Ceramic Classification in the Middle Missouri Subarea of the Plains

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MIDDLE MISSOURI SUBAREA
OF THE PLAINS

by

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Several major factors contributed to the development of this report. The initial impetus can be credited to Stanley Ahler who, during my visit to Grand Forks in the spring of 1977, casually suggested that it would be useful to have a document to cross-reference the myriad number of Middle Missouri pottery types. I did not pursue his idea until the fall of 1978 when I was confronted with collecting data on the distribution of pottery types from a number of Coalescent Tradition components in conjunction with my research with the ceramic assemblage from the Larson site (39WW2). Like others before me, I was astonished by the large number of seemingly duplicate and cross-cutting types. In an effort to organize the types into a coherent system for comparative purposes, I began constructing a ceramic classification or identification key of Coalescent Tradition pottery. The idea of an identification key was derived from the biological sciences. At the same time, I developed a number of broad descriptive rimsherd categories to facilitate the tabulation of pottery classes from the components. My interest in familiarizing myself with Plains Village Tradition pottery from the Middle Missouri Subarea led me to develop a second identification key, one involving pottery from the Extended and Terminal Variants of the Middle Missouri Tradition. After my struggle with Coalescent Tradition pottery, this key proved relatively easy to construct. In the spring of 1979, I added a brief history of ceramic classification in the Middle Missouri on the advice of Carl Falk. This paper was used by members of the 1979 Lake Oahe East Shore Survey Project. During the entire period, Carl Falk proved to be a source of support and advice in this research. In conjunction with the University of Nebraska, Division of Archeological Research work on its two most recent backlog collections (Sommers and H.P. Thomas), I felt the need to develop a knowledge of Initial Middle Missouri pottery types since both sites contain Initial Middle Missouri components. With a few minor modifications in the previously constructed keys, an Initial Middle Missouri key was developed in the fall of 1979.

In summary, Stan Ahler provided the initial idea for the development of this report. Carl Falk, as Director of the Division of Archeological Research, established a climate conducive to my personal research interests. The Interagency Archeological Services-Denver, Heritage Conservation and Recreation Service provided the funding for the description and analysis of extant Smithsonian Institution-River Basin Surveys collections from the Medicine Crow (39BF2), Larson (39WW2), H.P. Thomas (39ST12) and Sommers (39ST56) sites which supported me during my work on these sites and this report. I would also like to acknowledge the assistance of Laurie Soward, Secretarial Specialist (Division of Archeological Research, University of Nebraska), whose expertise and patience in typing this report contributed to the quality of the final product. Lorri Fisher deserves thanks for typing portions of this report. Sally Donovan designed the cover illustration. Thomas Thiessen, W. Raymond Wood and Carl Falk provided helpful comments on a draft of this report. To all those concerned, I owe a debt of gratitude.
CERAMIC CLASSIFICATION IN THE MIDDLE MISSOURI SUBAREA OF THE PLAINS

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INTRODUCTION

Throughout the history of systematic archeological investigations in the Middle Missouri Subarea of the Plains, a major concern has been to delineate temporal and spatial variability in ceramics. This interest in ceramic variation reflected broader research concerns involving questions that could, at least partially, be answered through the analysis of ceramics. Wood (1969) has summarized these topics, cast in terms of periods of archeological research in the subarea. From earliest to latest, and somewhat modified from Wood's scheme, these research orientations involve a concern with tribal identity, culture taxonomy and culture process. Research in these and other areas continues although varying degrees of progress have been made with each problem.

With the initiation of extensive salvage operations in the Middle Missouri under the Smithsonian Institution Missouri River Basin Program came the need to organize material remains for the purposes of description and comparison. Various artifact classes such as ceramics, stone and bone tools were subdivided based on variations in form and inferred function. Much of this activity focused on ceramic rimsherds on a site by site basis resulting in a plethora of often times cross-cutting pottery wares, types, varieties, classes, groups, categories and other units (for additional discussions of ceramic classification in the Middle Missouri, see Lehmer 1971:22-23; Calabrese 1977 and Krause 1972:86-89). Wheeler's (1954) list of eight wares and 51 types and subtypes in use at the time represented an early attempt to organize these ceramic groups.

