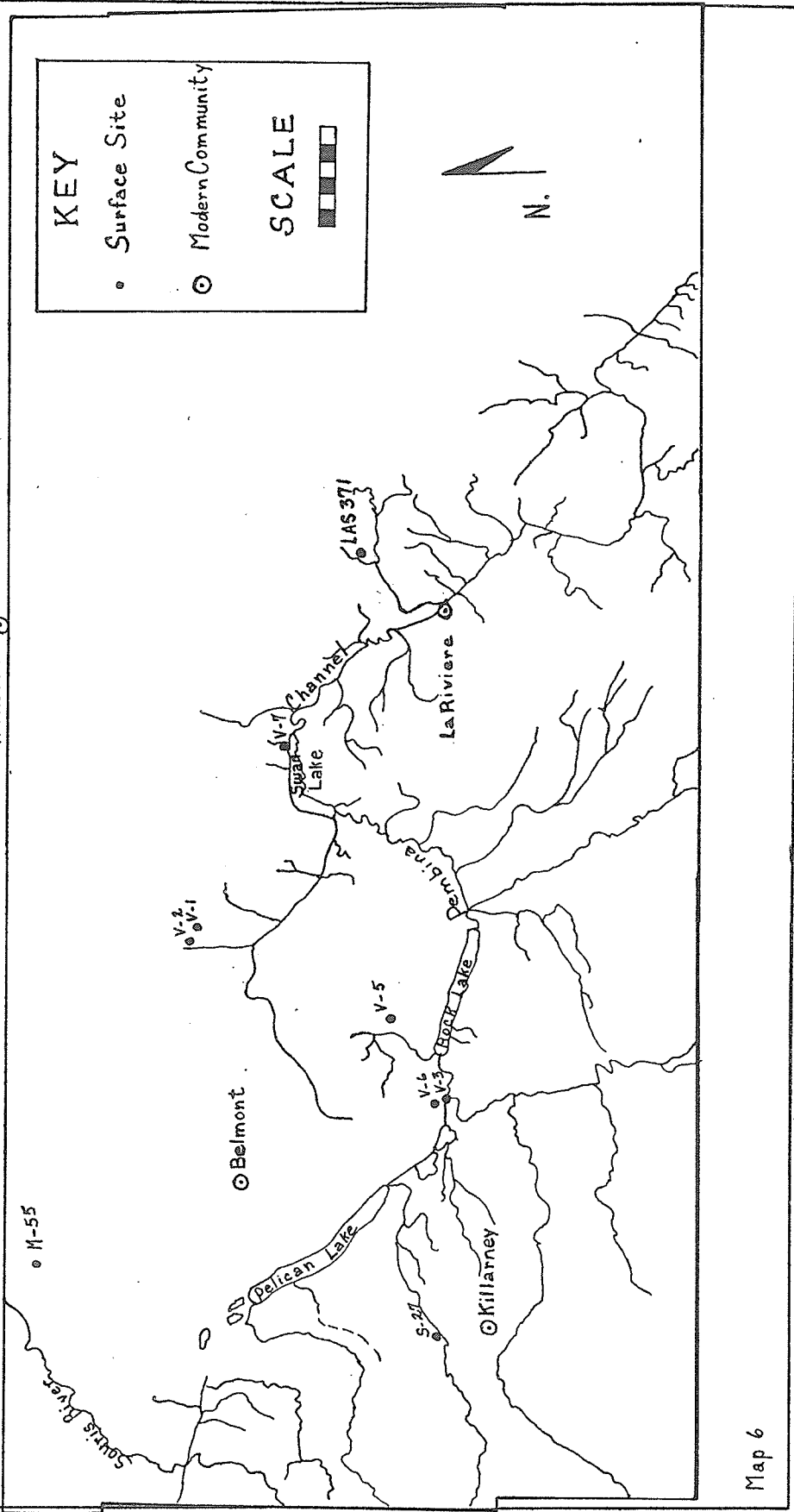
The sample in the vicinity of Rock Lake was collected as a result of frequent surveying of the landscape and frequent revisiting of the sites. If numerous projectiles had been dropped, then the sample would likely have been larger.

Only a few sites have been found north of the channel. One site, M 85, is probably associated more closely with the sites in the Carberry Region.

The absence of numerous sites north of the channel is more likely the result of lack of occupation than a lack of survey. Vickers surveyed parts of this area several times. The writer visited most of the local collectors south and west

SOUTH CENTRAL REGION

Truheerne



Map 6

of Treherne and found that artifact types tended to be later forms such as Beasant (Syms 1966).

About half the McKean complex specimens found in this region were made from brown chalcedony (Table 22). A higher percentage of projectiles were made from brown chalcedony in this region than in any other region.

TABLE 22

ATTRIBUTES OF MCKEAN COMPONENT ARTIFACTS
FROM THE SOUTH CENTRAL REGION

Site	Type	L.	W.	Th.	Wt.	Notch D.	Thin. Ht.	Stem W.	Lat. Gr.	Material
1.	V 1 Duncan	40.4	18.0			3.0	3.1			
2.	V 2 Duncan McKean	48.0	23.4			3.0	4.0			Chert
3.	V 2 Lanceolate McKean	31.1	16.0			2.4	3.7			Chert
4.	V 2 Lanceolate McKean	26.8	16.0			2.6	3.0			Chert
5.	V 3 Lanceolate McKean	43.8	18.3			2.0				Black-brown Chalcedony
6.	LAS 371 Lanceolate McKean		22.4			4.0				
7.	V 5 Duncan McKean	32.0+	25.0			4.0				Brown Chalcedony
8.	V 6 Lanceolate McKean	41.0+	21.4			5.4				Brown Chalcedony
9.	V 7 Duncan	38.0+	20.2			1.9		16.0	16.0	Brown Chalcedony

F. Carberry Region

1. Sample

Most of the sites (Map 7 and Appendix E, 5) in the Carberry Region were recorded by Wettlaufer (n.d.). The presence of McKean components was determined by viewing copies of Wettlaufer's photographs. No measurements could be determined for the pertinent specimens because the original photographs had lacked scales and because the copies were generally dark and blurred.

The sample from one site, S 26, was available for observation. These points were made available by Mrs. Helen Wong.

2. Summary

The sites tended to be concentrated near the Assiniboine River which is the largest river in this region and the second largest in southern Manitoba. The distribution of sites was sparse. The absence of numerous sites in the western part can be accounted for by the absence of an intensive and systematic survey, but the eastern third, around Portage La Prairie and southwest to the Morris River, has been partially surveyed and numerous collectors have been visited. The absence of numerous McKean components in the eastern section seems to be the result of infrequent occupation.


The sites and outlines of projectiles were quite variable. No measurements could be taken for most of the specimens, therefore, specific comparisons could not be made.

CARBERRY REGION

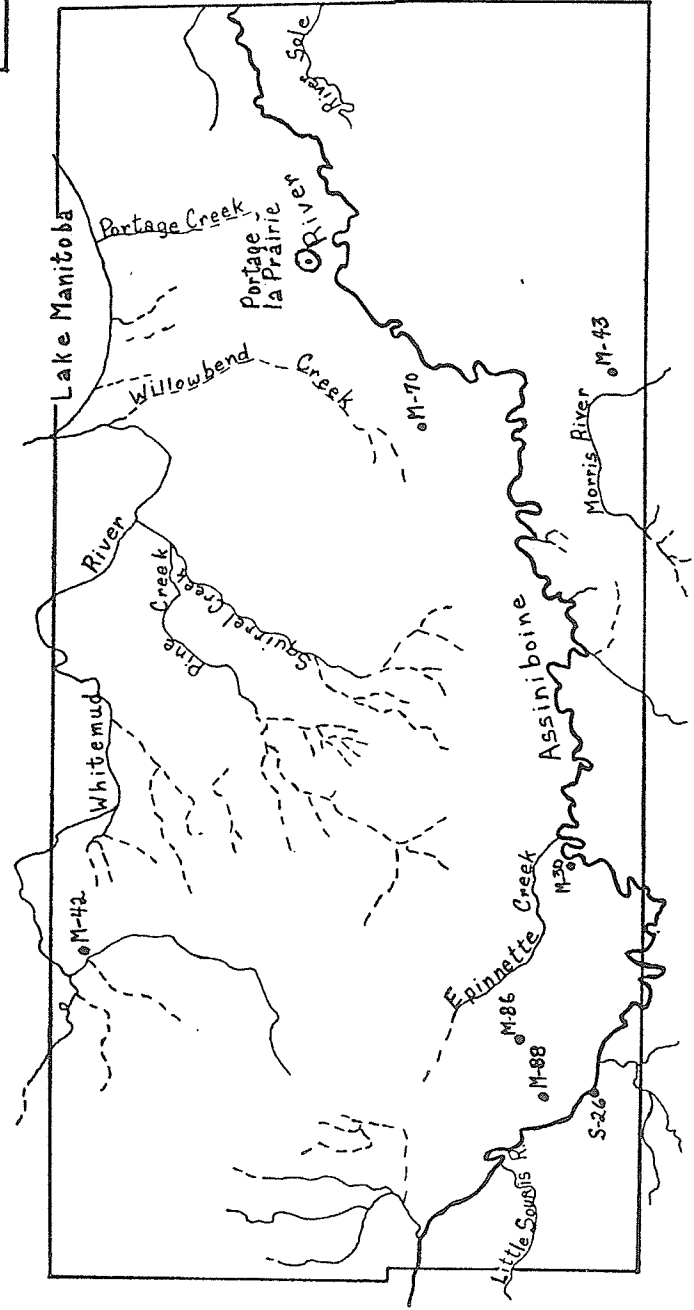
KEY

- ⊙ Modern Community
- Surface Site

SCALE



miles



Map 7

G. Other Sites

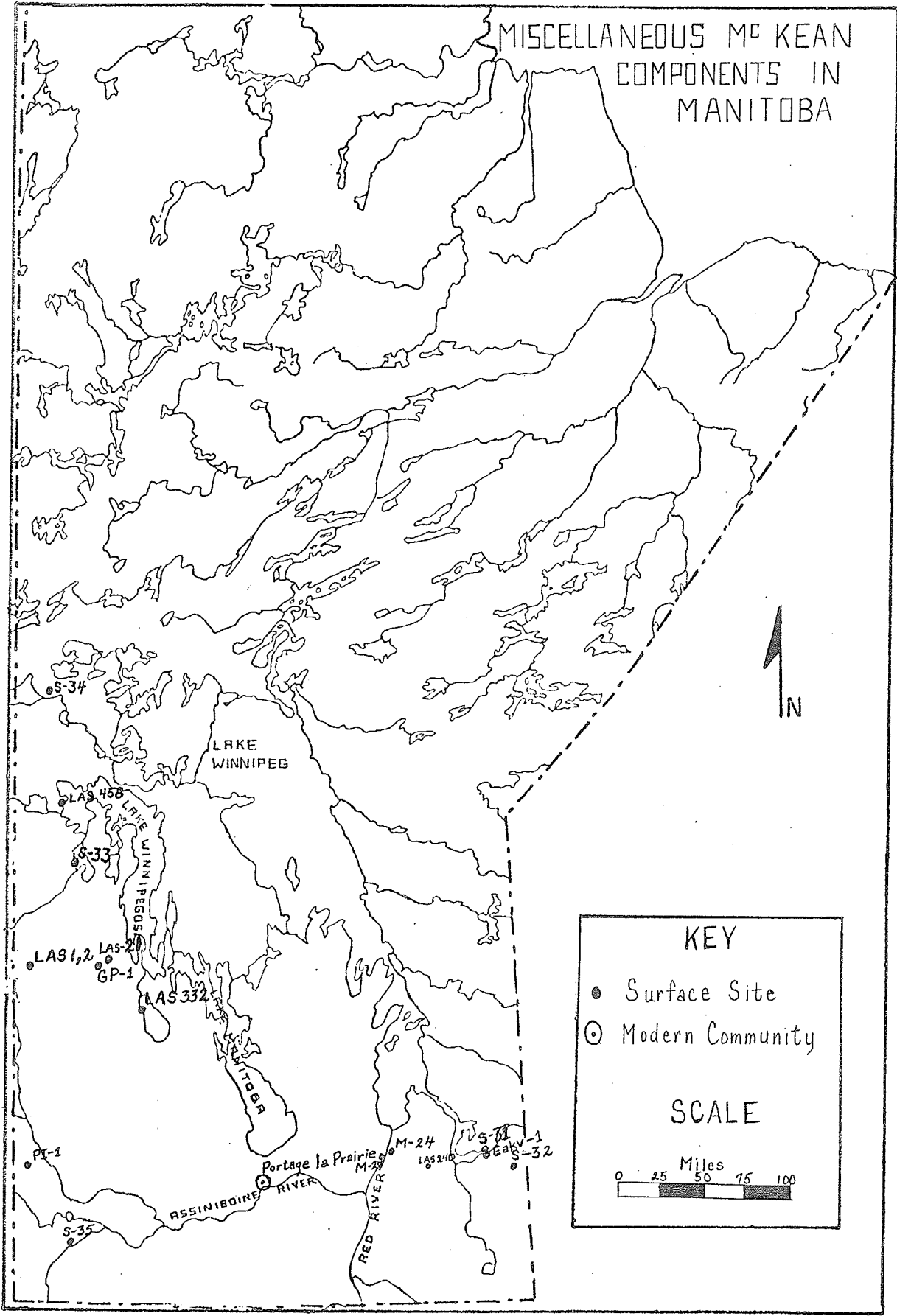
1. Sample

This section is a residual category which included all sites scattered in regions other than the above or for which there was no specific land location known (Map 8, Appendix E, 6). This data was obtained from Lake Agassiz site forms and personal collections.

2. Summary

This sample of sites indicated the wide distribution of McKean components in Manitoba. Both the northern and eastern limits of McKean components are represented in this distribution.

The sample of artifacts from each site could not be compared. The information from different sites ranged in calibre from projectiles which had been observed and measured to examples from sources that could not be observed (Table 23).



Map 8

TABLE 23

 ATTRIBUTES OF ARTIFACTS FROM MISCELLANEOUS
 MCKEAN COMPONENTS IN MANITOBA

Site	Type	L.	W.	Th.	Wt.	Notch		Stem		Lat. Gr.	Material
						D.	Thin	Ht.	W.		
LAS 332 (A) ¹	McKean Lanceolate	38.4	15.0	5.8	4.0	2.0	3.0			+	Chert
LAS 332 (B)	McKean Lanceolate	32.0	16.0	5.0	3.2	1.9	5.7			-	Swan River Chert
LAS 332 (C)	Duncan ?	38.0	19.6	6.0	3.9	0.5	?	5.0	14.0	?	Swan River Chert
LAS 332	McKean Lanceolate	28.0	14.0	5.0	1.5	3.0	5.3			+	Swan River Chert
LAS 332	McKean Lanceolate	27.0	15.5	10.5	3.0	1.0	1.5			?	Swan River Chert
LAS 332	McKean Lanceolate	30.0	18.0	6.0	4.0	4.0	6.5			?	Swan River Chert
LAS 332	McKean Lanceolate	48.0	19.0	9.0	8.0	2.0				+	Swan River Chert
LAS 332	McKean Lanceolate	31.0	16.0	6.0	2.5	2.0	4.5			-	Swan River Chert
LAS 332	McKean Lanceolate	?	15.0	6.0	4.0	2.0				+	Swan River Chert
LAS 332	Duncan	26.0	15.0	5.0	2.2	1.5	6.0	9.0	16.0	+	Swan River Chert
LAS 1, 2 (A)	Duncan	30.9	17.0	5.5	3.0	2.0	3.3	8.4	9.0	+	Swan River Chert
LAS 1, 2 (B)	Duncan	23.1	18.2	6.4	2.3	0.7	5.0	11.0	11.7	+	Swan River Chert
S-33	McKean Lanceolate	43.4	17.4	5.8		2.6	3.4				Brown-black Chert
S-31 (D)	Duncan ?	49.0	23.2			2.0	18.5	11.5	18.5		
S-32 (A)	McKean Lanceolate	35.0	17.8								
S-32 (B)	Duncan ?	37.0	19.0					9.8	12.0		

¹See Figure 24, A, B, C.

H. Summary of McKean Components in Manitoba

1. Distribution of Sites

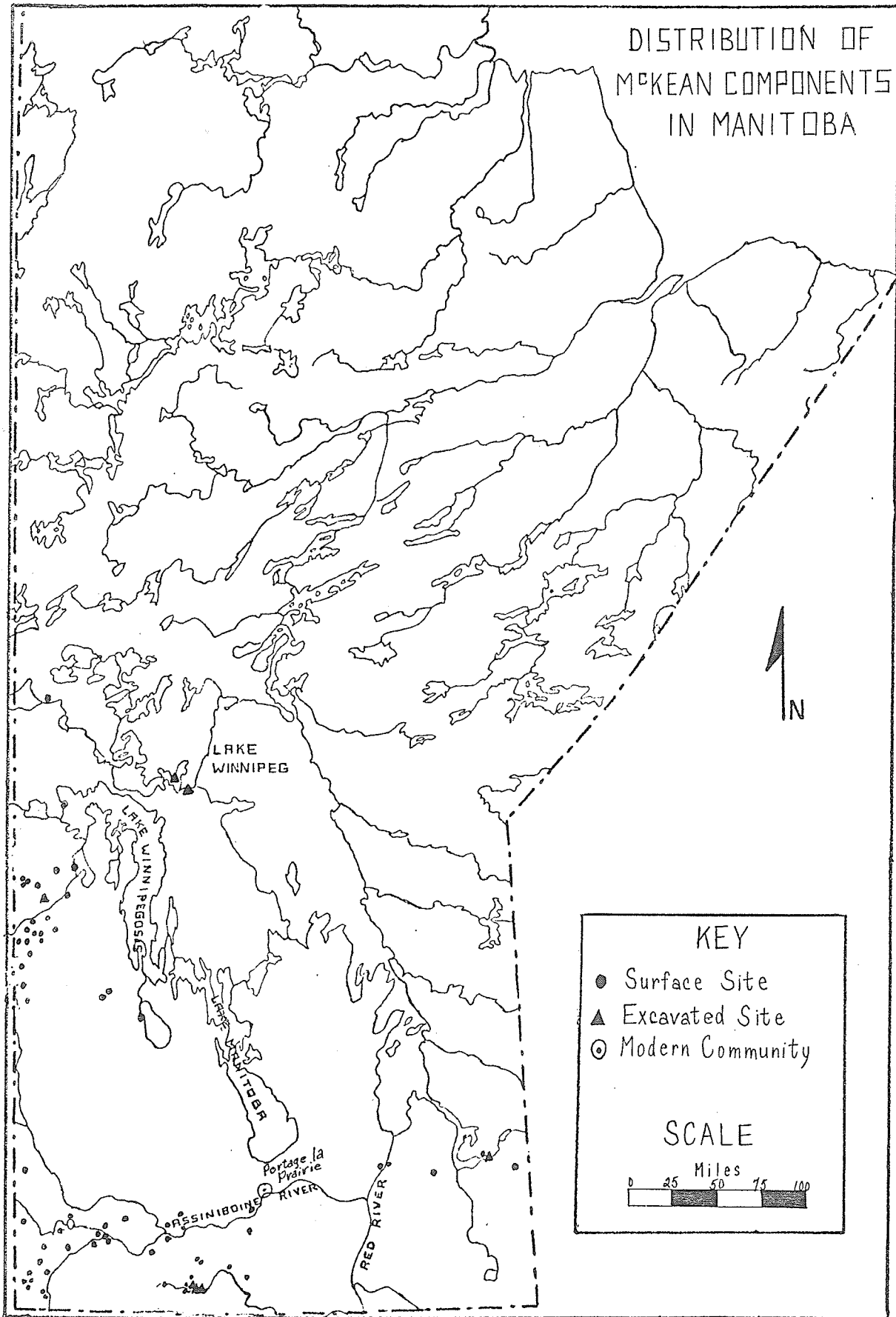
McKean components were found predominantly in the western half of the province, west of Portage La Prairie (Map 9). There were a total of 69 surface components and 7 excavated components recorded. Sixty-four of the surface components and 5 of the excavated components were located in the western half of Manitoba.

Within the western half of the province there was a notable concentration of sites in the Swan River Valley. Eighteen surface components and one excavated component were recorded and at least fifteen other McKean components are known but could not be recorded because of insufficient data.

Ecologically, sites were located in what is now boreal forest, aspen parkland, and prairie. Habitats ranged from the southerly districts to the northerly The Pas Reservation beyond the 53rd parallel of latitude. The distribution of sites cross-cut topographic boundaries such as the hilly morainic uplands and gently undulating lacustrine plains. Topographic features such as glacial beaches were not primary locations for sites, except where they were dissected by large streams or rivers.

There were two major patterns in choice of sites. Sites tended to be located along or near major waterways. Most sites that were not near a major waterway were generally along a fairly large tributary. Sites situated around swamps were uncommon.

No sites were recorded near the large lakes such as Lake Winnipeg, Lake



Map 9

Manitoba, and Lake Winnipegosis, nor in the Interlake area between them.

These areas may have been too wet for settlement prior to the historic period.

2. Stylistic Variation in Projectiles

No stylistic variation was noted among regions. Within some regions such as Carberry and Swan River, the range in shapes of the McKean Lanceolate specimens appears to represent possible evidence for a temporal change because there were examples of long, slender variants and shorter, squat variants. It was impossible to determine whether there were stylistic trends from earlier, long projectiles to later, short variants because most of the sample consisted of undated surface finds.

3. Raw Material

Most artifacts were made from local raw materials. All McKean projectiles in the Swan River Valley, for example, had been made from Swan River chert. Argillite, quartz, and Selkirk chert represented local materials that were used predominantly or exclusively. Brown chalcedony is the only material that may have been imported and it was used for a relatively small number of specimens.

CHAPTER VIII

SITES ON THE NORTHERN PLAINS

The Northern Plains area used here is the same as used in recent literature (Wedel 1961, 1964; Hurt 1966; Willey 1966). It extends north to the Saskatchewan River and south to the Niobrara River. It lies between the Rocky Mountains on the west and the ninety-fourth meridian on the east (Map 12). The area lacks sharp physiographic or cultural boundaries (Willey 1966:311) but is generally characterized by a "Plains environment" which consists of a "landscape . . . generally marked by flatness or moderate relief of its surface, by a predominantly grassland rather than a woodland or desert flora, and by a semi-arid to sub-humid climate of continental nature with warm, dry summers and cold, dry winters and a highly variable precipitation and temperature regimen" (Wedel 1964:193). The topography of the Northern Plains is more varied than the Central Plains because of the numerous river valleys, morainic ridges, low mountain remnants such as the Pryor and Big Horn Mountains, and features of sharp relief such as the Black Hills and Missouri Coteau.

The following sites represent an initial checklist of McKean components on the Northern Plains. Sites are found every year but no comprehensive list has been compiled.

This checklist includes unpublished data in the form of raw data, loaned to and analyzed by me, unpublished manuscripts, and comments based upon personal communication. The published data was obtained from a variety of sources varying from reports put out by amateur archaeological groups to books which are definitive

works of an area, e. g. An Introduction to the Archaeology of Alberta, Canada.

The sites include a few surface occupations, several cave sites, and numerous single and multi-component excavated sites. The nature of the sites vary from single component sites to multi-component stratified sites and multi-component unstratified sites that were excavated in arbitrary levels.

The projectile types were identified by me, unless otherwise stated. These identifications were frequently based primarily upon observations of photographs and drawings because I was not able to view the artifacts and because detailed descriptions were frequently absent.

A. Unpublished Data

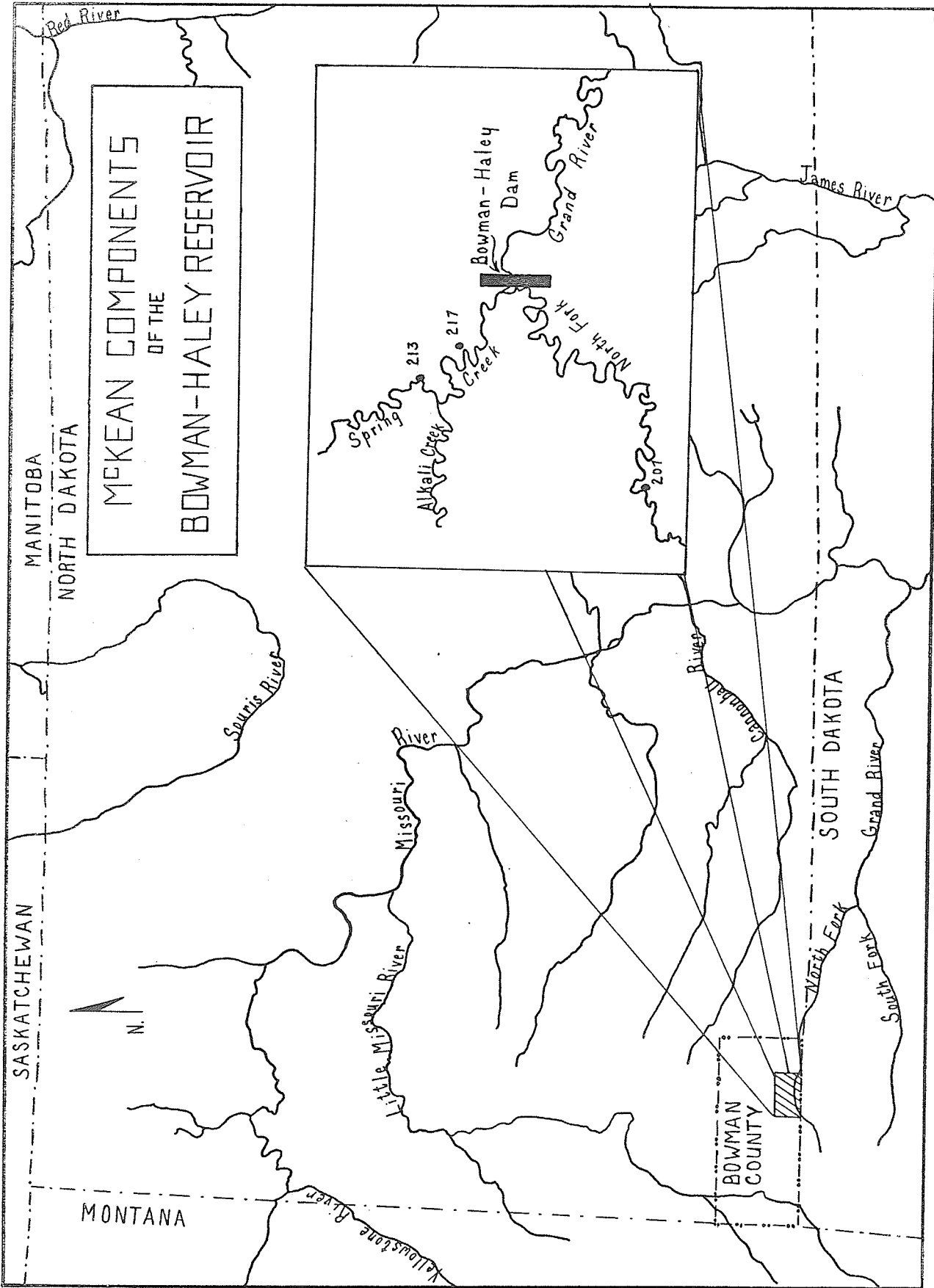
1. Bowman-Haley Reservoir

An archaeological survey was made in the Bowman-Haley Reservoir (Map 10 and Map 12, No. 43) in the extreme southwestern corner of North Dakota, during the summers of 1964-1965 by crews under the direction of Oscar L. Mallory of the River Basin Surveys, Smithsonian Institution. Mallory furnished profile sketches, artifact photographs and information on excavations for the Red Fox site (32B0213), Fisher site (32B0207) and 32B0217, an unnamed site.

A) Red Fox Site (32B0213)

The small camp or village site contained five stratigraphically distinct occupational zones, of which only the lower three, 0-3, 0-4, and 0-5, are pertinent. The site is on the left bank of Spring Creek about 1.5 miles above the Bowman-Haley dam (Map 10).

Occupational Zone 3 which lay approximately 3 feet below the surface con-



Map 10

tained one diagnostic artifact, a basal fragment of a side notched projectile point (Plate 25). The level was dated at 1900 ± 60 B. C. (SI-478) from charcoal recovered from a fire pit.

Occupational Zone 4, 3.2 to 4.0 feet below the surface, yielded six complete projectiles and ten fragments of which all, except one basal fragment, are identifiable as Duncan points. The remaining fragment may be the base of a McKean Lanceolate point. The occupation was dated at 1820 ± 90 B. C. from a charcoal sample recovered from a fire pit.¹

In addition to fire pits and a small cache pit, evidence was recovered during the last two days of excavation of a large shallow depression that appeared to be the remnant of a dwelling structure (Figure 23). Time did not allow full investigation of the feature but it was observed that all of the artifacts recovered came from within the confines of the pit. The only dimensions that can be given to the pit are a length and width greater than 10 feet and a depth of 0.5 to 0.6 feet.

One fire pit and a cache pit were in definite association with the floor. A second fire pit may also have been associated.

Occupational Zone 5, lying about 0.5 to 0.6 feet below 0-4, was recorded in the cut bank stratigraphy and was not exposed in excavation. No horizon markers

¹ Both charcoal samples consisted of charred pieces of small limbs or trunks of unidentified trees. The number of growth rings on each piece was less than the years of the standard deviation.

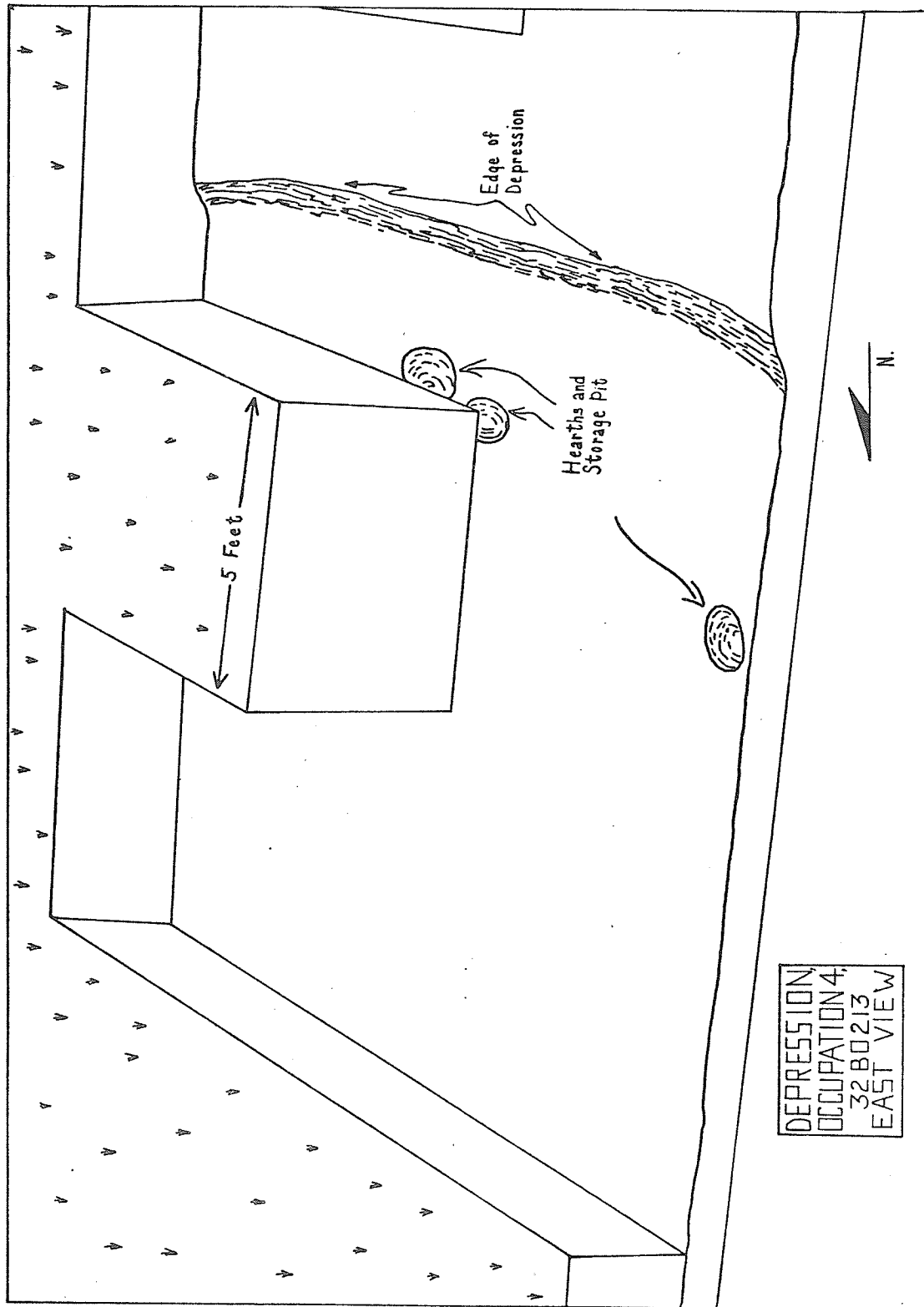


Figure 23: Sketch of Depression, Occupation 4, 32B0213 (based upon Mallory's field notes)

assignable to this unit were found though its stratigraphic similarity to 0-5 of the nearby Fisher Site was noted.

B) Fisher Site (32B0207)

This stratified site is situated on the right bank of the North Fork of the Grand River at the upper end of the reservoir. The geologic stratigraphy of the site appeared to be identical to that of the Red Fox Site.¹ The top unit, containing three unidentified occupational zones, was composed of eolian sands. The second unit contained silts and clays, which were probably alluvial. Occupational Zone 4 lay in the top foot of this unit and occupational Zone 5 was a stratigraphically distinct layer about a foot below 0-4. The clay-silt unit was 24 to 25 feet thick and overlaid sandstone or shale at the water line (Figure 24).

Occupational Zone 4 was identified as a McKean occupation on the basis of a single McKean Lanceolate point recovered from the exposed surface of the clay-silt deposit (Plate 26). Two bone awls were recovered in situ from this level. There had been 9 closely-spaced occupation levels within this zone, but they were excavated as one unit.

Occupation 5 yielded a basal fragment of a point that appears to fit the Box Elder class established by Wheeler (1957) from recoveries in Wyoming.

C) 32B0217

The artifacts from this site include one basal fragment and one complete point that closely resemble the Elko-Eared type. No dates were obtained for this site.

¹Because no Carbon-14 ages have been obtained for the Fisher Site occupation, the levels had to be correlated on the basis of geological stratigraphy.

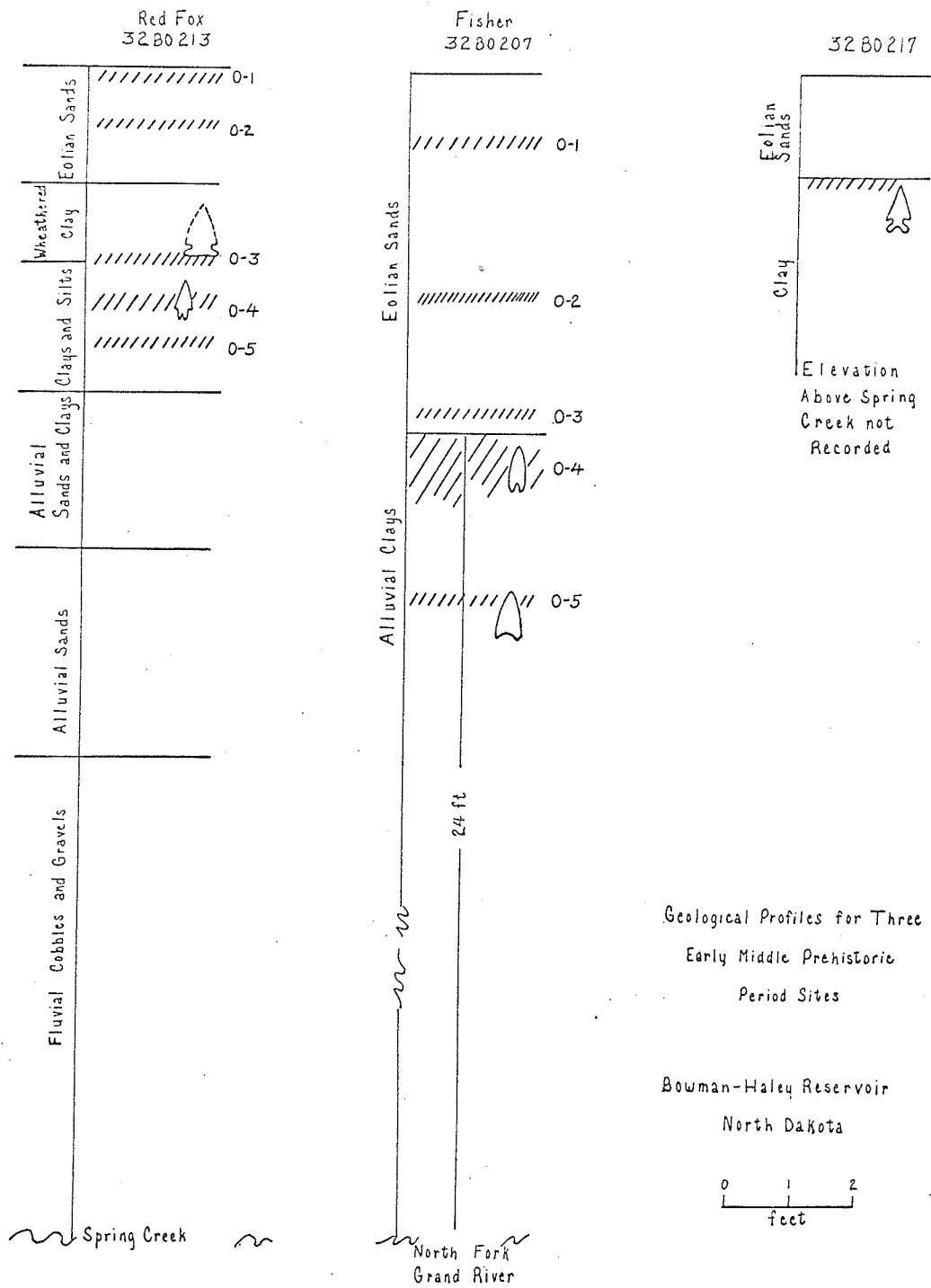


Figure 24: Geological Sequence for the Bowman-Haley Reservoir (Oscar Mallory, personal communication)

D) Paleo-Climate During the Early Middle Prehistoric Period

The geologic profile of the Spring Creek and North Grand River valleys consists of the three units: a) basal fluvial gravels and cobbles of a presumed proglacial origin, b) a middle unit of alluvial silty-clay, and c) an upper unit of eolian sands (Figure 24). The basal gravels were shallow and intermittent in the North Grand River portion of the reservoir.

There are several indications that the climate in the southwestern North Dakota region may have been somewhat wetter at 2000 B. C. and earlier. The presence of the clays and silts 25 feet above the present stream level indicates a different regime during the time of occupations 4 and 5 of both the Fisher and Red Fox sites.

The plant remains found in excavation were those of small limbs or trunks of unidentified trees or shrubs. The present vegetation consists of xerophitic grasses and forbs, but no woody plants the size of wood found in the fire pits. Mallory suggests that the plant remains from Occupations 4 and 5 of Fisher and Red Fox must reflect greater moisture than today.

E) Cultural Sequence

On the basis of preliminary analysis, Mallory suggests the following sequence for sites in the reservoir. The fragment of a Box Elder point from Occupation 5 of the Fisher Site being earliest was followed by the Occupation 4 of Fisher marked by McKean Lanceolate points. Terminal middle prehistoric occupations would be represented by Occupation Zone 3 of Red Fox which yielded basally ground side notched points and by the Elko-Eared point occupation at

32B0217 which was directly upon the surface of the silty-clay geologic unit.

F) Artifact Analysis

Occupation 4 of the Red Fox Site (32B0213) is the only level which contained an adequate number of projectiles for further consideration. No data was received on associated artifacts from any of the levels.

The projectiles from Occupation 4 represented a single Duncan component. They were found in one feature, a possible house pit, in a thin occupation level that did not indicate any mixing with other levels.

All projectiles shared the attributes of lanceolate outline, presence of stems, concave bases, and lateral grinding. Size and shape were quite variable. Variation in stem shape, length, and width appear to be relatively unimportant (Table 24).

If these projectiles represented the remains of one social group such as a conjugal or extended family then the variation found in these projectiles would mitigate against the hypothesis that these projectiles were made by one or two individuals who were constructing them according to some mental template that would represent a family style. Only specimens G and H (Plate 25) demonstrate close similarities that might be considered as having been produced according to a common pattern.

All specimens had been made from agatized wood or quartzite which occur locally (Mallory, personal communication). A combination of the knowledge of local raw materials and the presence of one large feature which was possibly part of a structure as well as two fire pits and a cache pit could be interpreted as

TABLE 24

ATTRIBUTES* OF PROJECTILES FROM THE RED FOX SITE (32B0213),
FISHER SITE (32B0207), AND 32B0217

	L. mm.	W. mm.	Th. mm.	Lat. Gr.	Base Gr.	Material
32B0213 (Level 3)						
1.						
32B0213 (Level 4)						
2.	30.0	18.0	5.1	+		Agatized Wood
3.	33.8 ⁺	18.6	5.8	+		Agatized Wood
4.	34.2	18.2	5.5	+		Quartzite Wood
5.	52.2	19.6	6.0	+		Agatized Wood
6.	50.0 ⁺	22.5	5.6	+		Quartzite
7.	-	24.3	6.9	+		Quartzite
8.	-	22.4	7.3	+		Quartzite
9.	25.4 ⁺	16.7	5.4	+		Quartzite
10.	32.9 ⁺	15.0	5.5	+		Quartzite
11.	-	18.5	5.4	+		Quartzite
32B0207						
12.	40.4	16.8	5.8	-	+	
13.	-	29.1	5.4	+	+	
32B0217						
14.	40.0	17.8	3.9	+	+	

* Data based upon information received from Mallory.

evidence that the social group had demonstrated some stability of residence at the site and in the surrounding locality.

2. Shellmouth Survey

A 1966 survey crew supervised by MacKie followed the Assiniboine River from a point four miles north of Kamsack to the Manitoba-Saskatchewan border¹ (Map 11). One of the sites, EiMj-301,² yielded evidence of a McKean component. This site is located on the NE 1/4 of the SE 1/4 of 28/27/30 W1. It is 2 miles west and 2 1/2 miles south of Togo, Saskatchewan (Map 11).

The members of the survey crew found no specimens of McKean projectiles but they photographed the collection of Richard (Dick) Smith who had collected McKean complex specimens as well as a great variety of other projectile types, ranging from Oxbow to Plains Side-notched, scrapers, and bifaces, from the site. The sample contained 2 McKean Lanceolate, 3 Duncan, and 3 Hanna specimens.

B. Published Data

A) Saskatchewan

1) Mortlach Site, Level 8 (Wettlaufer 1955).

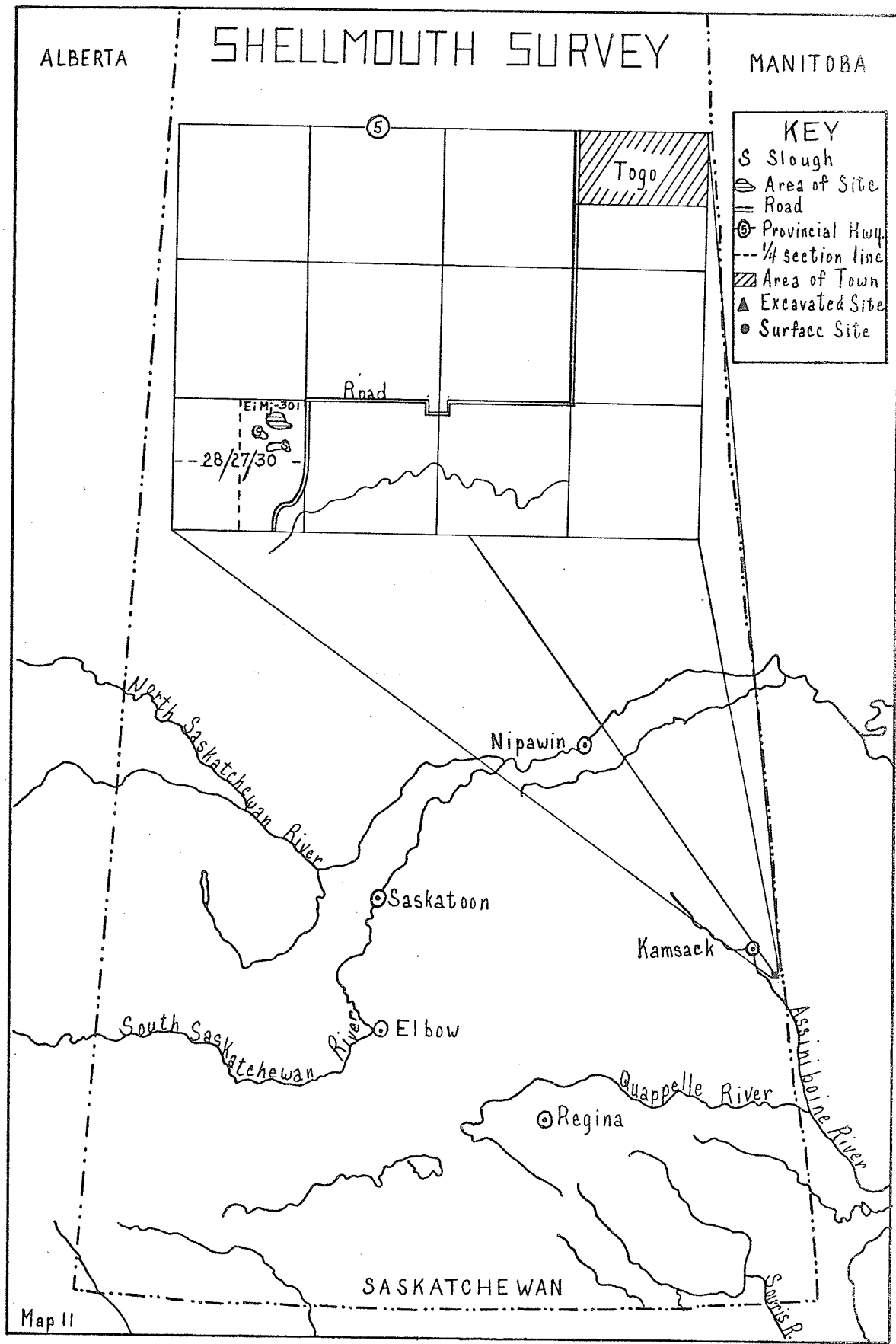
Location: South-central Saskatchewan (Map 12)

Kind: Excavated; distinctly stratified.

Artifacts: Four stemmed points with concave bases that represent

¹A report has not yet been compiled, but Mr. MacKie kindly loaned to me the pertinent data.