For the most part, ceramic classification systems were developed on the basis of one or a few assemblages. In many cases, the systems were used on other assemblages, which insured some degree of comparability. More often, however, it became necessary to modify an existing classification scheme or create new ones to account for variability that was either not present in the original assemblage(s) or not recognized
to be spatially or temporally significant. Other factors which contributed to the proliferation of ceramic types included the unavailability of sufficient numbers of related assemblages at any given time or place during the classification process and the large number of archeologists involved in Middle Missouri research.

With some exceptions, most archeologists working in the Middle Missouri have followed Lehmer's (1951:3-15) procedures for defining ceramic groups. The key to Lehmer's suggestions for the construction of ceramic typologies are his definitions of the concepts of ware and type:

The wares may be thought of as groups of types which share such fundamental characteristics as the fabric of the pottery itself, the surface finish, the general vessel form, and the basic rim form. The types themselves have all of the characteristic features of the ware, but are distinguished by the decorative treatment and sometimes minor variations in form (Lehmer 1951:3).

It is clear that Lehmer viewed the relationship between wares and types in a hierarchical manner; types were subdivisions of the more inclusive wares. Partly as a result of Lehmer's early work in the area, the variables which Middle Missouri archeologists used to partition ceramic assemblages were fairly uniform; however the number and order in which these variables were used have varied. Despite these differences, there has been a preference to use certain variables at various points in the grouping process.

It is the purpose of this report to provide a brief history of ceramic classification within the Middle Missouri Subarea and organize information on previously defined ceramic groups in a coherent fashion. Much of this information is provided in three ceramic identification keys which encompass all ceramic groups defined for Plains Village manifestations in the Middle Missouri and closely related areas (Lehmer 1971). Plains Woodland ceramics are not included in this discussion.

The keys will accomplish four goals: 1) facilitate the identification of ceramic remains in terms of previously formulated ceramic groups; 2) provide information useful in comparing ceramic groups and assemblages; 3) describe traditionally formulated ceramic groups in terms of
the variables and attributes important in their definition; and 4) il-
luminate the relationships between variables used in the formulation of
ceramic groups. This latter objective is important since the organiza-
tion of the keys is dependent on the procedures initially used in the
creation of the ceramic groups. The following brief discussion of the
archeologists instrumental in the formulation of wares and types in the
Middle Missouri Subarea will illustrate this point.
HISTORY OF CLASSIFICATION

The earliest attempts to classify pottery from the Middle Missouri Subarea were by Alfred Bowers, Paul Cooper, Gordon Hewes and Paul Tolstoy. Although none of these classificatory systems gained any measure of popularity in the following years, they laid the basis for later typologies, most notably those of Donald Lehmer, Carlyle Smith and Wesley Hurt in the early 1950s.

Alfred W. Bowers (1948:58-60, 65) developed a typological system consisting of seven types from a number of late prehistoric, protohistoric and historic components in North Dakota and northern South Dakota. Types were defined on the basis of rim form. Variations in decoration did not play a role in his system. The types were given letter designations: A (s-shaped rims with unthickened lips), AC (s-shaped rims with thickened or everted lips), B (curved rims with thickened lips), C (curved rims with unthickened lips), D (straight rims with unthickened lips), Type B Modified (collared rim forms), E (straight or curved rims which were indented or channeled producing a form similar to s-shaped rims). Because decoration was not considered in the formulation of these types, they will not be included in any further discussion.

Based on a series of sites located in the Fort Randall, Big Bend and Oahe Reservoirs, Cooper (1949) defined three pottery categories. Category A includes pottery with straight and curved rims, thickened lips which are sometimes plain but usually decorated with cord, tool or finger impressions, exterior rims which are usually brushed and occasionally simple stamped, and simple stamped or smoothed bodies. This category was later incorporated into Stanley Ware, typically associated with Post-Contact Coalescent Bad River Phase components. Category B consists of pottery with straight rims with horizontal incising or trailing on the rim exterior. This category was later absorbed into a number of types typically found in Extended Coalescent components (Nordvold Horizontal Incised, Grey Cloud Horizontal Incised, La Roche Horizontally Incised,
Wheeler Horizontal Incised Rim). Category C pottery has straight rims with simple stamped rim exteriors which lack any decoration except for tool impressions on the lip. This type was later included within several types commonly associated with Extended Coalescent occupations including Talking Crow Straight Rim and Wheeler Ridged Rim.

Gordon Hewes (1949:61-67) defined seven types from the Fort Yates Village, recognized today as the Paul Brave site (32SI4). Four of these types were unnamed. Three Fort Yates types were recognized: Fort Yates Fine Incised (straight and s-shaped rims with incised crosshatching on the exterior rim and simple stamped bodies); Fort Yates Cord Impressed (s-shaped rims with cord impressed rim exteriors and simple stamped bodies); Fort Yates Plain (straight rims with simple stamped bodies having either horizontal incised lines on the rim exterior or decoration only on the lip consisting of tool or finger impressions). All groups were later included within Fort Yates and Riggs Wares typically found in Extended Middle Mississippian components.

Finally, Paul Tolstoy (1950) created a typological system composed of four type series (Rygh, Fort Yates, Thomas Riggs, Buffalo Pasture) and 21 types from a broad range of Plains Village Tradition occupations in North and South Dakota. Because these types are described in a superficial manner and crosscut presently recognized variants and traditions, further discussion is not warranted.

Like many archaeologists working in the Middle Mississippian Subarea, Donald J. Lehner was interested in the formulation of ceramic types and wares for the purposes of description and comparison of cultural remains. Lehner (1951) created three wares based on the pottery from the multi-component Dodd site (39ST30): Stanley, Foreman and Anderson. Stanley Ware was associated with the Post-Contact Coalescent occupation at the site whereas Foreman Ware and Anderson Flared Rim Ware were found in association with the two earlier Initial Middle Mississippian components at Dodd. Within each component, the pottery was grouped into wares on the basis of rim form. Stanley Ware was distinguished by the presence of a rim brace, although these vessels may also be considered to have
straight or curved rim forms with thickened lips. The rims of Anderson Flared Rim Ware also have straight to curved forms, unlike Foreman Ware which is characterized by s-shaped rims. Lehmer divided Anderson Flared Rim Ware into two types (Anderson High Rim, Anderson Low Rim) on the basis of rim height. Decoration crosscut the two types. Types within Foreman Ware were recognized on the basis of decoration.

Lehmer's next involvement with ceramic typology dealt with pottery from the Fire Heart Creek site, located in Sioux County, North Dakota (Lehmer 1966). This site contained the remains of several components, the most extensive of which was an Extended Middle Missouri occupation. In this report Lehmer, along with W. Raymond Wood, made minor revisions in the types assigned to two wares typically found in Extended and Terminal Middle Missouri contexts: Riggs and Fort Yates. These wares and several component types included within them were previously defined by Hewes (1949), Kleinsasser (1953) and Wood and Woolworth (1964). The distinction between straight (Riggs Ware) and s-shaped (Fort Yates Ware) rim forms was maintained in Lehmer and Wood's new system although the types somewhat changed to take into account variations in decoration which were thought to have temporal and/or spatial significance.

In their study of protohistoric Arikara occupations near the Bad River, Lehmer and Jones (1968:28-30) elevated Colombe Collared Rim (Lehmer 1954:102) to a ware which includes three types differing in decoration. They also redefined the Talking Crow Ware types originally formulated by Smith (1951). Unlike Smith's typology, the Lehmer and Jones system for dividing Talking Crow Ware into its component types was based solely on variations in decoration. These types crosscut Smith's Talking Crow types.

In his latest contribution Lehmer, along with Wood and Dill (1978), created another pottery ware, Knife River Ware, based on several historic Mandan and Hidatsa sites in the vicinity of the confluence of the Knife and Missouri Rivers in North Dakota. Knife River Ware is similar to Stanley Ware in general appearance and is divided into five types based on differences in decoration. This report also included the
addition of several new types to Le Beau S-Rim Ware (Wood 1967), originally defined by Hurt (1957).

Another significant contributor to Middle Missouri ceramic typology is Carlyle S. Smith. Smith, working in the Fort Randall and Big Bend reservoirs, defined three wares (Talking Crow, Campbell Creek and Iona) during his investigations into Initial, Extended and Post-Contact Coalescent manifestations in the area. Based on his work at the multi-component Talking Crow site, Smith (1951) defined the Talking Crow and Campbell Creek Wares. These were formulated not only on attributes inherent in the pottery itself, but also in terms of site stratigraphy. The stated purpose was to develop temporally sensitive pottery groups which would illuminate the occupational sequence at Talking Crow. As a consequence, Campbell Creek and Talking Crow Wares were associated with the Initial and Post-Contact Coalescent occupations at Talking Crow, respectively. Unlike Lehmer and several other workers in the area, Smith allowed for greater variation within his wares by including types which differed in rim form, surface treatment and decoration. Presumably these types were formulated for maximal temporal sensitivity.