²This Borden number had not been listed with the National Museum of Man, Ottawa, at the time of writing.



ALBERTA

SHELLMOUTH SURVEY

MANITOBA

KEY

- S Slough
- ⊕ Area of Site
- Road
- ⊙ Provincial Hwy.
- - - 1/4 section line
- ▨ Area of Town
- ▲ Excavated Site
- Surface Site

5

Togo

Road

Ei M. 301

-28/27/30-

North Saskatchewan River

Nipawin

Saskatoon

Kamsack

South Saskatchewan River

Elbow

Quappelle River

Regina

Assiniboine River

SASKATCHEWAN

Souris R.

Map II

variants of the Duncan type; also pebble scrapers, flat end scrapers, domed end scrapers, 3 crude choppers or cores, ovoid bifaces.

Dates: 1445 B. C. \pm 200 from carbon-14 date on bone which, if contaminated, is younger than it should be.

Faunal Remains: Unknown.

Comments: Called the "Thunder Creek Culture", the earliest occupation which was found in fluvial deposited sand over the clay floor of a glacial lake.

2) Long Creek Site, Level 5 (Wettlaufer and Mayer-Oakes 1960).

Location: South-eastern Saskatchewan.

Kind: Excavated; distinctly stratified.

Artifacts: 1 Hanna projectile, 3 worked flakes, 3 flat end scrapers, 1 bone scraper, 1 gaming piece from a canine tooth, and 1 crude chopper.

Dates: 1413 B. C. \pm 115 from charred twigs and 1188 B. C. \pm 100 from ash in a layer at the top of this level. The authors assigned a mean value of 1332 B. C. \pm 100 to the level.

Faunal Remains: Variety of bison skeletal parts, canine tooth several bones of dog (Canis familiaris), 1 human premolar, mandible of a pocket gopher (Thomomys sp.), mandible of cottontail rabbit (Silvilagus sp.), and 2 species of mollusk (Stagnicola).

Comments: The lithic material was made from brown chalcedony and was crudely manufactured. The Hanna point is temporally similar to the Long Creek culture but is very similar topologically to one of the illustrated projectiles from the Sandy Creek Culture, Level 4E, Mortlach site, with a date of 445 B. C. \pm 290.

3) Other Sites

Mayer-Oakes (Wettlaufer and Mayer-Oakes 1960:104) reported finding McKean Lanceolate points in association with side-notched "Long Creek" style points at several sites near Elbow, Saskatchewan (Map 12, 3a). These sites were found as a result of surveys carried out during the summers of 1958 and 1959.

Gil Watson, Curator of Archaeology, Museum of Natural History in Regina (personal communication) reported a site near Nipawin in which several McKean points had been found in a surface site (Map 12, 3b). These specimens were unusual in that all of them had been made from quartz. Mr. Watson knew of no surface sites around the Regina area and southern parts of Saskatchewan.

Surface sites with McKean components are numerous in the Saskatoon area (Dyck, Meyer, and MacKie, personal communication). MacKie (personal communication) reports that most large collections have some McKean Lanceolate projectiles (Map 12, 3c).

Walter Hlady (1967) reported finding a McKean projectile near the Manitoba Saskatchewan border. The site is located at the exit of the Sturgeonweir River at Beaver Lake (Map 12, 3d).

B) Alberta

4) DgP1-1 (Level 2). (Husted 1969)

Location: Waterton Lakes National Park.

Kind: Excavated; stratified.

Artifacts: The first season of excavation by Reeves yielded McKean

Lanceolate, stemmed, and side-notched points (Husted 1969:89).

Dates: 4000 B. C. -2500 B. C. (estimated).

- 5) Johnston Sites (Wormington and Forbis 1965).

Location: North west of Cereal.

Artifacts: Thousands of artifacts including projectiles from Paleo-Indian to Late Prehistoric types. McKean Lanceolate, Duncan and 4 Hanna forms were present at many of the sites.

- 6) Coulee View Site (D1Pd-5) (Wormington and Forbis 1965).

Location: Near the confluence of the Oldman and Little Bow Rivers.

Artifacts: Oxbow and small McKeanes were found in the lowest levels.

- 7) Edmonton area (Wormington and Forbis 1965).

Artifacts: Many McKean and corner-notched points as well as Paleo-Indian forms found in the Coe Collection.

- 8) Sedgewick Area (Wormington and Forbis 1965).

Artifacts: McKean Lanceolate, Duncan, Hanna, Pelican Lake and Oxbow specimens were found on the surface.

Comments: These artifacts represent surface finds in the Webber Collection.

- 9) Edgerton Area (Wormington and Forbis 1965).

Artifacts: McKean Lanceolate and Duncan specimens.

Comments: Surface finds in the Sawyer Collection.

C) South Dakota

- 10) Gant Site (Gant and Hurt 1965).

Location: Northern periphery of the Black Hills.

Kind: Excavated; thin deposition.

Artifacts: McKean, Duncan, Hanna, Oxbow, and Meade projectiles, manos, metates, spokeshaves, scrapers, retouched flakes, blades, drill, choppers, and hearths.

Dates: 2180 B. C. \pm 130 from charcoal in a hearth.

Faunal Remains: Nil.

Comments: The authors, Gant and Hurt, believed that the site represented successive seasonal occupations during a drought period when the natives collected and cooked vegetal remains and that shortly after the occupations had terminated, the climate became much wetter as evidenced by the growth of vegetation on a previously unvegetated landscape.

11) Angostura Basin. 39FA68-145 and 39FA68-153.

Kind: Excavated.

Artifacts: One McKean point and two proximal fragments of McKean points, rock hearths (Crane 1956:670).

Dates: 2280 B. C. \pm 350 (M-369) and 1680 B. C. \pm 350 (M-368) (MacNeish 1958:54; Hurt 1966:106; Crane 1956:670).

Comments: The author knows of no published site descriptions for these sites.

12) Fort Thompson, Zone 2 (Neuman 1964:173-189).

Location: Great Bend area of the Missouri River.

Kind: Excavated.

Artifacts: Several projectile styles including DeLong¹ and McKean Lanceolate and Duncan styles.

Dates: Between 2450 B. C. ± 250 and 525 B. C. ± 150.

Comments: McKean Lanceolate points were found in a layer beneath mounds that were being excavated. The McKean Lanceolate and Duncan specimens were found in the upper portions of Zone 2 and may be somewhat later than the oldest date.

D) Montana

13) Northeastern Montana

Dennis Joyes (n. d.) reported that in a sample of approximately 60 surface sites found in a survey of the area north of the Missouri River and east of the mouth of the Milk River, McKean Lanceolate points were found at one site; Duncan and Hanna points were found at three sites. Oxbow points have been found at 15% of the sites, whereas 46% of the sites contained later Pelican Lake points.

14) Eagle Creek Site (24DA301) (Arthur 1966)

Location: On the bank of Eagle Creek near its mouth on the Yellowstone River on the Montana-Wyoming border.

Kind: Excavated.

Artifacts: McKean, Hanna, and early pre-McKean forms (Arthur's Type V) were found on the surface. Later types were found in situ. The one McKean Lanceolate specimen was made from obsidian.

Dates: No Early Middle Period dates were obtained.

¹DeLong points appear to be very similar to Nutimik Concave points.

Comments: The McKean complex artifacts were probably associated with the stone-lined hearth of Occupation Level 4, but the hearth lacked diagnostic artifacts (Arthur 1966:33)

15) Carbella Site (24PA302) (Arthur 1966).

Location: On the Yellowstone River near Carbella, Montana.

Kind: Excavated.

Artifacts: One McKean Lanceolate, five Duncan, and 12 Hanna (Type X and XI) specimens, as well as possible Logan Creek side-notched points, Angostura points and a number of more recent types.

Faunal Remains: Hundreds of broken bones and bone fragments of "deer, elk, possibly antelope, and bison . . . no small animals" (Arthur 1966:167).

Comments: Most artifacts were found in a sand zone but they were not distinguished according to levels within the zone.

16) Red Lodge (Mulloy 1943).

Location: On the Spring Creek, a tributary of the Yellowstone River near Red Lodge, Montana.

Kind: Excavated; unstratified.

Artifacts: Paleo-Indian, Duncan, Oxbow, side-notched, and tanged corner-notched projectiles, drills, metates, ovoid bifaces, scrapers, and choppers.

Comments: No stratigraphy could be determined. Mulloy (1943) attributed mixing to swampy conditions of the site.

17) Sorenson V (24CB202) (Husted 1969).

Location: On the Big Horn River.

Kind: Excavated; stratified.

Artifacts: 1 Duncan, 4 side-notched straight-based and 1 side-notched concave-based projectile, 8 knives, 1 end scraper, 1 scraper-graver, 1 scraper-biface, 2 graters, 12 modified flakes, and 1 hammerstone.

Dates: 2950 B. C. \pm 250.

Comments: This level was not clearly separated from Level 4 in which there was one specimen that could be considered as a Hanna point. Level 4 has a date of 3525 B. C. \pm 190. Artifacts of Level 4 included numerous crude end-scrappers, ovoid bifaces, and several side-notched straight-based projectiles.

18) Havre Region (Stallcop 1966).

Location: Seven surface sites between the Missouri River and the Canadian border and between the Milk and Marias Rivers.

Artifacts: 23 McKean Lanceolate, 7 Duncan, 22 Powers-Yonkee Eared, and 12 Hanna specimens.

Comments: Only the above projectile types were discussed; no data given on earlier or later types or associated tools.

19) Rigler Bluffs Hearth Site (24PA401) (Haines 1966).

Location: Along the Upper Yellowstone River drainage.

Type: Excavated.

Artifacts: Basin-shaped, rock-lined hearth and a stemmed projectile fragment tentatively identified as belonging to the McKean tradition (Haines 1966; Hurt 1966).

Dates: 4900 B. C. \pm 300 (2950 B. C.) by U. S. G. S.

5040 B. P. \pm 150 (3090 B. C.) by Don Grey.¹

Comments: The site represented an isolated hearth found under eight feet of silt in an eroded bank.

20) Powers-Yonkee Bison Trap (24PR5) (Bentzen 1962, 1963, 1966).

Location: On a tributary of the Yellowstone River, near the Wyoming Montana border.

Kind: Excavated; distinctly stratified.

Artifacts: 95 projectiles, 1 blade, 1 blade fragment, 1 biface, 1 pendant, and 1 serrated tool. Almost all projectiles were Powers-Yonkee Eared specimens; 1 was a McKean Lanceolate specimen, and 2 might be identified as Duncan specimens (Bentzen 1966: p. 19, nos. 19 and 22).

Dates: 4450 B. P. \pm 125 (2500 B. C.) (Isotopes Inc.).

Faunal Remains: Numerous bison bones. One skull was identified by Dr. C. Bertrand Schultz as an intermediate form between Bison bison and Bison antiquus (Bentzen 1966:18).

Comments: The projectiles were found in two distinct layers separated by a rock and gravel layer, but the projectiles from both layers were the same. The elevation of the site was estimated at 3600 feet above sea level.

21) Pictograph Cave I (Mulloy 1958).

Location: In the valley of Bitter Creek, seven miles from its mouth at the Yellowstone River.

¹Date obtained from a private laboratory operated by Don Grey, Sheridan Wyoming.

Kind: Excavated; some stratigraphy.

Artifacts: 2 McKean Lanceolate, 26 Duncan, and 22 Pelican Lake projectiles; several bifaces and scrapers, 1 metate, 1 mano, 2 concave stone discs, 1 tanning stone, 2 pestles, 1 pendant, 1 shaft smoother, 2 steatite disk beads, and 1 small bone disk.

Faunal Remains:

Buffalo (<u>Bison bison</u>)	93 specimens
Elk (<u>Cervus canadensis</u>)	1 specimen
Mule deer (<u>Odocoileus hemionus</u>)	8 specimens
Antelope (<u>Antilocapra americana</u>)	3 specimens
Wolf (<u>Canis cf. lupus</u>)	6 specimens
Bob Cat (<u>Lynx cf. faciatus</u>)	1 specimen
Pocket Gopher (<u>Thomomys cf. fuscus</u>)	4 specimens
Porcupine (<u>Erithizon epixanthum</u>)	1 specimen
Pack Rat (<u>Neotoma cinerea</u>)	15 specimens
Jack Rabbit (<u>Lepus americanus</u>)	2 specimens
A few unidentified birds	

Comments: It is the writer's opinion that there was mixing of artifacts between Level I and Level II because Level I contained specimens of the predominate Pelican Lake type of Level II, and Level II contained specimens that could be identified as Hanna projectiles.

E) Wyoming

22) Mavrakis-Bentzen-Roberts Bison Trap (48SH311) (Bentzen 1966b).

Location: Tributary of Buffalo Creek, a tributary of the Yellowstone River.

Kind: Excavated; single component.

Artifacts: 81 projectiles or projectile fragments, 1 polished stone, 1 fragment of blade or chopper, 3 side-scrapers, and 1 snub-nosed end-scraper.

All but 2 specimens were identical to the Powers-Yonkee Eared¹ points found at the Powers-Yonkee Site (see No. 20 above); the 2 stemmed forms appeared to represent 1 Duncan and 1 Paleo-Indian specimen.

Dates: 2600 B. P. \pm 200 (650 B. C.) (Isotopes Inc.).

Faunal Remains: Mainly bison (Bison bison) but a few smaller bones resembling deer; 39 mandibles, 256 hoof cores of bison.

Comments: This site was found 40 miles southwest of the Powers-Yonkee Bison Drive on the same physiographic unit and in the same stratigraphic position, and at approximately the same depth as demonstrated by the soil profiles; therefore it is unlikely that the sites would be 1900 years apart in age.

23) Bottleneck Cave IV (48BH206) (Husted 1969).

Location: At the entrance of Bighorn Canyon.

Kind: Excavated; distinctly stratified.

Artifacts: 2 McKean Lanceolate, 2 Duncan, and 2 Hanna projectiles, 5 crude biface knives, 1 pyriform scraper, 2 side scrapers, 1 graver, 1 chopper, 9 modified flakes, 1 grinding stone, 1 piece of red coloured earth, and 11 hearths.

Dates: 1870 B. C. \pm 200.

Faunal Remains:

Deer or Antelope (<u>Odocoileus sp.</u> or <u>Antilocapra americana</u>)	4 bones
Bighorn Sheep (<u>Ovis canadensis</u>)	1 mandible, several teeth
Coyote (<u>Canis sp.</u>)	1 canine tooth
Rabbit	6 bones
Pack Rat	1 mandible

¹Bentzen believes that the Powers-Yonkee Eared type is a variant within Mulloy's McKean type, but the writer believes that there are much closer morphological similarities to the Oxbow type.

Mouse (<u>Microtus</u> sp.)	1 skull
Unidentified	8 bones
Catfish (<u>Ictalurus</u> sp.)	1 spine

Comments: This level contained 3 feet of sterile soil beneath and 1 foot of sterile soil above the occupation lens.

24) Sweem-Taylor Site, Layer IV (48J0301) (Anonymous 1959; Hurt 1965).

Location: Powder River in the Big Horn Mountains.

Kind: Excavated; no distinct stratification.

Artifacts¹: 6 blades, 4 scrapers, 5 bifaces, 10 McKean points, 3 corner-notched triangular points, 2 triangular un-notched points, 1 "jackass ear"², and 1 probably lanceolate point.

Dates: 3010 B. C. +180 years, according to Grey (Hurt 1966:105).

Comments: The site was probably not distinctly stratified or else there had been mixing because 2 McKean points had been found in Layer III and 1 McKean point was located in Layer V.

25) Grey-Taylor Site (40J0303) (Hurt 1966; Deevey et al 1966).

Location: Middle Fork, Powder River in the Big Horn Canyon.

Kind: Excavated.

Artifacts: McKean component in Layer II.

Dates: Early occupation--2030 B. C. +70 (Deevey et al 1966, A-485);

¹These descriptions are based upon a written report (Anonymous 1959) because there were no illustrations with the report.

²Probably an Oxbow variant with a deep basal notch.

3650 B. C. \pm 200 (Grey)¹ to 2700 B. C. \pm 180 (Grey)¹ (Hurt 1966:105). Later occupation -- 1500 B. C. \pm 40 (Deevey et al 1966, A-483); 1220 B. C. \pm 180 (Grey)¹.

Comments: The earlier dates were from the base of Layer II and represented the earliest date of occupation of a McKean component and the later dates were found in the upper part of Layer II. For the purposes of this research, I am using the dates from Geochron rather than Mr. Grey's dates because they seem to be more consistent.

26) Leigh Cave (48WA304) (Frison and Huseas 1968).

Location: Big Horn Basin near Ten Sleep, Wyoming.

Kind: Excavated; single component.

Artifacts: 6 Duncan and Hanna points, 1 corner-notched point, 5 non-descript side and end scrapers, 1 core, 1 chopper, 26 retouch flakes, 217 unretouched flakes, 2 or 3 milling stones, 3 manos, 3 possible shaft fragments, 26 examples of two-strand, twisted cordage, 2 pieces of netting, retted bark, 9 pieces of sinew, 5 fragments of hide.

Dates: 2220 B. C. \pm 150 (Grey).

Faunal Remains: 2 specimens of mountain sheep, (Ovis canadensis), 1 specimen of mule deer (Odocoileus hemionus), 2 specimens of grey squirrel (Sciurus sp.), 1 specimen of coyote (Canis latrans), hundreds of cooked remains of Mormon cricket (Anabrus simplex).

Flora Remains: Wild onion bulbs (Allium sp.), chokecherry pits (Prunus demissa), limber pine seeds (Pinus flexilis), buffalo berry (Shepherdia argentea),

¹ Private laboratory of Don Grey, Sheridan, Wyoming.

wild rose (Rosa woodsii), juniper bark (Junipurus sp.), yucca fiber (Yucca glauca), willow (Salix sp.), and rye grass (Elymus canadensis).

Comments: Frison believes that this site represents a late summer occupation of a small family group oriented towards vegetable gathering and small animal gathering.

27) Mummy Cave, Level 30 (Wedel, Husted and Moss 1968).

Location: North Fork of the Shoshone River in the Big Horn Canyon.

Kind: Excavated; distinct stratigraphy.

Artifacts: McKean type points and variants, "tubular bone pipes, coiled basketry fragments, bits of vegetable fiber cordage and netting, wood trimmings, leather scraps, flint chips, animal bones" (Wedel et al. 1968:184).

Dates: 2470 B. C. +150.

Comments: No detailed data is yet available on the artifacts from the McKean components or the earlier or later components.

28) Lissolo Cave Site, Level I (Steege and Paulley 1968).

Location: Dakota Canyon of the Black Hills.

Kind: Excavated; distinctly stratified.

Artifacts: 25 projectiles and fragments of which at least 8 are McKean Lanceolate, 1 is a Duncan, and 1 is probably a Scottsbluff; 13 blades, 6 snub-nosed end-scrapers, 1 metate, 1 mano, 1 graver, 1 decorated bone, and 1 flake knife.

Dates: Charcoal samples had not been dated.

Comments: The layer above had several corner-notched and Oxbow specimens.

29) The Bentzen-Kaufmann Cave Site (48SH301) (Grey 1962).

Location: Foothills of the Big Horn Mountains.

Type: Excavated; lacking distinct artifact stratigraphy.

Artifacts: 1 Paleo-Indian, 1 Logan Creek, 1 Duncan, and several side-notched points, 4 scrapers, 1 square-backed knife, 1 hammerstone, 7 pieces of red ochre, 3 retouched-flake tools.

Dates: 6975 B.P. \pm 275 (5025 B.C.) for Layer III.

Comments: The date is probably associated with the Paleo-Indian artifacts. The range of point styles in Layer II where the Duncan projectile was found indicated a long period of occupation by several groups.

30) Edgar Site (Coe 1959).

Location: 30 miles south of Cody.

Type: Surface collection.

Artifacts: McKean Lanceolate, Duncan, Hanna and Oxbow points as well as the tanged, side-notched type found in the Upper Level of the McKean site; scrapers, choppers, and drills were also found.

Comments: Coe made no analysis of frequency of types in the various collections, but illustrated what he considered as a representative sample.

31) McKean Site, Lower Level (48CK7) (Mulloy 1954).

Location: Keyhole Reservoir, northeastern Wyoming.

Kind: Excavated; 2 distinct levels.

Artifacts: 34 hearths; 2 cache pits; 115 whole and broken projectiles which include McKean Lanceolate, Duncan, Hanna, and possibly Oxbow types;

22 snub-nosed end-scrapers, 12 ovoid scrapers, 5 spokeshaves; 43 ovoid to prirform bilateral knives; 26 crude percussion-flaked cores; 19 flake knives; 116 retouched flakes; 7 metates and fragments; 2 mano fragments; 1 sandstone disk; 1 incised bison bone rib.

Dates: Greater than 3287 B. P. \pm 600 (1337 B. C.) which was the date for the Upper Level.

Comments: The number of tools and hearths imply repeated occupation. The variety of McKean types might indicate that the Lower Level is a multi-component occupation zone visited by several different groups over an undetermined length of time.

The Upper Level was separated from the Lower Level by a sterile zone but it contained specimens that could be considered as Hanna points (Mulloy 1954: Fig. 4; 15, 16, 21, 33 and 36). Other specimens included tanged corner-notched forms and side-notched forms.

32) Birdshhead Cave, Levels II and III (Bliss 1950).

Location:

Type: Excavated; no distinct occupation strata.

Artifacts: Metate, 2 Duncan projectiles, roasting pits.

Faunal Remains: Small game.

Comments: Artifacts were few in number, possibly due to brief occupations by small groups.

33) Wedding of the Waters Cave (48H0301), Level I, (Frison 1962).

Location: Southern area of the Big Horn Basin.

Kind: Excavated; distinct stratigraphy.

Artifacts: 1 McKean Lanceolate and 1 Duncan point; 2 unworked flakes.

Comments: Occupation consisted of a 1-inch thick discolouration about 8 feet by 5 feet. Level II contained tanged, corner-notched specimens, similar to the Upper Level at the McKean site.

34) Bentzen-Little Bald Mountain (Bentzen 1963).

Location: Between the North Fork of the Tongue River at Little Bald Mountain at 9,000 feet elevation.

Kind: Excavated; two levels but no distinct stratigraphy.

Artifacts: 3 Hanna, 1 Duncan, and 2 McKean points, several triangular straight-based points, several tanged corner-notched points, awls, scrapers, knives, two hearths, spokeshaves.

Faunal Remains: Fragments of common elk (Cervus canadensis) and mountain sheep (Ovis canadensis), teeth of bison (Bison bison) and mandibles of deer.

Comments: There was no typological stratification, several of the specimens were without context, and separation of artifacts was on the basis of 6-inch arbitrary levels. The divide in which this site occurs is a natural pass between the Big Horn Basin and the area east of the Little Bald Mountain.

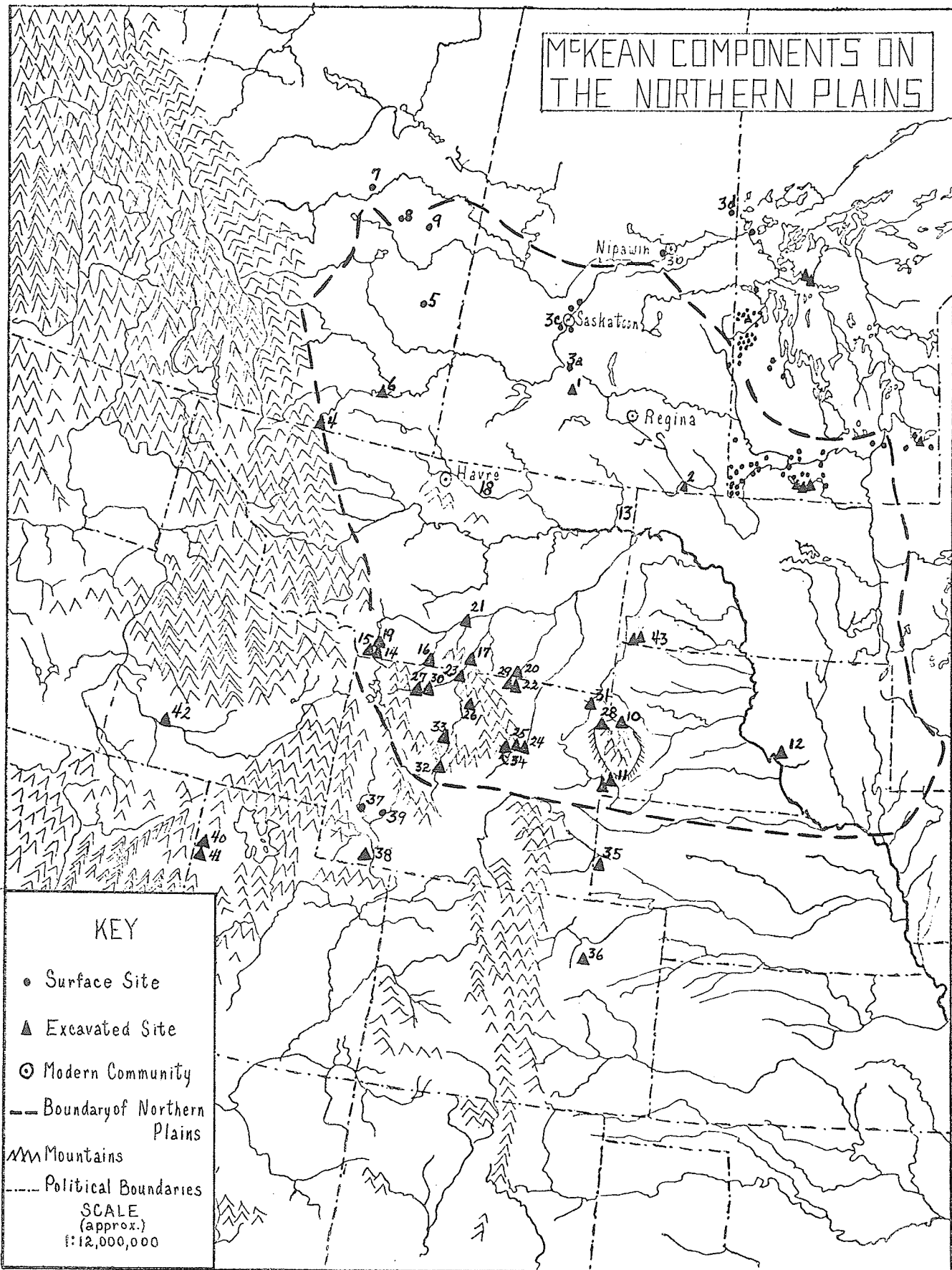
C. Related Sites in Adjacent Areas

The Northern Plains area was an arbitrary unit for analysis. Sites containing projectiles the same as, or similar to, McKean complex artifacts have been found in the Central and Southern Plains, the Great Basin Plateau, and Southwest (Lister 1953); and lanceolate concave-based points have been found in the southeast United States (Broyles 1966). An analysis of all sites containing McKean-like projectiles in North America was beyond the scope of this research. However, it is very likely that the McKean components in adjacent areas are indicative of some generic relationships.

In the Central Plains, sites such as Signal Butte (Strong 1935; Libby 1959) (Map 12, No. 35) yielded artifacts in the early levels which were the same as some of the McKean variants (Mulloy 1954:454). Level one, Zone A at Signal Butte had dates of 4550 B. P. \pm 220 (2600 B. C.) from charcoal and 3400 B. P. \pm 150 (1450 B. C.) from bone. Level one, Zone B, which was above Zone A and separated from it by the sterile Zone B, yielded dates of 4170 B. P. \pm 250 (2220 B. C.) from charcoal and 2850 B. P. \pm 350 (900 B. C.) from bone.¹ (Libby 1955:22).

Irwin-Williams and Irwin (1966) reported an intrusion of McKean Lanceolate projectiles in Layer C at LoDaisKa (Map 12, No. 36). Dates of 3400 B. P. \pm 200 (1450 B. C.) and 3150 B. P. \pm 200 (1200 B. C.) were associated with this layer that was identified as intrusive, late McKean in this foothills area of Colorado.

¹The dates from the bone are most likely in error because of contamination, particularly the latter date, because it was not treated with humic acid (Libby 1959:22).



Map 12

In southwestern Wyoming, 2 Duncan specimens were found in a survey of the Fontenelle Reservoir (Dibble and Day 1962) (Map 12, No. 37).

Sharrock (1966) found a few McKean complex artifacts at the Pine Spring site, Flaming Gorge Reservoir (Map 12, No. 38.). Two possible Duncan points and several McKean Lanceolate specimens were found. The Duncan points were found in Occupation 2 which had a date of 1685 B. C. +80.¹ (Sharrock 1966:25). The provenience of the McKean Lanceolate points cannot be stated because they were subsumed under Agate Basin and unclassified types.

Davis (1966) reported sites 48SW2 and 48SU5 in the Big Sandy Reservoir of southwestern Wyoming (Map 12, No. 39) which contained McKean complex artifacts. Site 48SU5 contained 2 McKean Lanceolate, 4 Duncan, and 3 Hanna points. Site 48SW2 contained 1 Hanna point.

Sites have been found in the intermontane or Basin Plateau area that contain projectiles similar, or identical, to specimens recognized as belonging to the McKean complex. Jennings (1964) and Aikens, Harper, and Frye (1968) argue for a Desert Culture which began in the Great Basin spread throughout the Basin Plateau and spilled onto the Plains. Diagnostic artifacts for the Desert Culture include manos, metates, and several styles of lanceolate, concave-based points that fall within the range of McKean projectiles, e.g. Types W3, W5, W6, W9,

¹This date is not necessarily associated with a McKean component because projectiles such as Eden, Scottsbluff, Agate Basin and corner-notched variants were also found in Occupation 2.

W11, W41 from Danger Cave (Jennings 1957). Both Jennings and Aikens et al argue for a relatively unmodified artifact inventory from 7000-2000 B.C. and for minimal modifications in subsistence patterns because climatic modifications were slight.

Intermontane sites with artifacts similar to McKean components are widespread. In the Great Basin, there is Danger Cave (Map 12, No. 40) and Hogup Mountain Cave (Map 12, No. 41). In Idaho, Gruhn (1961) found McKean-like points at Wilson Butte Cave (Map 12, No. 42).

The relationships between McKean components on the Northern Plains and the neighbouring areas has recently been analysed by Husted (1968, 1969) and Mallory (1968). Husted rejects the early dates for McKean Lanceolate components at Danger Cave and Hogup Mountain Cave and rejects the premise that McKean Lanceolate points are found on the Northern Plains as a result of the spread of the Desert Culture. He sees the McKean hunters spreading from the mountain areas onto the Plains along the length of the entire Western region about 3000 B.C. and supports his data with numerous Carbon-14 dates from the Plains, Great Basin and California.

CHAPTER IX
SUMMARY AND CONCLUSIONS

A. McKean Complex as a Horizon Marker

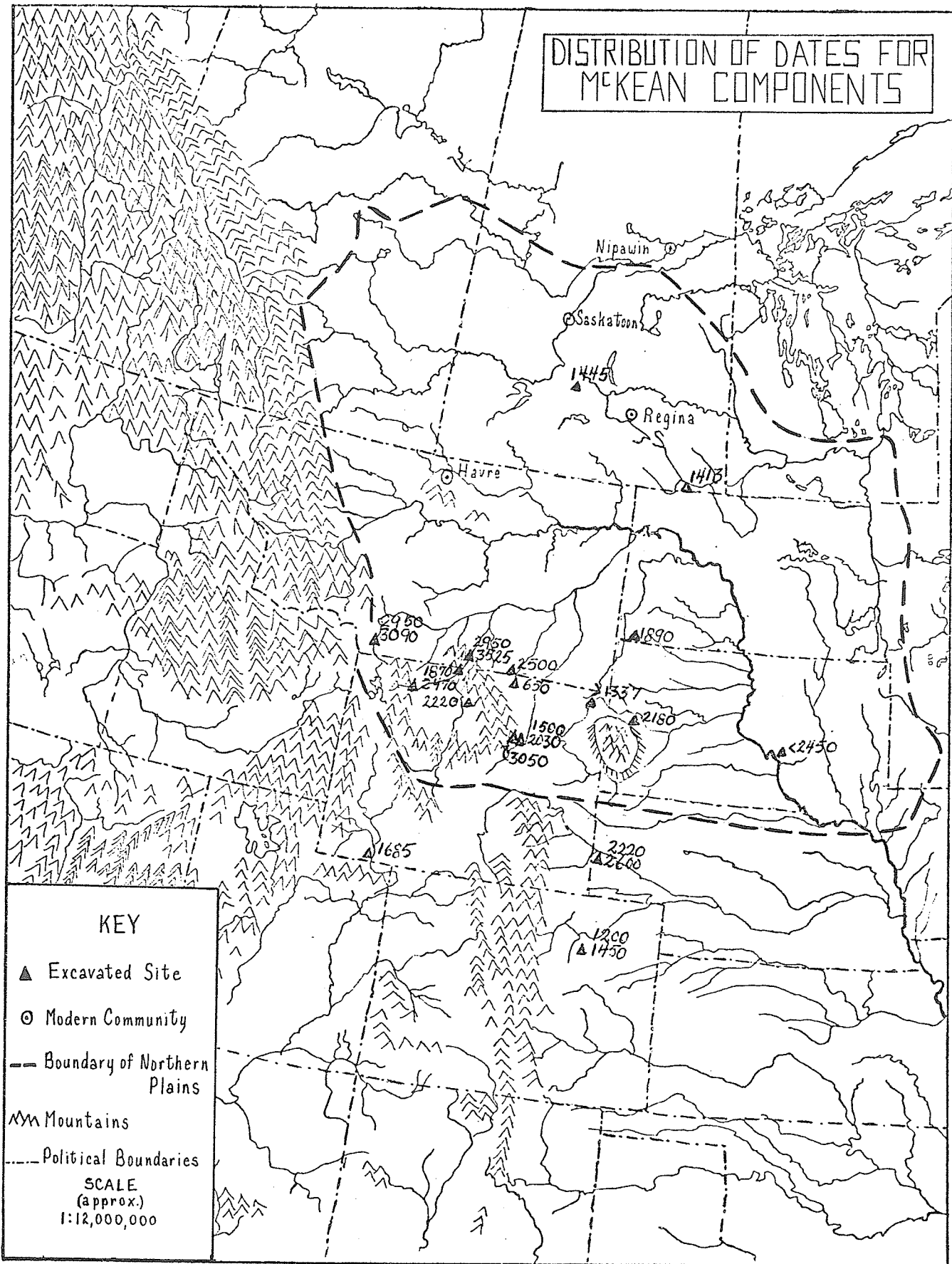
The McKean complex, is identified on the Northern Plains by medium-sized, concave-based projectiles which have been assigned to McKean Lanceolate, Duncan, and Hanna types. These types are frequently found together, even in the sample of two points at Wedding of the Waters Cave, but are also found separately as "pure" components such as the Fisher and Tailrace Bay sites.

The distribution of McKean components is concentrated on the western and central parts of the Northern Plains. This distribution pattern is due, at least in part, to archaeological research. However, the absence of McKean components in western Minnesota and the paucity of sites in North and South Dakota as well as eastern Manitoba and Montana is probably a reflection of a relatively low population density. In these areas, McKean components are scattered along at least the entire western and central parts of the Northern Plains.

When the carbon-14 dates are plotted (Map 13), a pattern of relatively rapid expansion is evident. The oldest dates of about 3000 B. C. are found primarily in the mountain ranges that encircle the Big Horn Basin. e.g. Sweem-Taylor 3050 B. C. \pm 250, Grey-Taylor 3650 B. C. $\overset{1}{\pm}$ 200, Sorenson V 2950 B. C. \pm 250 and 3525 B. C. $\overset{2}{\pm}$ 190, and Rigler Bluffs 2950 B. C. \pm 300 and 3090 B. C. \pm 150. The youngest

¹If you use the older date obtained by Don Grey.

²If Sorenson IV is considered.



Map 13

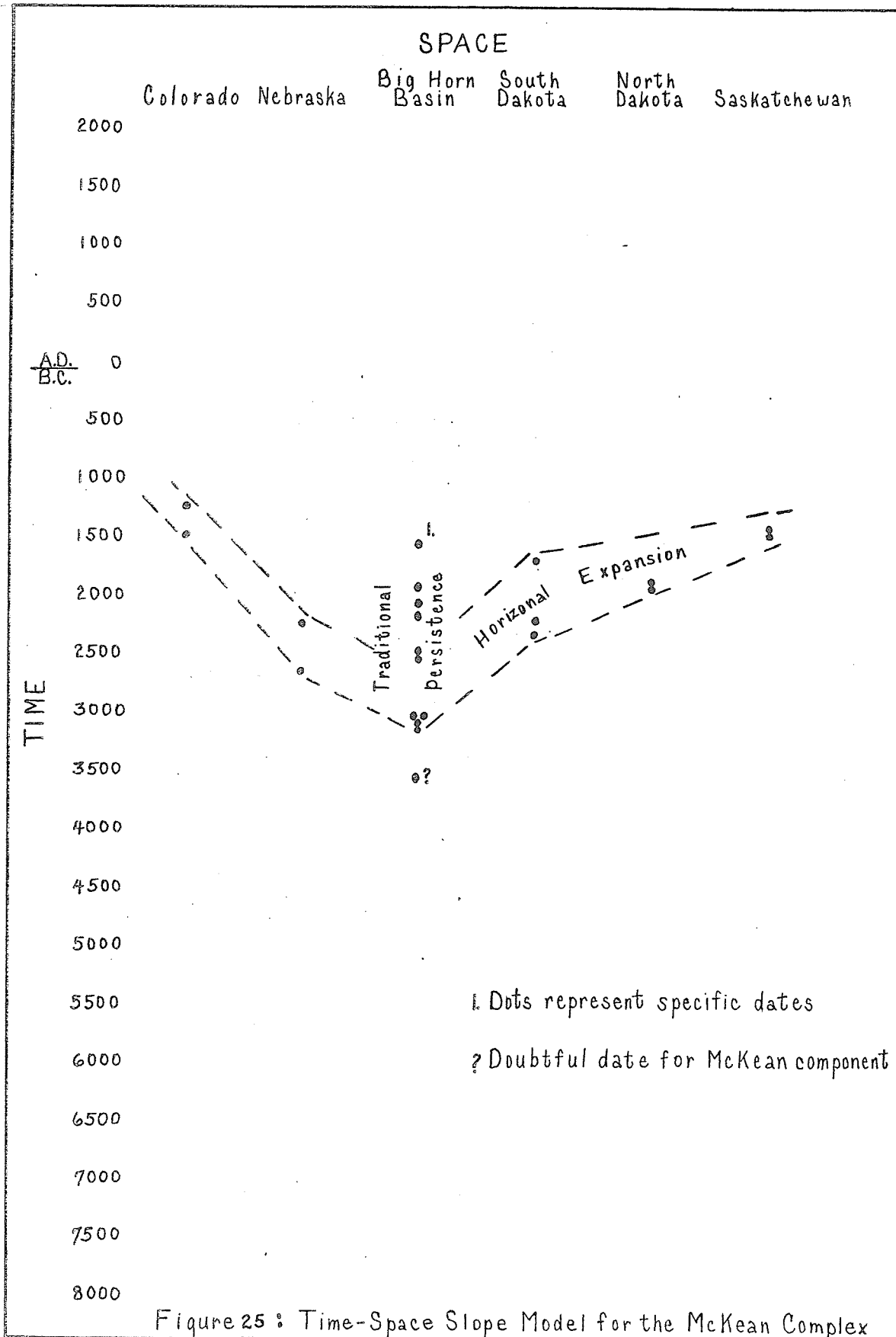
date¹ in this region is 1500 B. C. \pm 40 for the upper level of the McKean occupation at Grey-Taylor.

The dates farther east, in the region of the Black Hills, and the Bowman-Haley Reservoir vary between 2280 B. C. \pm 350 and 1680 B. C. \pm 350. The Occupations at Fort Thompson and the McKean site itself probably fit within this period.

Farther north and south the dates tend to be even later. The two dates in Saskatchewan are circa 1400 B. C.; the dates for Signal Butte, Nebraska, are 1450 to 1200 B. C., and for wouthwestern Wyoming there is a date of 1685 B. C. At the terminus of the time period when these peripheral sites were being occupied, the hearth area in the Big Horn Basin Region was probably being occupied by groups whose members made tanged, corner-notched projectiles like those found in Wedding of the Waters Cave, Level 2, McKean Site, Layer 2, and Mummy Cave Occupation 32.

The concept of horizon as used for the McKean complex represents a relatively rapid expansion on a space-time slope (Deetz 1967:61), rather than the strictly horizontal concept utilized for Peruvian ceramics. The McKean complex distribution also illustrates the problem of trying to separate the concepts of horizon and tradition on the Northern Plains (Figure 25). The McKean component dates indicate that there was a rapid expansion after 3000 B. C., but the McKean complex also persisted as a tradition in the Big Horn region from 3000 B. C. to 1500 B. C. The complex probably lasted for much briefer periods in the areas of

¹The date 650 B. C. \pm 200 from the Mavrikas-Bentzen-Roberts Trap is assumed to be in error because the material was stratigraphically located at the same level as the Powers-Yonkee Bison Trap with a date of 2500 B. C. \pm 125 and because it is not in line with the other dates.



the Central Plains and the northern periphery of the Northern Plains.

B. Ecological Adaptation

The distribution of McKean components does not correlate closely with any ecological niche. Sites are found in mountainous areas above 3500 feet, and as high as 9,000 feet, in the Big Horn region and on the flat lowlands of Manitoba. They are found on the short-grass prairies of Montana and in the Boreal forest of northern Manitoba and Saskatchewan.

Faunal remains associated with McKean components vary from predominantly bison remains, to a predominantly small game, vegetable and insect diet. Leigh Cave (No. 22) yielded evidence of a diet of mountain sheep, mule deer, grey squirrel, coyote, numerous plants such as wild onion bulbs, chokecherry pits, limber pine seeds, buffalo berry, and wild rose, as well as Mormon crickets. The presence of manos and metates indicate that seed grinding was probably very important. Frison and Huseas (1968) interpreted the occupation as being oriented to a desert culture tradition. The Gant site (No. 10) was apparently used for collecting and pulverizing vegetable remains (Gant and Hurt 1965). The presence of manos at the McKean site indicates that seed gathering was also important there.

McKean sites that indicate subsistence oriented to bison hunting were long Creek (No. 2) Mortlack (No. 1) and Pictograph Cave (No. 21). Manos and metates were absent at the Saskatchewan sites and rare at Pictograph Cave.

The Cemetery Point site in Manitoba appeared to have been occupied by hunters relying upon a woodland game and fishing subsistence. Grinding tools were replaced with cutting and scraping tools.

The natives who used the McKean projectiles not only changed their subsistence pattern to adapt to different environments, they modified their tool kit as well. The tool kit common to all groups consisted of McKean projectile variants, choppers, bifaces, crude scrapers that generally showed evidence of extensive pressure flaking only at the working edge, and bifaces. Shallow, oval hearths lined with stone are frequently found. Grinding tools such as metates were used mainly at localities where small game hunting and seed gathering were important.

One important environmental correlation was the presence of a large river. Most sites tend to be near large rivers rather than on small tributaries or swamps. One exception was the Gant site. It is unlikely that this desire for a large river reflects any need for water not is it likely that this distribution is the result of archaeological research. The distribution in Manitoba reflects a preference to be near large rivers even though other sources of water were abundant. Furthermore, archaeological research in Manitoba has not been confined to the river edges. It is impossible to state, at this time, whether the tendency to live near large rivers may have been the result of being near game living in amenable conditions of river valleys, being near major migration routes, or some other reason. A greater understanding of pertinent paleoenvironments and distribution of McKean sites is necessary before the reasons for the distribution pattern can be determined.

C. The McKean Type and Social Groups

Statements relating projectile types of this period to specific social groups are at best, very tenuous. The small sample of tools at most sites indicates that

the social groups were probably small. None of the sites in Manitoba yielded more than a dozen projectiles. The Mortlach site (No. 1) yielded only 4 projectiles, 5 scrapers, 1 hammerstone, 3 choppers or cores, and several flake scrapers and ovoid bifaces (Wettlaufer 1955:37-38). The Wedding of the Waters Cave site (No. 33) yielded 2 projectiles and 2 unworked flakes in an occupation area eight feet by five feet. Lissolo Cave (No. 28), Level 1, (Steege and Paulley 1967) contained 27 projectiles and fragments, 6 end-scrapers, 13 blades, 1 flake knife, and 3 miscellaneous tools. Leigh Cave (No. 26) had a small inventory of 5 projectiles, 1 core, 1 chopper, 5 retouch flakes, a few end-scrapers, and 217 miscellaneous flakes. None of these sites appeared to contain remains of large groups such as bands, because the artifact inventory was relatively small, but also because the occupation zones were shallow and areas of occupation were small, e.g. many of the sites in the Big Horn Basin regions were in small caves.

Some sites did yield a large number of tools. These sites represented either multi-component sites or bison kills in which larger numbers of individuals had combined to trap bison. Both the Powers-Yonkee site (No. 20) (Bentzen 1966) and the Mavrakis-Bentzen-Roberts site, (No. 22) (Bentzen 1967) yielded in excess of 80 projectiles in association with thick concentrations of bison bones. The use of 80 projectiles at one kill site indicates that more than a few hunters representing a conjugal or extended family were present. The subsistence pattern of the hunters using McKean points may have been similar to early historic Plains groups such as the Cheyenne who lived much of the year in small groups and combined into larger groups during the summer for buffalo hunts.

Sites such as Gant (No. 10) (Gant and Hurt 1965) and McKean, (No. 31) (Mulloy 1954) also have large quantities of artifacts. Evidence at the Gant site indicated that the site had been used over a period of several seasons because hearths were found superimposed and overlapping. The only possible indication there is a number of occupations is the presence of four hearths. If each hearth represented one occupation, then the group occupying the site would likely consist of a family unit.

The McKean site also contained a large number of tools and 54 fire pits. However, these artifacts represent up to 1 1/2 feet of deposition in parts of the cave and may indicate a long period of multiple occupations. The concentration of fire pits in the McKean cave can hardly be explained in terms of contemporaneous occupation because there would be inadequate space for all individuals. The artifacts from the lower level at the McKean site probably represent the remains of many successive occupations of one or more groups.

The mixing of projectile types poses some interesting problems about possible mixing of social groups. At the Fisher site in the Bowman-Haley Reservoir, all projectiles represented Duncan specimens with distinct stems and shoulders. The Tailrace Bay site contained twelve projectiles and fragments of which all but one were McKean Lanceolate specimens. These components appear to have been left by individuals possibly closely related, who manufactured closely similar projectiles.

On the other hand, small samples of projectiles contain different types. Wedding of the Waters site contained a distinct Duncan and McKean Lanceolate

projectiles that were used by individuals who were travelling together. The mixing of projectile types may indicate that members of various groups who had adopted their own projectile type or type variant tended to intermingle. An alternative hypothesis is that projectiles were traded freely among groups.

Not only does there appear to have been intra-mixing of projectiles assigned to the McKean complex, but there was mixing of McKean complex types with the "eared" variants, such as the Oxbow and Powers-Yonkee Eared types. Sites in Saskatchewan containing Oxbow points frequently have a small sample of McKean Lanceolate forms. The Powers-Yonkee site (No. 20) (Bentzen 1966) and the Mavrikas-Bentzen-Roberts bison trap (No. 22) (Bentzen 1967) contained predominantly "eared" specimens but also had a few specimens that could be classed as McKean Lanceolate, Duncan, and Hanna types. The Gant site, (No. 10) (Gant and Hurt 1965) yielded predominantly McKean Lanceolate and Duncan specimens, but a few Oxbow variants were found. A similar situation occurred at the McKean site (No. 31) (Mulloy 1954).

The lanceolate, concave-based variants of the McKean complex overlap in time and space with the eared variants. The dates for sites containing the two styles share the same time period in the Big Horn Basin region and are treated by several researchers as part of the same complex (Stallcop 1966; Mulloy 1954; Bentzen 1966; 1969; Frison 1967; Husted 1968, 1969).

The "eared" variants were stratigraphically beneath McKean components at Long Creek, (No. 2), (Wettlaufer and Mayer-Oakes 1960), and Mummy Cave (No. 27) (Wedel et al 1968), but the typological stratigraphy is clearly reversed at Lissolo Cave (No. 28), (Steege and Paulley 1967). The makers of these two general styles

of projectiles appeared to have existed contemporaneously with the makers of McKean projectiles and may have inter-mixed to some degree. However, the temporal and geographical distribution of components with a predominance of "eared" projectiles is not yet adequately understood to develop relationships on the Canadian Plains.

D. The McKean Type as a Horizon Marker in Manitoba

1. Early Middle Prehistoric Period Chronology

The geographical and temporal distribution of dates for McKean complex projectiles indicates that the period of habitation of the hunters who used the projectiles was brief, perhaps as brief as 800-1000 years. The prehistory of Manitoba for the remainder of the Early Middle Prehistoric Period represents either a void or occupation by groups whose members were using some other projectile types. The latter alternative seems most likely (Figure 26).

The presence of the Pryor stemmed points at the Larter Site probably represent the earliest post-Paleo-Indian occupation in Manitoba. These points have been found at several sites in the Big Horn Mountain area (Edgar 1966; Husted 1969). The dates associated with these points in the Big Horn Canyon are 5,610 B. C. \pm 250 at Sorenson III and 6,090 B. C. \pm 200 and 6,210 B. C. \pm 180 at Bottleneck Cave III (Husted 1969). Types that seem to be associated with these Pryor stemmed specimens are lanceolate straight-based specimens and Lovell Constricted points which have the appearance of large McKean Lanceolate forms with incipient stems. This complex was probably somewhat later in Manitoba.

Following this complex of lanceolate forms which is derived from a

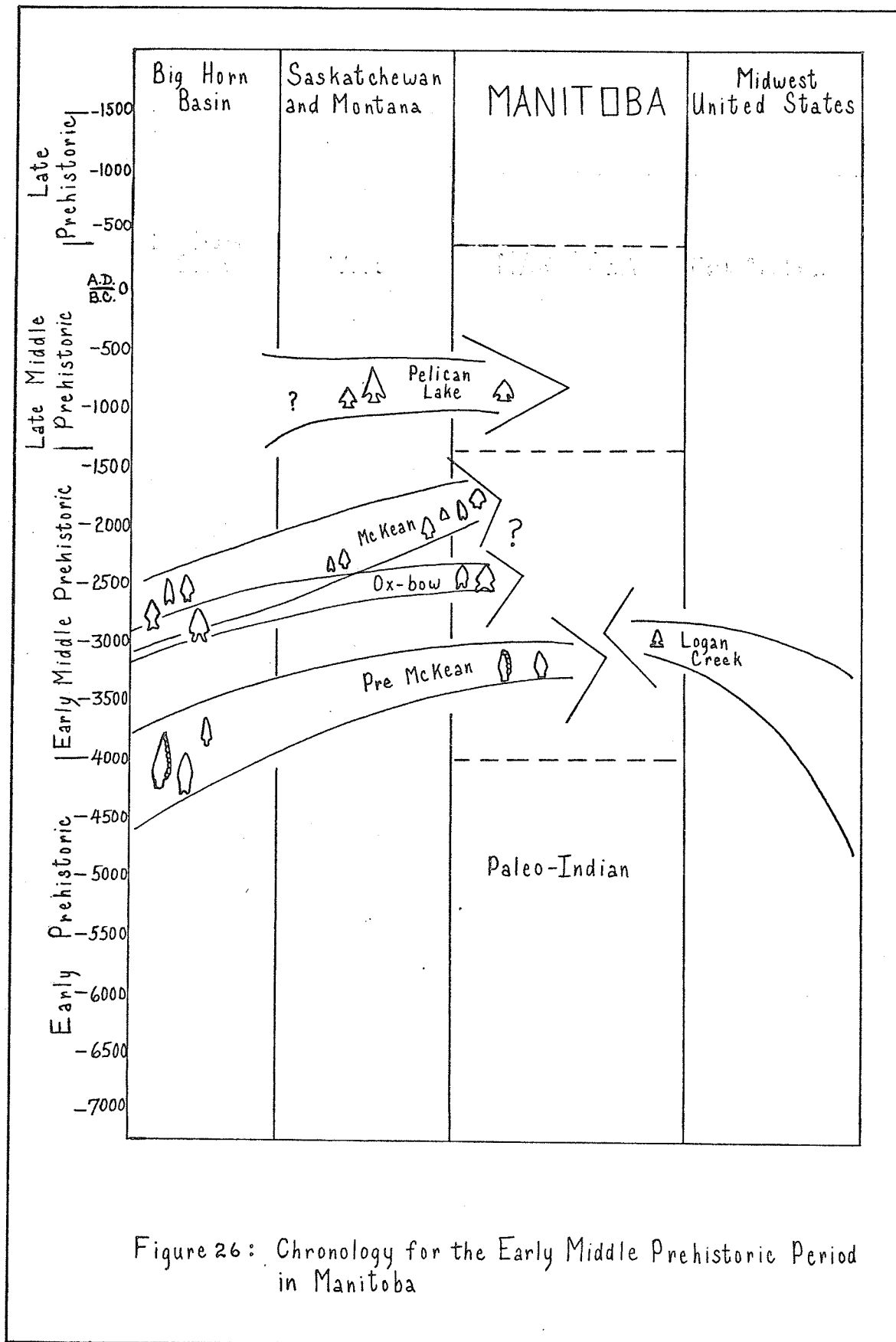


Figure 26: Chronology for the Early Middle Prehistoric Period in Manitoba

southwestern direction, is a complex of medium-sized square to concave-based side-notch points from a southeast direction. This type is associated with dates of 4,683 B.C. \pm 300 at Logan Creek (Hurt 1966:104), 3,525 B.C. \pm 190 at Sorenson IV (Husted 1969), and dates ranging from 5,680 B.C. \pm 170 to 3,305 B.C. \pm 140 at Mummy Cave (Wedel *et al* 1968:185). These points are also found stratigraphically earlier than the McKean complex at the Sweem-Taylor site (Anonymous 1959). These projectiles may have been distributed by members of groups who moved into the southern Manitoba area directly from the area of the east-central or midwestern United States.

T These side-notched forms have been found at two sites in the Swan River Valley which are believed to be quite early¹ (Simpson 1968: Gryba 1968). Four specimens were found in the lower excavation levels at the Larter site which may indicate a late persistence or mixing. No dates can be assigned to this point type in Manitoba but it is likely that the first appearance would predate or be contemporaneous with the McKean complex and might be contemporaneous with the earlier complex associated with the Pryor Stemmed type.

The McKean complex and Oxbow complexes may have been separated by the time these tool kits arrived in the Canadian Plains (Wettlaufer and Mayer-Oakes 1960: 100-101; Wormington and Forbis 1965). More stratified sites must be excavated before we can determine whether these artifacts were deposited by co-existing groups during a long period of time or whether they were deposited by two successive groups.

¹ Charcoal samples from these two sites have not yet been dated at the time of writing.

The McKean complex appears to have entered Manitoba from the west, perhaps via the Saskatchewan River. The greatest density of McKean components is in western Manitoba, particularly in the Swan River Valley. McKean components are common along the Saskatchewan River in Saskatchewan, but rare in eastern and southeastern Saskatchewan. These components are also rare in northeastern Montana, South Dakota and North Dakota.

The distribution of raw materials used for McKean projectiles also supports the hypothesis of a western migration. Most McKean points are made from Swan River chert or Selkirk chert. Brown chalcedony is rarely used, even though it is a superior material for flaking. If migration had taken place through the Dakotas and eastern Montana, the use of brown chalcedony would likely have become common and continued during occupations in Manitoba.

The McKean complex represents the terminal tool inventory for the Early Middle Prehistoric Period. The Late Middle Prehistoric Period is represented by a tool inventory associated with projectiles similar to the Larter Tanged specimens found at the Larter site. The Larter Tanged type is a variant of the tanged, corner-notched projectile type found in several sites on the Northern Plains. These tanged points have been found at the Upper Level of the McKean site, dated at 1337 B. C. \pm 600 (Mulloy 1954), Occupations 32 and 34 at Mummy Cave dated at 870 B. C. \pm 135 and 100 B. C. \pm 150 (Wedel *et al* 1968:185), Layer II at Wedding of the Waters Cave site (Frison 1962), Layers II and III at the Sweem-Taylor site (Anonymous 1959), and the Long Creek, Level 4, dated at 293 B. C. \pm 110 (Wettlaufer and Mayer-Oakes 1960). The dates associated with these tanged points indicate a widespread horizon overlying the McKean complex.

The Early Middle Period in Manitoba consists of at least three complexes. Two, and possibly three of these complexes probably co-existed. The basic premise that one projectile type represents one culture and that the presence of one type implies total aerial coverage by members of one culture needs to be reviewed. It is entirely possible that several different groups could have co-existed in an area and could have exchanged artifacts.

2. Life Ways of McKean Hunters

The existence of natives who used McKean projectiles in Manitoba is based upon lithic materials. Perishables such as bone, leather, and vegetable remains have disintegrated.

The remains from other sites on the Northern Plains indicate that the hunters who used McKean points had a quite sophisticated technology. Leigh Cave (Frison and Huseas 1968) yielded wood remains that appeared to be fragments of foreshafts intended to fit socketed main shafts as well as fragments of main shafts.

Worked bone was more frequently found. At Leigh Cave (Frison and Huseas 1968); two bone awls had been constructed from deer carpals. Mulloy (1958) found awls, knapping tools, tubes, serrated fleshers, and gaming pieces of incised ovoid bone fragments made from bone at Level 1, Pictograph Cave. Signal Butte I also yielded awls, tubular bone beads, a pick, spatula, and gaming counters (Mulloy 1958:148).

At Signal Butte I, excavators found a claw-shaped shell pendant. Mulloy found two disk beads made of shell at Pictograph Cave I. It is possible that McKean

hunters in Manitoba may also have used shell.

Leigh Cave (Frison and Huseas 1968) contained evidence that cordage, sinew, hide, and wads of grass and animal hair had been utilized in various ways. Two-strand, twisted cordage, generally with the "S" twist, was found. Nine pieces of sinew demonstrated two-strand "S" twist, single strand "Z" twist, two-strand "Z" twist and ends bound with an overhand knot. Pieces of hide contained holes for sewing and pieces of fiber chordage in some of the holes. Rye grass and other species were mixed with the hair from deer and mountain sheep to form a living floor.

No post molds have been found at McKean sites, but a shallow, square depression found in a Duncan component at the Fisher site, in the Bowman-Haley Reservoir may represent evidence of a dwelling structure. Since hideworking was apparently well-developed, some skin structure may have been used.

Practically nothing can be said about their spiritual beliefs. Red ochre had been used on two fragments of leather at Leigh Cave, but it cannot be determined if it had any religious significance. Few stone and bone effigies and pendants have been found. No pictographs have been associated with McKean occupations.

Based on sites elsewhere, the McKean hunters in Manitoba may have been using a wide range of vegetable materials and also may have mastered a variety of techniques in working with hide, sinew, bone, shell, and local plant fibers. It is unlikely that they were only in loin cloths, lacking adequate shelter, and limited to a flint knapping technology and hunting. As more stratified sites, and

particularly cave sites, are excavated, more inferences can be made about these people who once inhabited the Northern Plains.

APPENDIX A

ANALYSIS OF SOIL PROFILE FOR LAS 253

Order: Luvisolic

Great Group: Gray Wooded (Gray Luvisol)

Sub-group: Dark Gray Wooded (Dark Gray Luvisol)

Parent material: Lacustrine (11½ inches) over calcareous till. Upper 7 inches of till was sorted by water.

Profile description by: M.A. Zwarich and G.F. Mills.

<u>Horizon</u>	<u>Depth (in.)</u>	
Ap	0-6	Dark grayish brown (10YR4/2, moist), grayish brown (10YR5/2, dry) loam; weak, fine, platy structure breaking to weak, fine, granular structure; friable, abrupt, smooth boundary.
Bt	6-11½	Dark brown (10YR3/3, moist), dark grayish brown (10YR4/2, dry) clay; weak, medium, subangular blocky structure breaking to moderate, fine, subangular blocky structure; firm; clear, smooth boundary.
II Bck	11½-13½	Dark brown (10YR3/3, moist), brown (10YR4/3, dry) fine gravelly clay loam; weak, medium, subangular blocky structure breaking to weak, fine granular structure; firm; pebbles mostly limestone; weakly calcareous; clear, smooth boundary.
II Ck1	13½-18	Dark grayish brown (10YR4/2, moist), grayish brown (10YR5/2, dry) fine gravelly to fine, very gravelly loamy coarse sand; weak, fine to medium granular structure; very friable; pebbles mostly limestone; moderately calcareous; abrupt, smooth boundary.
II Ck2	18-36	Dark brown (10YR4/3, moist), brown (10YR5/2, dry) loam; moderate, fine to medium granular structure; friable; strongly calcareous.

Remarks:

The profile description was made after a soil monolith was examined in the laboratory. Kodachrome transparencies were also studied. In the soil monolith an undisturbed Ae horizon was not present however, the transparencies showed an Ae horizon below the Ap horizon which varied in thickness from 0 to 3 inches. The Ae was considerably lighter in color than the Ap. The Ap and Bt horizons developed in lacustrine material which was underlain by water worked till and non sorted till.

Classification, horizon designations and terminology for profile description are those recommended by the National Soil Survey Committee of Canada, 1968.

APPENDIX C

LITHIC ARTIFACT INVENTORY FOR PETTIPAS' EXCAVATION AT THE

FILUK SITE

Artifact Classes	No.	Illust.
A) Unworked Lithic Artifacts		
1) Unworked Flakes	17,471	-
2) Cores		
a) Prepared Platforms	2	Pl. 1: A, B
b) Irregular	5	-
c) Discoidal	2	-
3) Platform rejuvenation flakes	4	Pl. 2: A-D
B) Worked Lithic Artifacts		
1) Bifaces		
a) Elongate		
i) Projectiles (Arrow, atlatl, and spear points ?)	5	Pl. 3: A-E
ii) Knives (Fragments?)	4	Pl. 3: F-I, Pl. 6: A
b) Discoidal		
i) Regular edge and thin (knives)	14	Pl. 3: J-C, Pl. 4: A, B Pl. 5: A-D
ii) Irregular edge and thick (choppers)	3	Pl. 4: C-E; Pl. 6, C
iii) Undetermined intermediate	2	Pl. 4: D; Pl. 5: E, F
2) Unifaces		
a) Scrapers		
i) Type I	5	Pl. 7: A, B, D, F, G
ii) Type II	1	Pl. 7: C
iii) Type III	5	Pl. 7: E, H-K
b) Spokeshaves	2	Pl. 8: A, B
3) Multipurpose tools	2	Pl. 8: C, D
4) Other: retouched flakes	23	-

MATERIALS COLLECTED BY SYMS AND HLADY AT THE
CEMETERY POINT SITE

Level	Depth (in.)	Test Pit										Depth (in.)	Eroded Bank						
		Lithic					Pottery						Bone						
		Quartz	Argillite	Granite	Other	Total	Plain	Cord-marked	Other ¹	Bone	Quartz		Argillite	Granite	Other	Total	Plain	Cord-marked	Other
1	0-3	0	1	1	1	3	0	0	2 ²	2									
2	3-9	2	0	7	3	12	2	0	1	18									2
3	9-15	7	22 ⁴	3	3	35	2	5	3	0									0
4	15-21	4	9	2	3	18	0	0	0	0									0
5	21-27	5	7	1	0	13	0	0	0										
6	27-33	1	4	0	0	5	0	0	0										

¹ Some fragments were too small to be placed in any category.

² The artifacts collected from Level 1 included materials from the former backdirt pile and some materials from a slumped wall; the pottery probably comes from Level 3.

³ Fa ke appears to be worked.

⁴ One specimen was a basal fragment of a straight-based, side-notched projectile.

APPENDIX E

CHECKLIST OF SURFACE SITES IN MANITOBA CONTAINING
MCKEAN COMPONENTS1. Swan River Region

a) LAS 77, 78, 79

Location: On a high moraine known locally as Gryba's Hill.

Reference:¹ Lake Agassiz Site Report.

Artifacts: The sample from the three sites contains 12 McKean Lanceolate, 2 Duncan, 2 Hanna, 9 Oxbow types, and several tanged points with straight bases. No late period artifacts were collected.

Comment: These sites were combined because they were close together and probably represent co-existing occupation by the same groups.

b) LAS 245

Location: Just below Lower Campbell strand-line.

Reference: Lake Agassize Site Report.

Artifacts: 1 McKean Lanceolate specimen (Table 17, 1).

Comments: Other materials included 1 tanged, corner-notched point, 1 scraper, 10 worked flakes, 16 cores and core flakes, and 272 unworked flakes.

c) LAS 458

Reference: Lake Agassiz Site Report.

¹The term reference refers to published article, site reports, or collections from which data was obtained.

Artifacts: 1 Duncan (B, B¹), 1 McKean Lanceolate (A, A¹), 1 Oxbow, 1 stemmed straight based, and 3 tanged straight-based specimens (Figure 27).

d) LAS 142

Reference: J. B. Norman Collection.

Artifacts: 1 Duncan specimen.

e) LAS 410

Reference: J. B. Norman Collection.

Artifacts: 1 Duncan and 2 Hanna points.

f) LAS 469

Reference: J. B. Norman Collection.

Artifacts: 2 McKean Lanceolate and 1 Oxbow point.

g) LAS 69

Reference: Dobbyn Collection.

Artifacts: 2 Duncan specimens.

h) LAS 470

Reference: Dobbyn Collection.

Artifacts: One specimen that appears to be a Duncan with a reworked tip, but the dimensions (Table 17) yield evidence that it may have been too large originally to be a Duncan and the flaking is oblique; also 1 basal fragment which was from a McKean Lanceolate or Duncan specimen.

i) LAS 65

Reference: J. B. Norman Collection.

Artifacts: 1 Oxbow and 2 Duncan points.

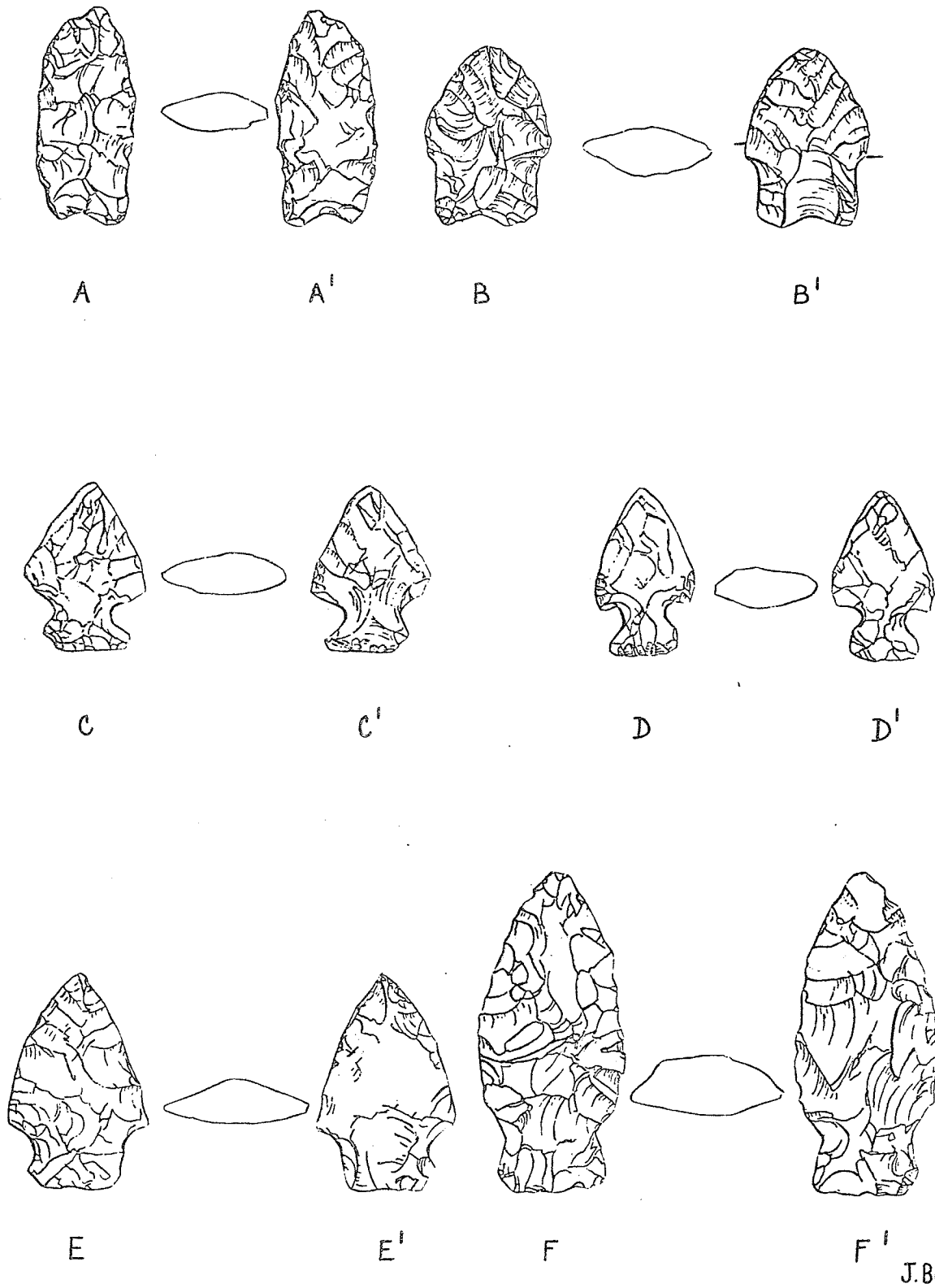


Figure 27: Projectiles from LAS 458

j) LAS 473

Reference: J. B. Norman Collection.

Artifacts: 1 McKean Lanceolate.

k) LAS 264

Reference: J. B. Norman Collection.

Artifacts: 1 McKean Lanceolate and 1 Hanna point.

l) S 29¹

Reference: Dobbyn Collection.

Artifacts: 1 McKean Lanceolate projectile.

m) LAS 159

Reference: J. B. Norman Collection.

Artifacts: 1 McKean Lanceolate point.

n) LAS 466

Reference: Dobbyn and Norman Collections

Artifacts: 7 McKean Lanceolate, 1 Hanna, 10 Duncan, 2 Oxbow, and 9

tanged or corner-notched specimens.

o) LAS 62

Reference: J. B. Norman Collection

Artifacts: 2 Duncan points.

¹Site designations beginning with "S" represent site locations that have not been given a designation under any other scheme such as the Lake Agassiz Survey symbols.

p) LAS 173

Reference: J. B. Norman Collection

Artifacts: 7 McKean Lanceolate, 10 Duncan, and 1 Hanna point.

q) S 28

Reference: Viny Norman Collection

Artifacts:

2. Rosburn-Virden Region

a) S 20

Reference: W. Hlady

Artifacts: 2 McKean Lanceolate, 2 Duncan, and several tanged, straight

based specimens were found.

Comments: Measurements (Table 19) were based on vacuforms of the specimens.

b) S 24

Reference: Gonzalves Collection.

Artifacts: 1 McKean Lanceolate point

c) V 4¹ (Oak Lake Site)

Reference: Vickers 1946: 4-5.

Artifacts: One Duncan specimen found with several projectiles, scrapers, bifaces, pottery sherds and quantities of animal remains.

Comments: Probably multi-component site with the Duncan specimen representing the earliest occupation.

¹Site designations beginning with "V" represent locations catalogued by Mr. Chris Vickers.

d) S 10

Reference: Dave Braddell, Reston, Man.

Artifacts: 1 Duncan Specimen.

Comments: No available data on other artifacts from this site.

e) S 23

Reference: Gonzalves Collection.

Artifacts: 2 stemmed specimens that are possibly Hanna points with very shallow basal notches, or possibly stemmed, straight-based forms.

f) S 25

Reference: Dennis Simpson.

Artifacts: 1 Oxbow, 1 possible Duncan, and 3 Hanna specimens were made available but the owner has collected numerous specimens of many types.

3. South Western Region

a) S 14

Location: 10 miles south of Melita on west side of Souris River; Snyder Mound Field, probably NW 22-2-27W1.

Reference: Dave Braddell.

Artifacts: 1 McKean Lanceolate specimen.

b) V 12 (Snyder Site)

Reference: Vickers Collection.¹

Artifacts: 1 Duncan base, 1 Hanna base, and 2 Oxbow specimens.

¹Land locations not supplied in the thesis are on file at the Laboratory of Anthropology, University of Manitoba.

c) V 11 (McSwain Site)

Reference: Chris Vickers.

Artifacts: Among the many types found, there were 1 Pryor Stemmed point, 2 McKean Lanceolate points, 2 Duncan points and 2 Hanna points.

Comments: The artifacts from the McSwain site were found by an elderly bachelor, now deceased. These projectiles are believed to have been collected from his own land because he rarely left his farm (Chris Vickers, personal communication).

d) S 16 (Roblin Site)

Location: 2 1/4 miles west of Elva; low plateau north of road. Probably SE of 22-3-28W1 (according to Braddell), SW of 22-2-28W1 (according to C. Vickers).

Reference: Dave Braddell and Chris Vickers.

Artifacts: 2 Oxbow and 1 McKean Lanceolate point.

e) S 17

Location: 1/4 mile north of Elva; low ridge east of road. Probably SW 19-3-27W1.

Reference: Dave Braddell.

Artifacts: One specimen tentatively identified as a Duncan projectile, but it may be pre-McKean because of overall size and the relatively wide cross-section for the length.

f) S 15

Location: 7 miles west and 1/4 mile south of Melita. Probably N 1/2 of 35-3-28W1.

Reference: Dave Braddell.

Artifacts: 1 McKean Lanceolate and 1 tanged specimen.

g) S 13

Location: Approximately 1 mile due south of Melita on east side of Souris River; knoll south of outdoor theatre. Probably S 1/2 pf 36-3-27W1.

Reference: Dave Braddell.

Artifacts: 1 Hanna Point.

h) S 12

Location: 2 miles west and 2 miles north of Melita. Probably 15-4-27W1.

Reference: Dave Braddell.

Artifacts: 1 McKean Lanceolate projectile.

i) S 19

Location: Collected in the vicinity of Pipestone, Manitoba.

Reference: Ron Nash, Manitoba Museum of Man and Nature.

Artifacts: The total collection includes a wide range of types from Plain-view to late triangular forms. There were 5 McKean Lanceolate, 4 Hanna, and 6 Oxbow specimens.

Comments: The artifacts were collected in the vicinity of Pipestone, Manitoba, by Mr. A. Harrold. However, there may be some specimens from Saskatchewan, but this cannot be determined because the collector is now deceased. The similarity in outline, shape of the basal concavity, and dimensions of the McKean Lanceolate specimens suggest that they may have been made by the members of one social group.

j) S 22

Location: 7-7-22 on middle terrace east of Souris River.

Reference: Clive Gonzalves.

Artifacts: 1 Hanna point.

k) S 21

Location: NE 34-7-21 on middle terrace south of Souris River.

Reference: Clive Gonzalves.

Artifacts: 1 Hanna specimen.

l) LAS 467 (Trealeven Site)

Reference: Chris Vickers.

Artifacts: 1 Nutimik Concave specimen; numerous artifacts from later components.

4. South Central Region

a) M¹85

Reference: Wettlaufer site report.

Artifacts: Numerous McKean Lanceolate, Duncan and Hanna artifacts found on four adjacent quarter sections.

Comments: These artifacts represent part of a large collection obtained in this vicinity.

¹Sites with the letter "M" denote recording of sites by Wettlaufer (n. d.).

b) S 27 (Whiles Site).

Reference: Walter Hlady.

Artifacts: Several Hanna and 1 McKean Lanceolate specimen.

Comments: The writer did not see any of the artifacts from this site.

e) V 6

Reference: Vickers' catalogue; with the collection at the University of Manitoba (Vickers n.d.).

Artifacts: 1 McKean Lanceolate specimen.

d) V 3

Reference: Vickers' catalogue; with the collection at the University of Manitoba.

Artifacts: 1 McKean Lanceolate and 1 Duncan specimen.

Comments: Found in a garden with a few unworked flakes.

e) V 5

Reference: Vickers' catalogue; with collection at the University of Manitoba.

Artifacts: 1 Duncan projectile.

f) V 1

Reference: Vickers' catalogue; with the collection at the University of Manitoba.

Artifacts: 1 Duncan specimen

Comments: This specimen was unusual because it had a slightly flared base resembling the basal configuration of Dalton type specimens.

g) V 2

Reference: Vickers' catalogue; with collections at the University of Manitoba.

Artifacts: 2 McKean Lanceolate and 1 Duncan specimen.

h) V 7

Reference: Vickers' catalogue; with collection at the University of Manitoba.

Artifacts: 1 Duncan point.

i) LAS 371

Reference: Vickers' collection.¹

Artifacts: 1 McKean Lanceolate specimen.

5. Carberry Region

a) M 86 (Borden Designation DkLv-1)

Reference: Wettlaufer Report.

Location: This site is located on the NE 1/4 of 14/9/16W1. It is situated on a sandy ridge of an old meander of the Assiniboine River.

Artifacts: The total sample of 11 projectiles have concave bases. At least seven specimens belong to the McKean complex; 3 are McKean Lanceolate and 4 are Duncan, and the rest are corner-notched. The McKean assemblage projectiles tended to be squat and exhibited relatively narrow basal notches.

¹The reference, Vickers' collection, represents artifacts collected during recent years and still in his possession; the reference to his catalogue (Vickers n.d.) represents the collection that had been collected during the 1940's and early 1950's which was subsequently donated to the Department of Anthropology, University of Manitoba.

b) M 88 (Borden Designation DkLv-2)

Reference: Wettlaufer Report.

Location: 6 and 7/9/16W1

Artifacts: The range of artifacts include everything from Agate Basin and Alberta types to the Plains Triangular Type. The McKean variants tended to be relatively long and slender with relatively deep basal notches. McKean Lanceolate, Duncan and Hanna types were present as were a few of the Oxbow type and possibly one Nutimik Concave.

Comments: The McKean variants from this site demonstrate distinct visual differences from the specimens of M 86. Although the various attributes cannot be measured, the McKean projectiles from M 88 are generally much longer and more slender than those from M 86.

c) M 30

Reference: Wettlaufer Report.

Location: The site was located on the first and second terrace above the Assiniboine River on the North side. The site is on SW of 36/8/14W1.

Artifacts: Among the wide variety of artifacts collected at this site, specimens of Oxbow and McKean Lanceolate were included. No Duncan or Hanna specimens were discernible. Most of the McKean Lanceolate specimens were long and thin with the widest section near the base.

d) M 70 (D1Lp-1)

Reference: Wettlaufer Report.

Location: SE 1/4 of 25/10/9W

Artifacts: Several Duncan, Hanna and Oxbow projectiles were found. One

specimen is possibly a McKean Lanceolate variant. The Duncan and Hanna variants tended to be relatively large, and the Oxbow specimens were smaller.

e) M 43 (DjLo-2)

Reference: Wettlaufer Report.

Location: SE 1/4 of 15/8/8/W1

Artifacts: At least one specimen, and possibly two, are McKean Lanceolate projectiles.

f) M 42 (EbLu-1)

Reference: Wettlaufer Report.

Location: SW 1/4 25/14/15W1 and NW 1/4 23/14/15W1. Wettlaufer reported that the site was on the NW 1/4 of 19 but this is unlikely because sections 19 and 25 are several miles apart and other comments by Wettlaufer indicate that the site is too far west to be located on section 19.

Artifacts: The specimens include at least one McKean Lanceolate, Duncan and Oxbow example.

g) S 26 (C3-CO-1, 2, 3)

Reference: Mrs. Helen Wong, Walter Hlady (personal communication) and Al Simpson (1967).

Location: Bank of the Assiniboine River, north of Wawanesa.

Artifacts: 4 McKean Lanceolate, 1 possible McKean Lanceolate Base, 1 Hanna and 1 Oxbow.

Comments: Three sites have been identified on the upper terraces of the south bank of the Assiniboine River. The McKean projectiles were surface finds and could not be related to any one of the sites.

5. Other Sites

a) M 74 (EcLs-1)

Reference: Wettlaufer Survey form.

Location: SW 20/16/12W1.

Artifacts: Several Duncan and Oxbow forms.

b) LAS 332

Reference: Kaleta Collection and Agassiz Survey site form.

Location: SE 28/27/18W1. It is located beside the Valley River near its mouth.

Artifacts: Specimens collected by members of the Lake Agassiz field crew included 2 McKean Lanceolate, 4 Oxbow and 3 stemmed specimens which lacked concave bases (Figure 28). Specimens in the owners collection included several McKean Lanceolate, Duncan, and Oxbow forms.

c) GP 1 (Mymka site)

Reference: Hlady (1967).

Artifacts: McKean specimens recorded from a site near Ashville, but there was no indication of the number of specimens.

d) LAS 21

Reference: Lake Agassiz Survey site forms.

Location: SW 12/31/22W1; on the top and east slope of the lower Campbell strand line.

Artifacts: 1 Duncan, 1 Hanna, 1 McKean Lanceolate, 3 Pelican Lake, 6 Oxbow and several side-notched specimens.



A



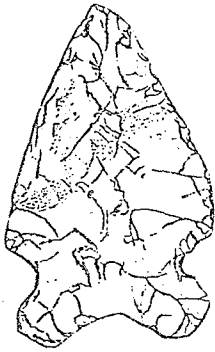
B



C



D



E



F



G



H



I



J

J.Bu.

Figure 28: Artifacts from LAS 332

e) LAS 1 and 2

Reference: Lake Agassiz Survey site forms.

Location: SW and NE of 7/30, 27W1; overlooking the Shell River.

Artifacts: 2 Duncan specimens (Figure 29 and Table 24).

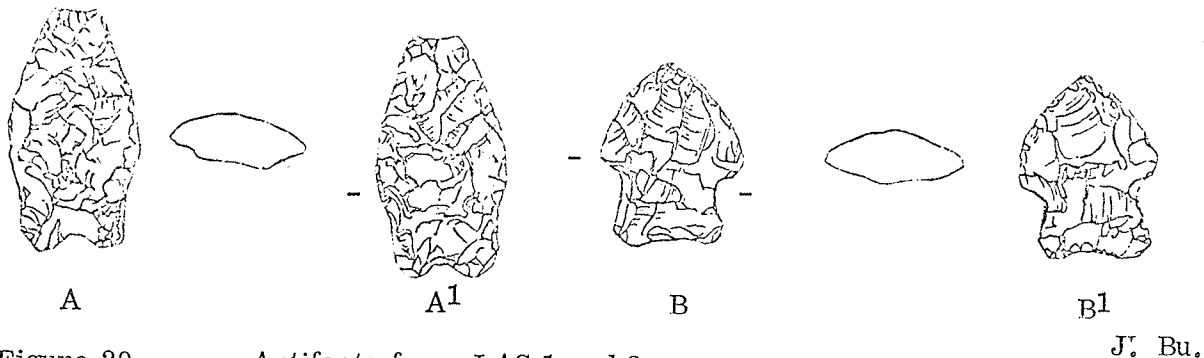


Figure 29: Artifacts from LAS 1 and 2.

f) S 33

Reference: Morgan Tamplin (personal communication).

Artifacts: 1 McKean Lanceolate point found on or near shore of Swan Lake by J. B. Tyrrell during the period 1887-90 (Figure 30).

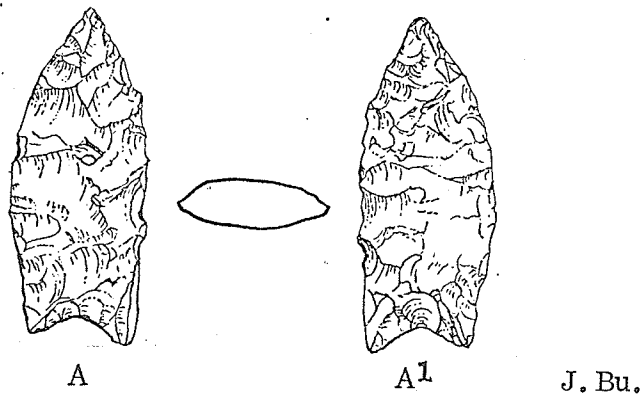


Figure 30: Projectile Found by J. B. Tyrrell.

g) LAS 458

Reference: Lake Agassiz Survey site forms.

Location: SW 19/40/25W1.

Artifacts: 2 Duncan projectiles (see Table 24).

h) S 34

Reference: Walter Hlady (personal communication and 1967).

Location: The Pas Indian Reserve. The specimen is now in The Pas Museum.

Artifacts: McKean projectile.

i) PI 1 (Davis Site)

Reference: Walter Hlady (1967)

Location: Exact location not known.

Artifacts: McKean projectile.

j) S 35

Reference: Hlady (1967).

Location: Souris District.

Artifacts: McKean projectile, on display in the Souris Rock Shop.

k) M 24 (Larter site, EaLg-2).

Reference: Wettlaufer Survey (n.d.).

Artifacts: 1 McKean Lanceolate and 1 Duncan specimen found on the surface.

l) M 27 (Lockport site, EdLf-1).

Reference: Wettlaufer Survey (n.d.).

Artifacts: Several McKean Lanceolate and Oxbow specimens found on the surface.

m) LAS 420

Reference: Lake Agassiz Survey site forms.

Artifacts: 1 Hanna specimen (Table 24).

n) S 31 (Sturgeon Falls site)

Reference: Jack L. Brown, Winnipeg.

Location: North side of Nutimik Lake, near the Sturgeon Falls.

Artifacts: Several Oxbow, McKean Lanceolate and Duncan points

(Figure 31).



A

B

C

D

J. Br.

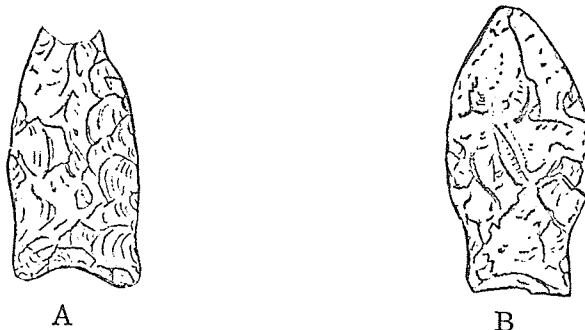
Figure 31: Projectiles From the Sturgeon Falls Site.

o) S 32

Reference: Jack L. Brown.

Location: Shore of Crow Duck Lake in the Whiteshell Forest Reserve.

Artifacts: 1 McKean Lanceolate and 1 Duncan specimen (Figure 32).



A

B

J. Br.

Figure 32: Projectiles from Crow Duck Lake.

* "J. Br. indicates that the illustrations are by Jack Brown.

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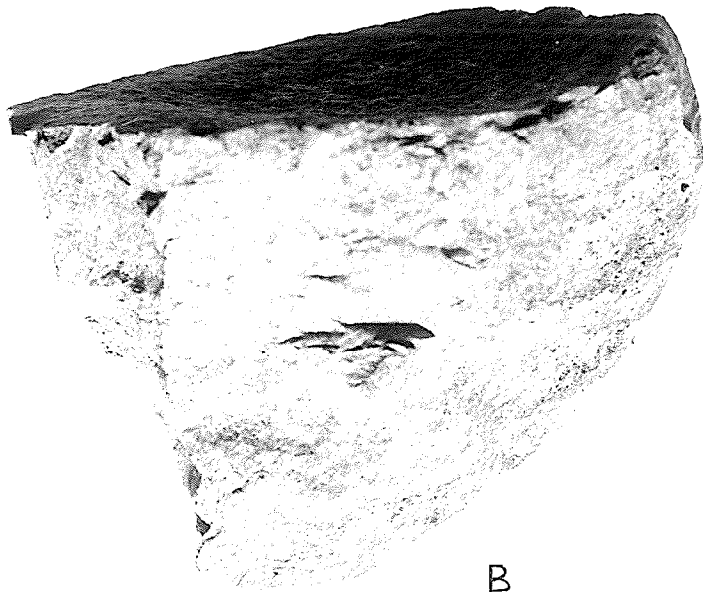
Plate 1

Filuk Site (LAS 253)

Prepared Platform Cores



A



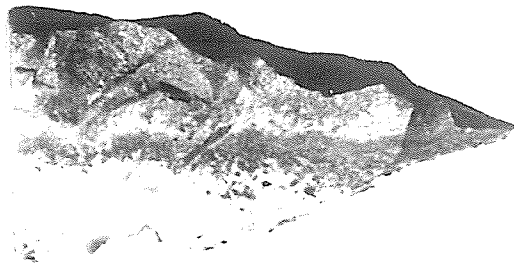
B



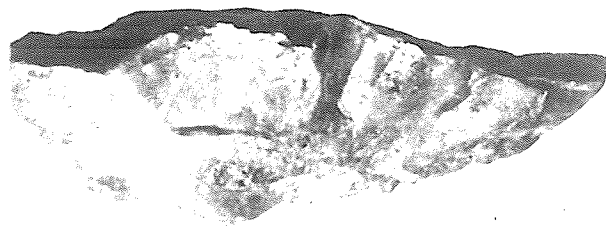
Plate 2

Filuk Site (LAS 253)

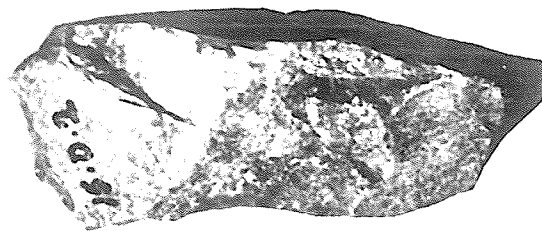
Platform Rejuvenation Flakes



A



B



C



D

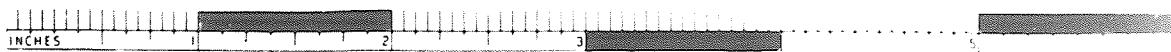
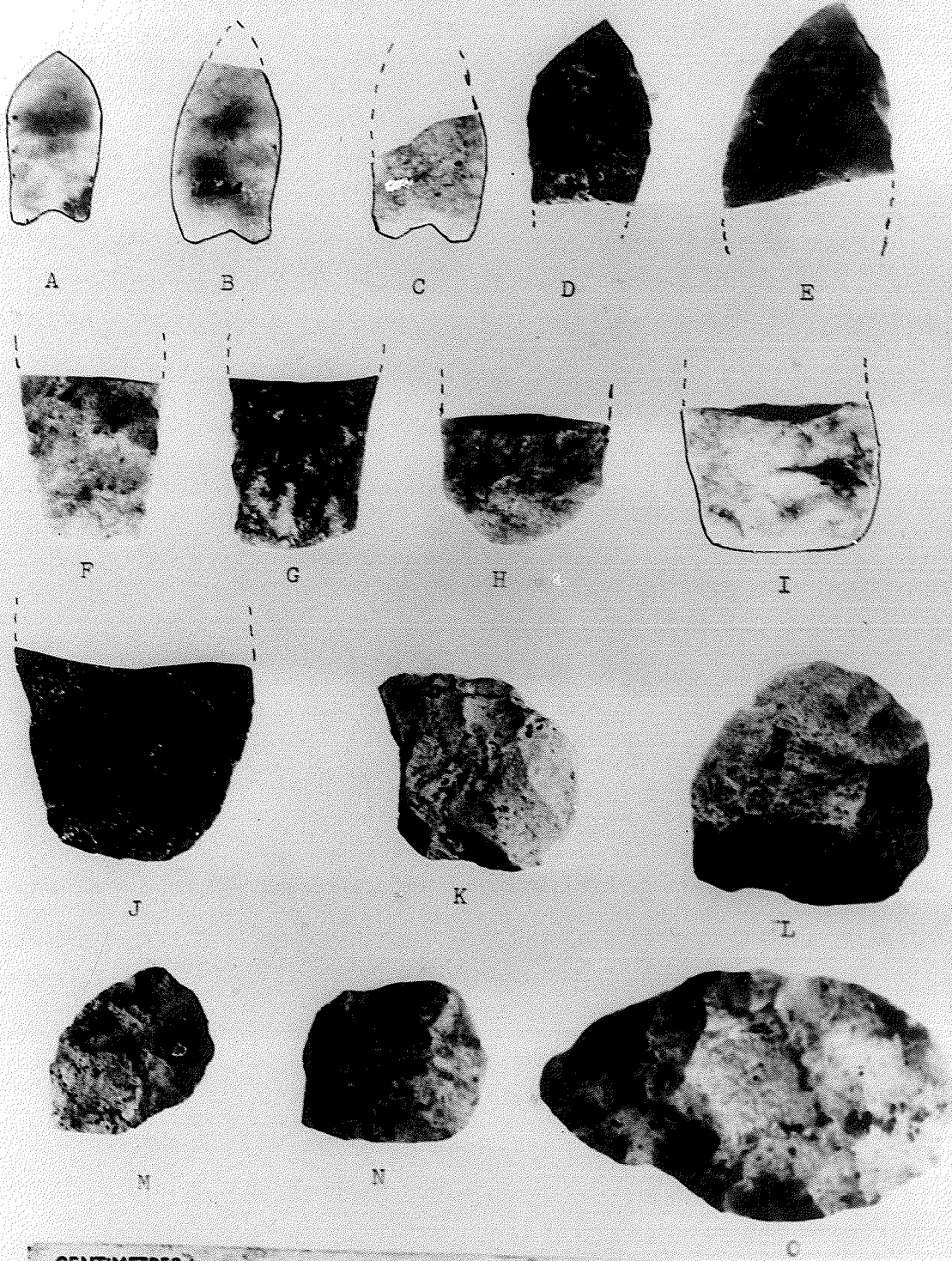


PLATE 3

Artifacts From The Filuk Site (LAS 253)

- A. Projectile, McKean Lanceolate
- B. Projectile fragment, McKean Lanceolate
- C. Projectile fragment, McKean Lanceolate
- D. Projectile fragment, McKean Lanceolate?
- E. Spear fragment, spear point?
- F. Biface, fragment of projectile or knife
- G. Biface, fragment of projectile or knife
- H. Biface, fragment of projectile preform or knife
- I. Biface, fragment of projectile preform or knife
- J. Biface, fragment of ovoid knife?
- K. Biface, ovoid knife
- L. Biface, ovoid knife
- M. Biface, ovoid knife
- N. Biface, ovoid knife
- O. Biface, ovoid knife



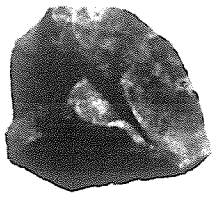
CENTIMETRES
INCHES

Plate 4

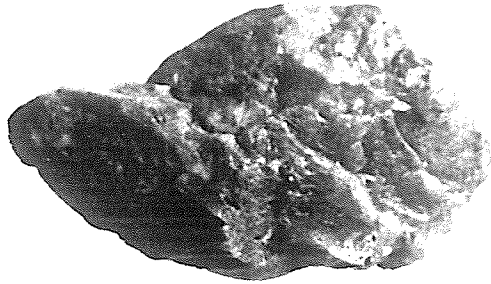
Filuk Site (LAS 253)

Discoid Bifaces, Whole

- A. Knife
- B. Knife
- C. Chopper
- D. Chopper
- E. Chopper



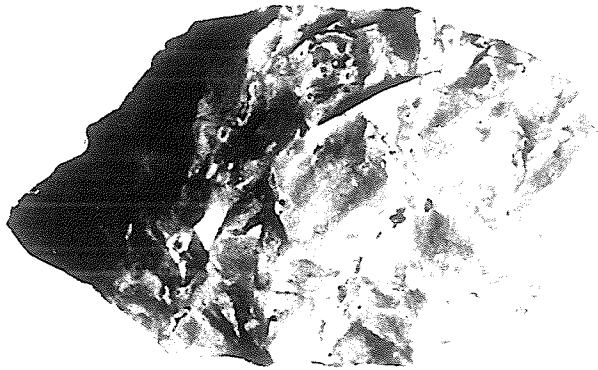
A



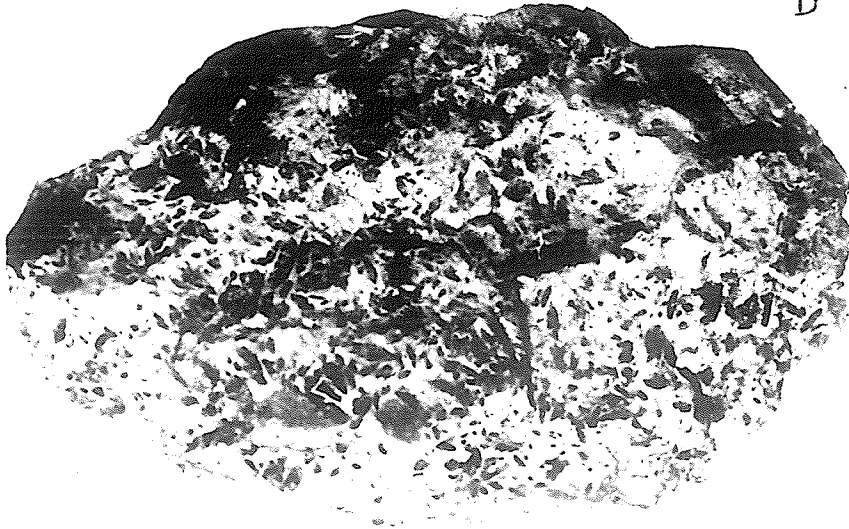
B



C



D



E

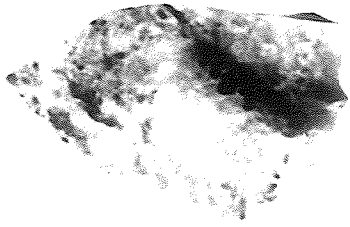


Plate 5

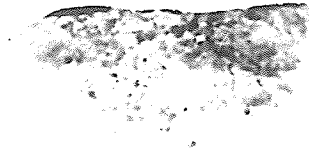
Filuk Site (LAS 253)

Discoidal Bifaces, Fragmented

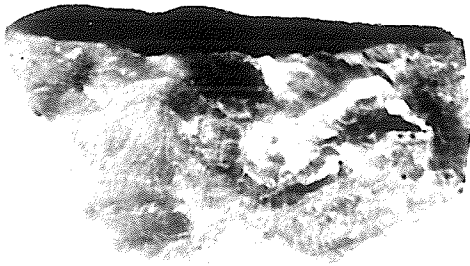
- A. Knife ?
- B. Knife
- C. Knife
- D. Knife
- E. Chopper ?
- F. Chopper ?



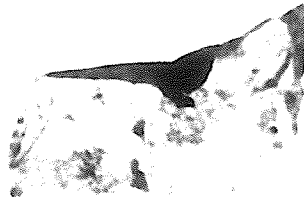
A



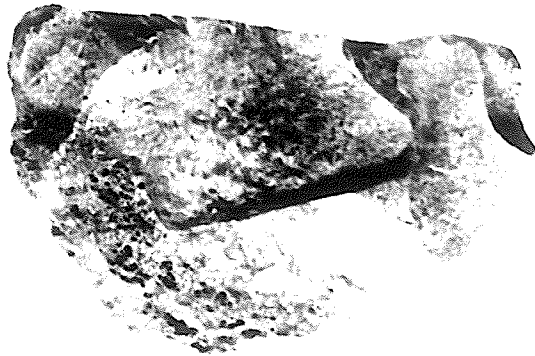
B



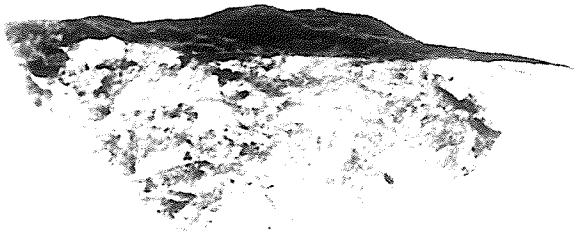
C



D



F



E

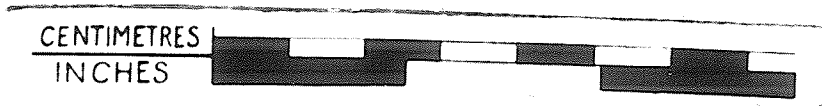


Plate 6

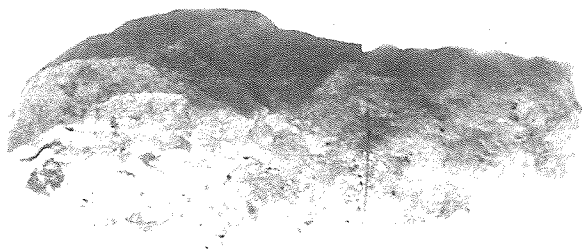
Filuk Site (LAS 253)

Three artifacts showing the continuum of variation in thickness and evenness of edge of discoidal bifaces.

A, A¹ Projectile point or knife?

B, B¹ Knife?

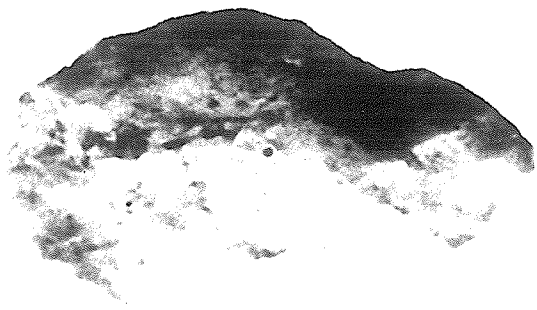
C, C¹ Chopper



A



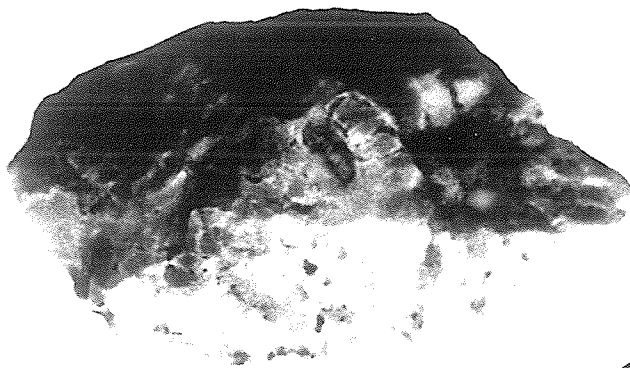
A'



B



B'



C



C'

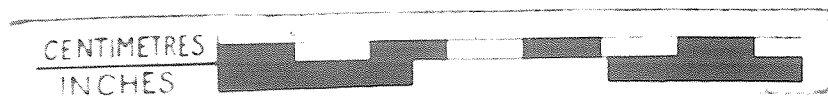
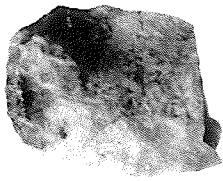


Plate 7

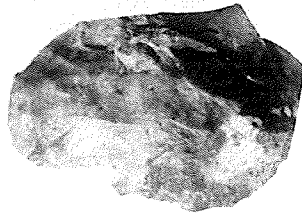
Filuk Site (LAS 253)

Scrapers

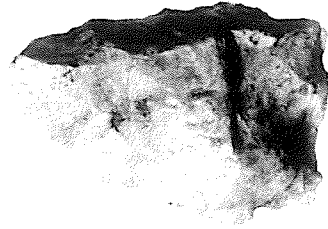
- A. Scraper, Type I
- B. Scraper, Type I
- C. Scraper, Type II
- D. Scraper, Type I
- E. Scraper, Type II
- F. Scraper, Type I
- G. Scraper, Type I
- H. Scraper, Type III
- I. Scraper, Type III
- J. Scraper, Type III
- K. Scraper, Type III



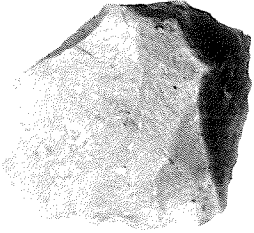
A



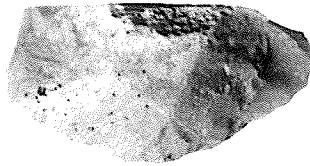
B



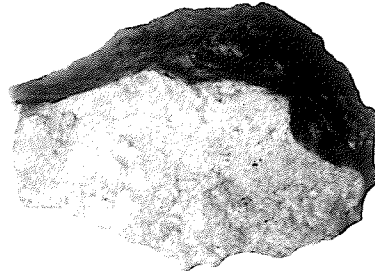
C



D



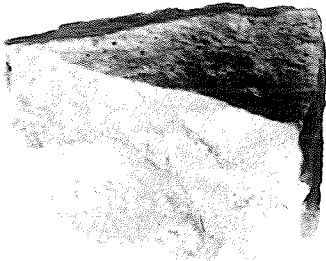
E



F



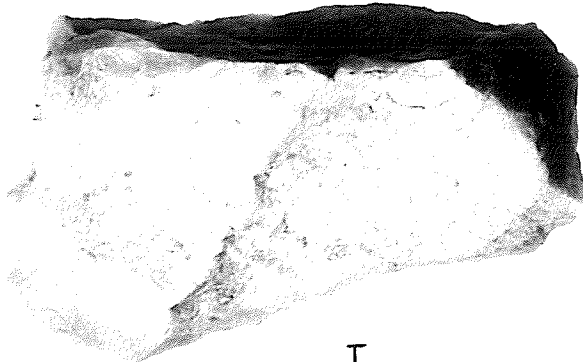
G



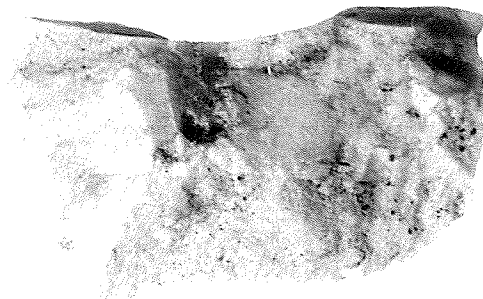
H



I



J



K

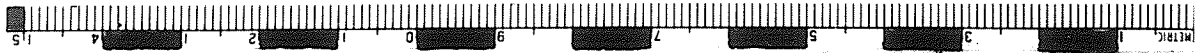


Plate 8

Filuk Site (LAS 253)

Miscellaneous

- A. Spokeshave
- B. Spokeshave
- C. Multipurpose Tool
 - C¹ End scraper, along bottom edge
 - C² Spokeshave
- D. Multipurpose Tool
 - Reworked edge for three graver points and scraper

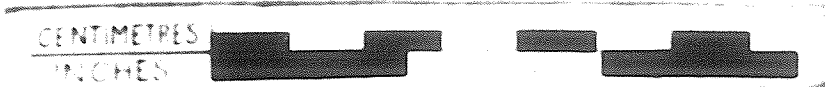
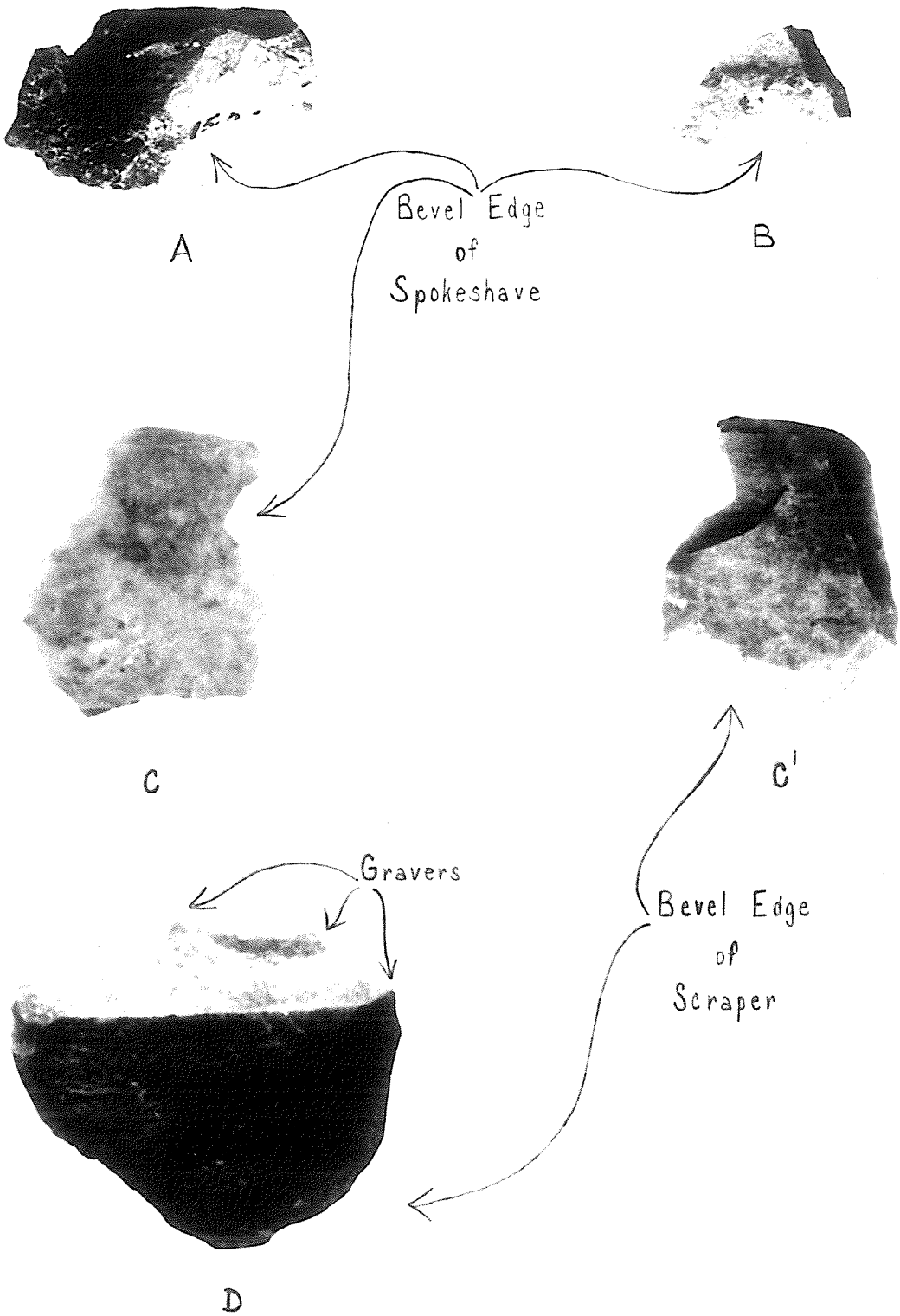


Plate 9

ARTIFACTS EXCAVATED BY MACNEISH
FROM LEVEL 6, CEMETERY POINT SITE

- A. Projectile, McKean Lanceolate
- B. Projectile, Duncan
- C. Projectile, Lanceolate and Straight Based
- D. Projectile Fragment
- E. Beaver Tooth, Upper Right Molar
- F. Scraper, Type III
- G. Scraper, Type III
- H. Scraper, Type III
- I. Biface, Trapezoidal knife
- J. Scraper, Type III
- K. Scraper, Type III
- L. Scraper, Type II
- M. Biface, Tapered Back
- N. Biface, Lanceolate or Reject?
- O. Biface Fragment
- P. Scraper, Type II



A



B



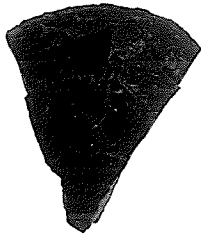
C



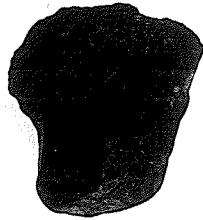
D



E



F



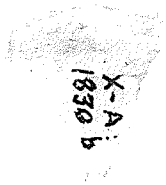
G



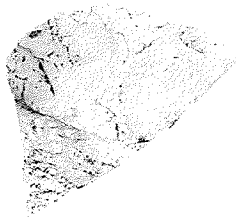
H



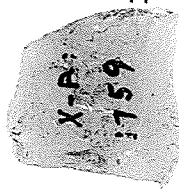
I



J



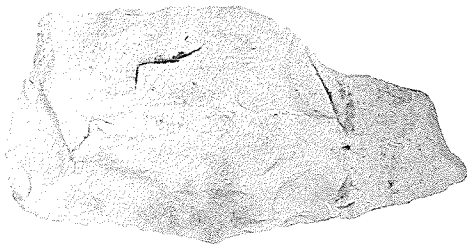
K



L



M



N



O



P

Level 6



Plate 10

ARTIFACTS EXCAVATED BY MACNEISH
FROM LEVEL 5, CEMETERY POINT SITE

- A. Projectile Fragment, Nutimik Concave
- B. Projectile, Selkirk Side-Notched
- C. Projectile, Stemmed and Straight Base
- D. Projectile Fragment
- E. Projectile Fragment
- F. Scraper, Type IV
- G. Scraper, Type IV
- H. Scraper, Type IV
- I. Scraper, Type IV
- J. Scraper, Type I
- K. Scraper, Type I
- L. Scraper, Type IV
- M. Scraper, Type I
- N. Scraper, Type IV
- O. Scraper, Type IV
- P. Scraper, Type IV
- Q. Scraper, Square



A



B



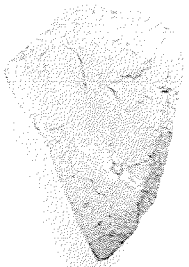
C



D



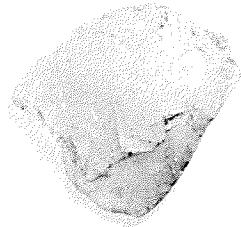
E



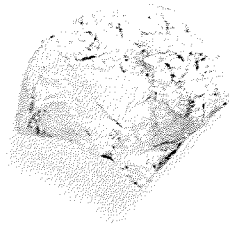
F



G



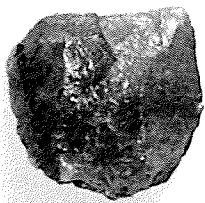
H



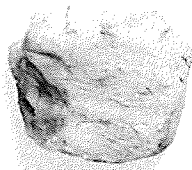
I



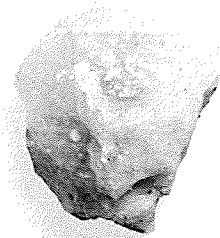
J



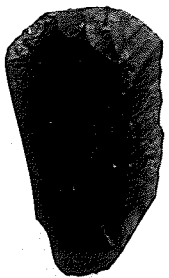
K



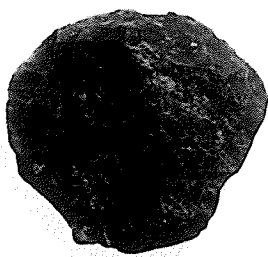
L



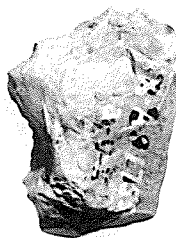
M



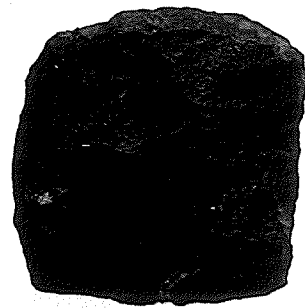
N



O



P



Q

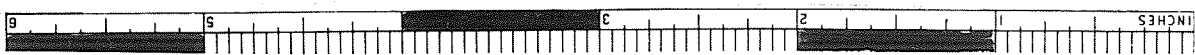
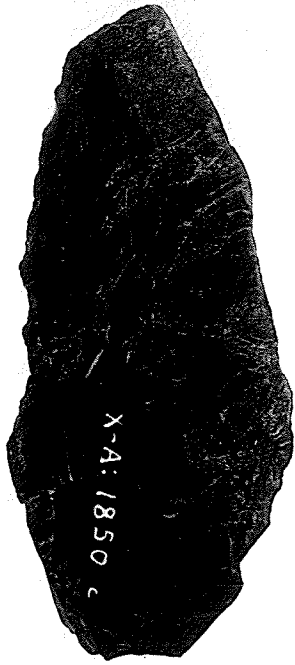


Plate 11

ARTIFACTS EXCAVATED BY MACNEISH
FROM LEVEL 5, CEMETERY POINT SITE

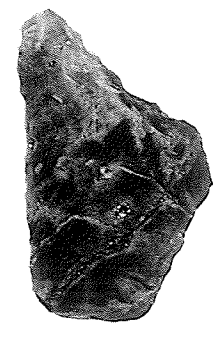
- A. Biface, Lanceolate
- B. Biface Fragment
- C. Biface, Trapezoidal
- D. Retouched Flake
- E. Retouched Flake
- F. Scraper, Type II
- G. Biface, Tapered-Back
- H. Scraper, Type IV
- I. Scraper, Type IV
- J. Scraper, Type IV
- K. Biface Fragment
- L. Scraper, Type IV
- M. Biface, Flake-Knife?
- N. Biface Fragment



A



B



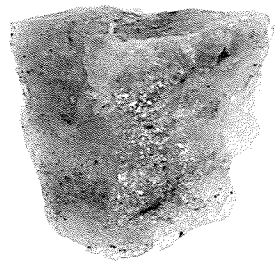
C



D



E



F



G

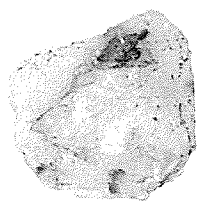


H



I

J



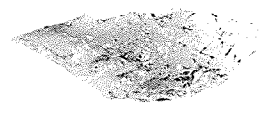
K



L



M



N

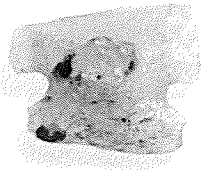
Level 5



Plate 12

ARTIFACTS EXCAVATED BY MACNEISH
FROM LEVEL 4, CEMETERY POINT SITE

- A. Projectile Fragment, Whiteshell Side-notched
- B. Projectile Fragment, Selkirk Side-notched
- C. Projectile Fragment, Hanna?
- D. Projectile Point Fragment
- E. Scraper, Type IV
- F. Scraper, Type IV
- G. Scraper, Type IV
- H. Retouch Flake
- I. Scraper, Type I
- J. Scraper, Type IV
- K. Biface Fragment, Knife-scraper?
- L. Scraper, Type II
- M. Scraper, Type I
- N. Scraper, Type I
- O. Scraper, Type IV
- P. Biface Fragment
- Q. Retouched Flake
- R. Spokeshave



A



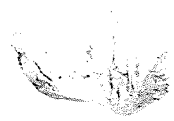
B



C



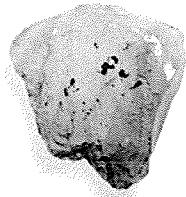
D



E



F



G



H



I



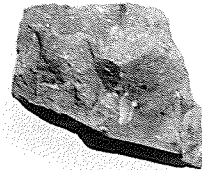
J



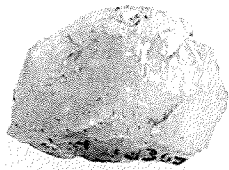
K



L



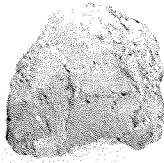
M



N



O



P



Q



R

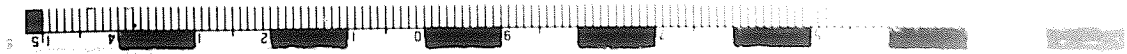


Plate 13

ARTIFACTS EXCAVATED BY MACNEISH
FROM LEVEL 4, CEMETERY POINT SITE

- A. Biface, Ovoid
- B. Biface, Ovoid
- C. Retouched Flake
- D. Biface Fragment



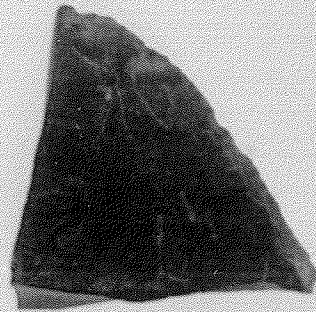
A



B



C



D

Level 4



Plate 14

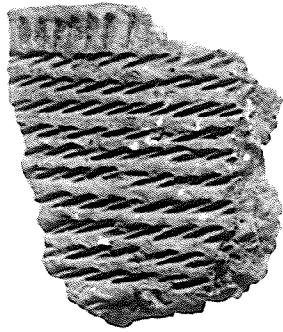
POTTERY EXCAVATED BY MACNEISH
FROM LEVELS 4 AND 5, CEMETERY POINT SITE

Level 4

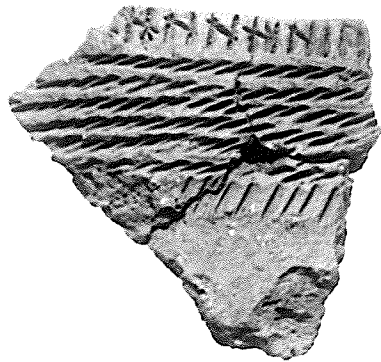
- A. Nutimik Oblique Type
- B. Nutimik Oblique Type
- C. Laurel Plain Type
- D. Push-and-Pull Grooved

Level 5

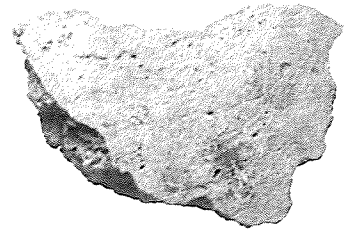
- E. Smoothed Over
- F. Laurel Plain Type
- G. Push-and-Pull Grooved
- H. Dentate Stamped Type
- I. Dentate Stamped Type



A



B



C



D



E



F



G



H



I

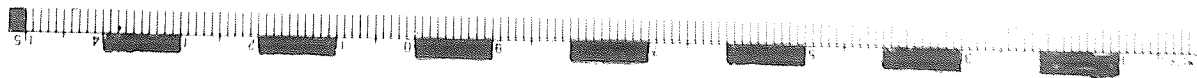


Plate 15

MULTIBARBED HARPOON EXCAVATED BY MACNEISH
FROM LEVEL 6, CEMETERY POINT SITE

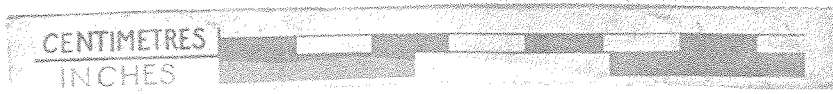


Plate 16

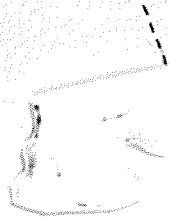
PROJECTILES FROM LEVELS 1 AND 2 OF MACNEISH'S EXCAVATIONS AT
THE LARTER SITE

LEVEL 1

- A. Projectile Fragment, Larter Tanged
- B. Projectile, Avonlea
- C. Projectile, Besant?
- D. Projectile Fragment, Plains Triangular?
- E. Projectile Fragment
- F. Projectile Fragment
- G. Projectile Fragment

LEVEL 2

- H. Projectile, Larter Tanged
- I. Projectile, Larter Tanged
- J. Projectile, Side-Notched
- K. Projectile, Side-Notched



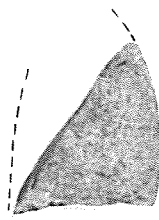
A



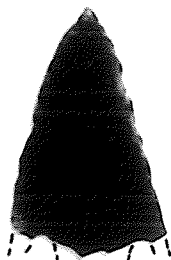
B



C



D



E



F

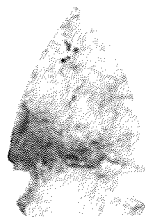


G

Level 1



H



I



J



K

Level 2

CENTIMETRES
INCHES



Plate 17

PROJECTILES FROM LEVELS 3 AND 4 OF MACNEISH'S EXCAVATIONS AT
THE LARTER SITE

LEVEL 3

- A. Projectile, Larter Tanged
- B. Projectile, Larter Tanged
- C. Projectile, Side-Notched
- D. Projectile, McKean Lanceolate
- E. Projectile, Retouched Flake
- F. Projectile Fragment

LEVEL 4

- G. Projectile, Larter Tanged
- H. Projectile, Hanna?
- I. Projectile Fragment
- J. Projectile, Spear, or Knife?
- K. Projectile, Larter Tanged
- L. Projectile, Larter Tanged
- M. Projectile, Larter Tanged
- N. Projectile Fragment



A

B

C

D

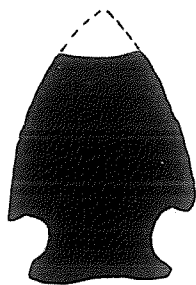


E



F

Level 3



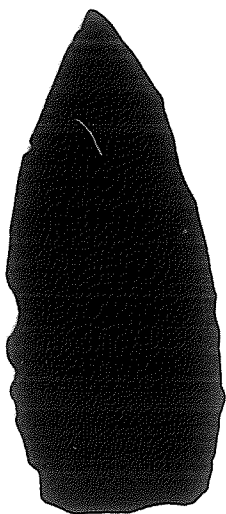
G



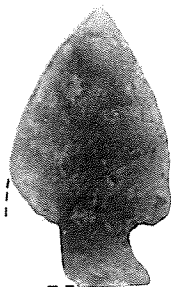
H



I



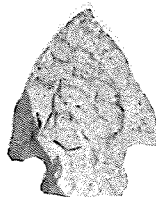
J



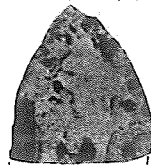
K



L



M



N

Level 4



Plate 18

ARTIFACTS FROM THE LARTER SITE CATALOGUED BY
MACNEISH AS PROJECTILES BUT
RE-IDENTIFIED BY SYMS

LEVEL 1

- A. Uniface, Knife-Scraper?

LEVEL 2

- B. Biface, Knife-scraper
C. Biface Fragment, Knife?
D. Biface, Knife-scraper
E. Uniface, Scraper
F. Biface, Unfinished Knife?
G. Unfinished Biface
H. Biface, Knife-scraper?
I. Biface Fragment
J. Biface Fragment
K. Biface Fragment

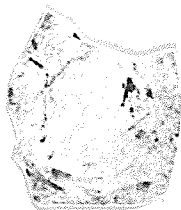


A

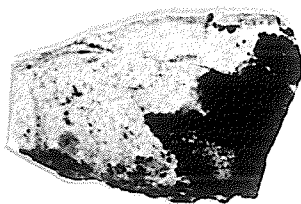
Level 1



B



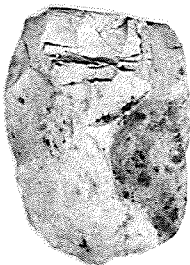
C



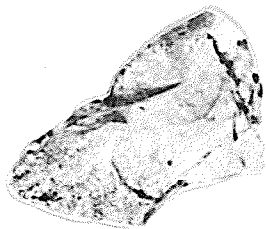
D



E



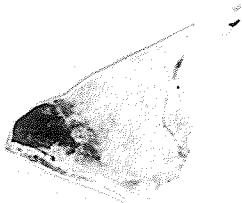
F



G



H



I



J



K

Level 2

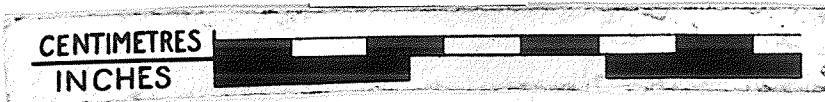


Plate 19

ARTIFACTS FROM THE LARTER SITE CATALOGUED BY
MACNEISH AS PROJECTILES BUT
RE-IDENTIFIED BY SYMS

LEVEL 3

- A. Biface, Knife or Spear Point?
- B. Biface Fragment, Spear Point Tip?
- C. Biface, Knife
- D. Biface, Knife
- E. Biface, Unfinished Ovoid Knife?
- F. Biface, Knife-scraper?
- G. Biface, Crude Knife?
- H. Biface, Knife or Unfinished Projectile



A



B



C



D



E



F



G



H

Level 3

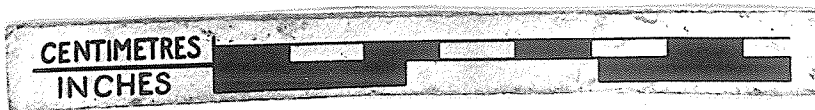


Plate 20

ARTIFACTS FROM THE LARTER SITE CATALOGUED BY
MACNEISH AS PROJECTILES BUT
RE-IDENTIFIED BY SYMS

LEVEL 4

- A. Biface Fragment

FLOOR 1

- B. Biface, Knife-scraper
- C. Hafted Knife-scraper
- D. Biface, Hafted Knife ?
- E. Biface, Knife or Spear Point
- F. Biface, Knife-scraper
- G. Biface, Knife
- H. Uniface Fragment, Knife-scraper
- I. Biface Fragment
- J. Biface Fragment

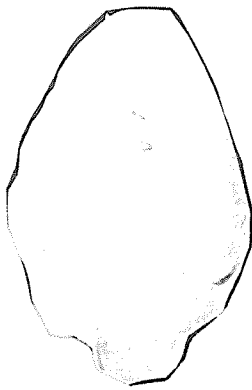


A



B

Level 4



C



D



E



F



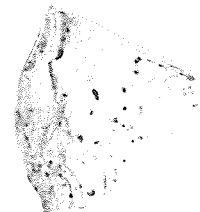
G



H



I



J

Floor 1

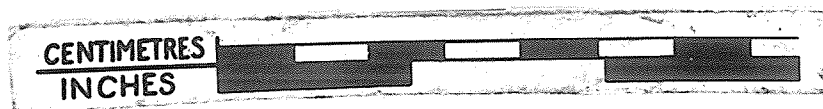
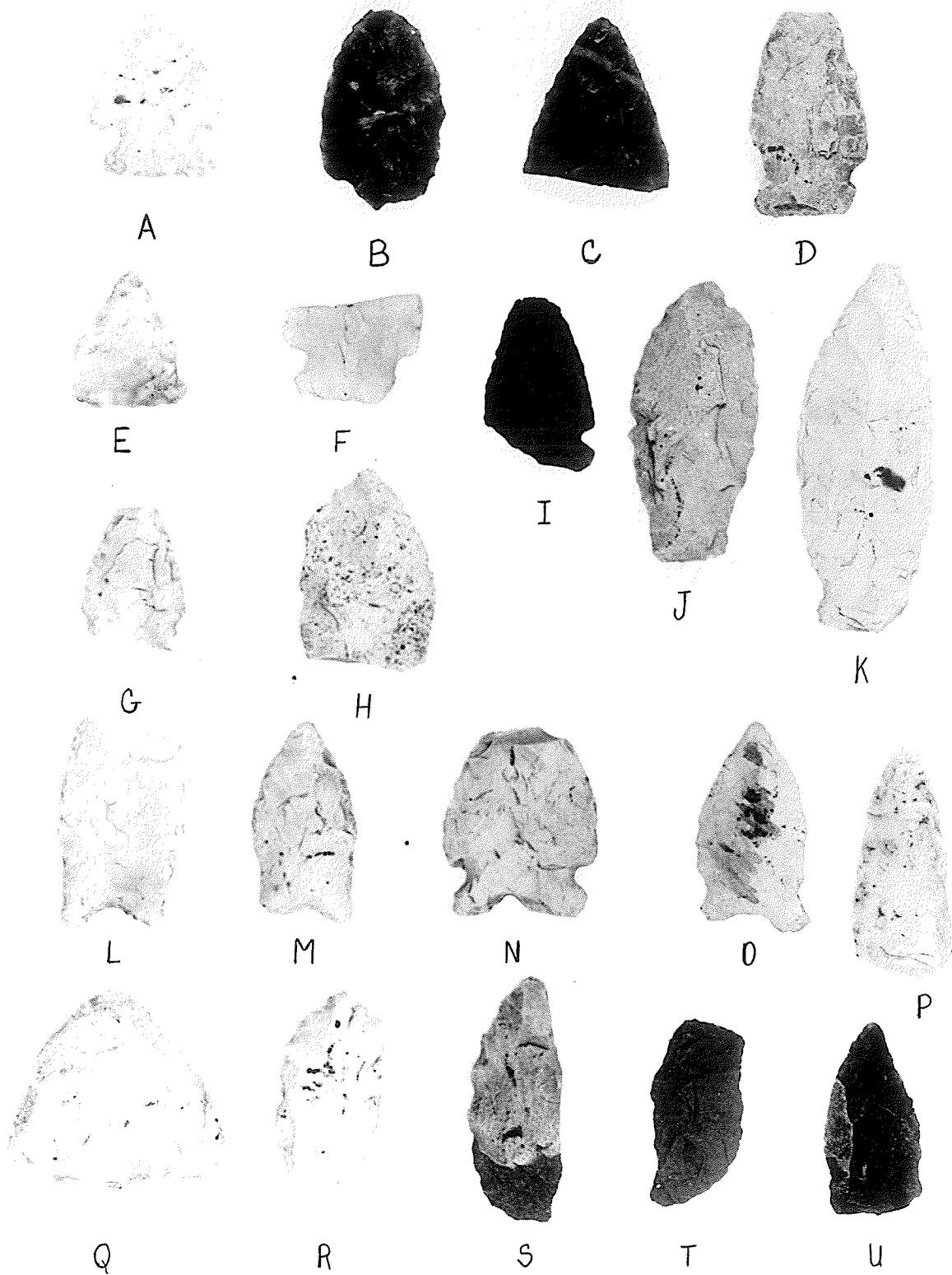


Plate 21

ARTIFACTS FROM THE SURFACE OF THE LARTER SITE
CATALOGUED BY MACNEISH AS PROJECTILE POINTS

- A. Projectile Point, Larter Tanged
- B. Projectile Point Fragment?
- C. Projectile Point Fragment?
- D. Projectile Point, Prairie Side-notched
- E. Projectile Point, Plains Side-notched
- F. Projectile Point Fragment, Whiteshell Side-notched
- G. Projectile Point Fragment, Avonlea?
- H. Projectile Point Fragment
- I. Projectile Point Fragment, Prairie Side-notched
- J. Projectile Point, Pryor Stemmed
- K. Projectile Point, Pryor Stemmed
- L. Projectile Point Fragment, McKean Lanceolate
- M. Projectile Point, Duncan
- N. Projectile Point, Parkdale Eared (Oxbow)
- O. Projectile Point, Parkdale Eared
- P. Biface
- Q. Biface
- R. Uniface, Side scraper?
- S. Uniface Fragment
- T. Uniface Fragment
- U. Unfinished Biface



Surface



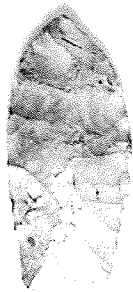
Plate 22

MCKEAN PROJECTILES FROM THE
TAILRACE BAY SITE

- A. McKean Lanceolate
- B. McKean Lanceolate
- C. McKean Lanceolate
- D. McKean Lanceolate
- E. McKean Lanceolate
- F. McKean Lanceolate
- G. Duncan (?)
- H. Basal Fragment
- I. Basal Fragment
- J. Basal Fragment
- K. Basal Fragment
- L. Basal Fragment



A



B



C



D



E



F



G



H



I



J



K



L

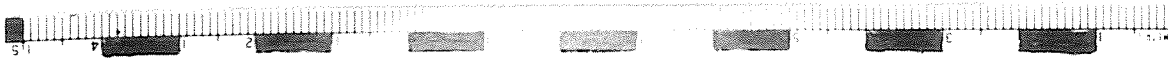


Plate 23

PROJECTILES FROM LEVELS 5 AND 6 OF
THE UNITED CHURCH SITE

LEVEL 5

- A. Projectile Tip
- B. Projectile, Hanna Type?
- C. Projectile
- D. Projectile
- E. Projectile

LEVEL 6

- F. Projectile, McKean Lanceolate Type



A



B



C



D



E



F

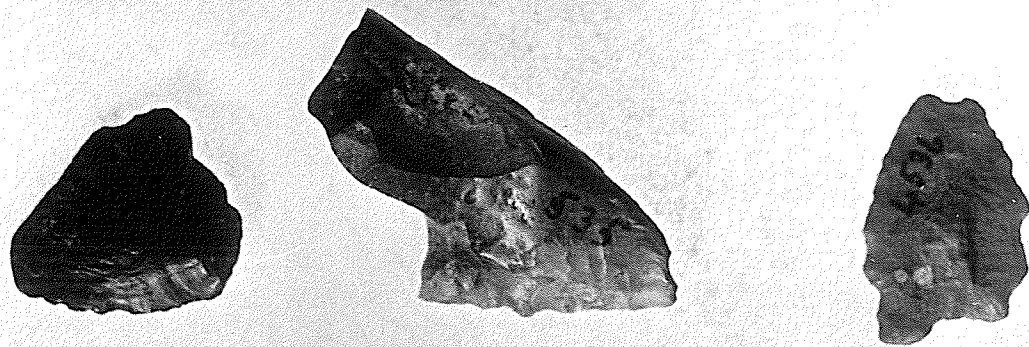
CENTIMETRES
INCHES



Plate 24

EARLY MIDDLE PREHISTORIC PERIOD PROJECTILES FROM
THE LAKE SHORE SITE

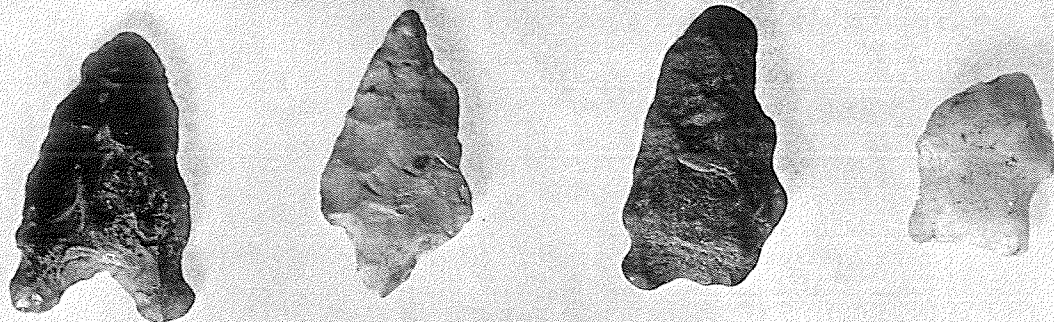
- A. Scraper, Type IV
- B. Scraper, Type III
- C. Projectile, Oxbow Type ?
- D. Projectile, Oxbow Type
- E. Projectile, Stemmed (see Figure 22, A)
- F. Projectile, Hanna Type
- G. Projectile, Hanna Type
- H. Projectile Fragment
- I. Duncan Point Reworked Into a Scraper



A

B

C



D

E

F

G



H



I



Plate 25

PROJECTILES FROM THE RED FOX SITE (32B0213), BOWMAN-HALEY
RESERVOIR

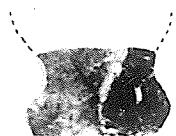
Occupation 3

A. Side-notched Projectile ?

Occupation 4

- B. Duncan Projectile
- C. Duncan Projectile
- E. Duncan Projectile
- F. Duncan Projectile
- G. Duncan Projectile
- H. Duncan Projectile
- I. Duncan Projectile
- J. Duncan Projectile
- K. Duncan Projectile

OCCUPATION 3



A

OCCUPATION 4



A



B



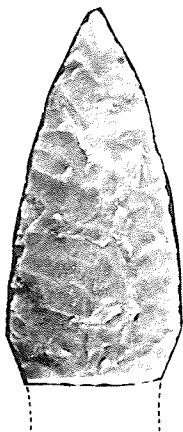
C



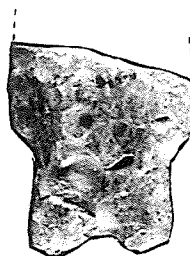
D



E



F



G



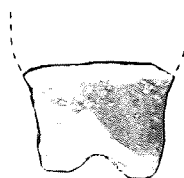
H



I



J



K

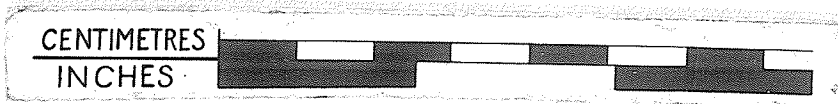


Plate 26

ARTIFACTS FROM 32B0217 AND THE FISHER SITE (32B0207),
BOWMAN-HALEY RESERVOIR

32B0217

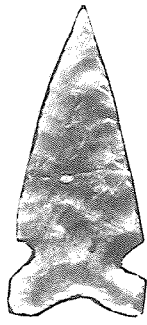
A. Elko-Eared Projectile

32B0217 (Occupation 4)

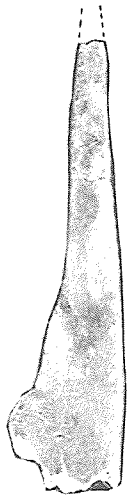
- B. Bone Awl
- C. McKean Lanceolate Projectile
- D. Bone Awl

32B0217 (Occupation 5)

E. Box Elder Projectile



A



B



C



D



E