To help clarify the stratigraphic situation at Talking Crow, Smith conducted excavations at other sites in the area. Excavations at the Spain site (Smith and Grange 1958) uncovered an extensive Extended Coalescent occupation. Based on this work, a third ware was formulated--Iona Ware. Iona Ware includes several types differentiated on the basis of rim form (i.e. straight and S-shaped), decoration technique and decoration motif. Some Iona types were divided into varieties. Later excavations at the Two Teeth site (Smith and Johnson 1968) indicated that Cadotte Collared, previously unassigned to a ware, be incorporated into Iona Ware. The Iona types crosscut the Wheeler Ware types earlier defined by Hurt (1952). Smith and Grange (1958:97) provide information necessary in understanding these crosscutting relationships.

Wesley R. Hurt has also contributed to the number of named ceramic groups from the Middle Missouri Subarea. Hurt is perhaps best known
for his typology of Initial Middle Missouri pottery. His first classification appeared in conjunction with the description of the remains from the Swanson site, Brule County, South Dakota (Hurt 1951). With a few exceptions, the types were not explicitly organized under more inclusive groups such as wares. Two series of types, grouped under the terms of Foreman and Chamberlain, figure prominently in the typologies of other archeologists. The four Foreman types defined by Hurt have s-shaped rim forms and are differentiated from each other on the basis of exterior rim decoration. The three Chamberlain types have straight to curved rim forms and, like their Foreman counterparts, were differentiated on the basis of rim decoration. The Foreman types are nearly identical to those defined by Lehmer (1951:8-10). Since Hurt and Lehmer were working with Initial Middle Missouri pottery at about the same time, it is difficult to determine who can be credited with the term Foreman. The two types within Lehmer's (1951:10-12) Anderson Flared Rim Ware (Anderson High Rim, Anderson Low Rim) crosscut several of the Chamberlain types in addition to a number of other types formulated by Hurt (1951).

Hurt expanded his typology of Initial Middle Missouri ceramics several years later with an analysis of four Over Focus assemblages (Hurt 1954). The sites include Swanson, Mitchell, Brandon and Twelve Mile Creek. The latter three sites are located off the Missouri River trench in southeastern South Dakota. In this study, Hurt made minor modifications in several of the types originally defined from the Swanson site. He also added a Twelve Mile group and elevated the Chamberlain and Foreman series to Chamberlain Flared Rim ware and Foreman S-shaped Rim ware, respectively. Finally, several Foreman and Chamberlain types were added to the existing ones.

Hurt's other contributions to ceramic classification involve ceramic assemblages from various Coalescent Tradition sites. Wheeler Ware was defined from the Scalp Creek site, located in the Fort Randall reservoir (Hurt 1952). Wheeler Ware includes both straight and s-shaped rim forms. Several types included in the ware were differentiated on the basis of
surface treatment and decoration. Variation in rim form was not used to differentiate types. Two types, Wheeler Horizontal-incised Rim and Wheeler Deep-Trailed Rim, have straight and s-shaped rim forms. This situation was partially modified by Hurt in his report on the No Heart Creek site, Armstrong County, South Dakota (Hurt 1970). In this study, Hurt developed a Wheeler S-Shaped Rim type which included all s-rims which did not have horizontal lines on the exterior rim. Wheeler Horizontal-incised remained unmodified.

Two additional wares were defined by Hurt (1957) in conjunction with his report of the multi-component Swan Creek site (39WW7). An association between stratigraphic location and ceramic style let Hurt to postulate the presence of three components at Swan Creek: one Extended Coalescent occupation and two Post-Contact Coalescent components. These observations were partially reflected in his pottery typology of the ceramic assemblage. Two wares were defined: Le Beau and Akaska. Akaska Ware was the predominant ware in the Extended Coalescent component. Like Hurt's types from Scalp Creek, Akaska Ware was separated into types on the basis of decoration and rim form. Akaska Stab and Drag is composed of vessels with straight and s-shaped rim forms. Le Beau Ware, most commonly associated with the Post-Contact Coalescent occupations at Swan Creek, is a broadly defined inclusive ware. Within it are nine types varying in rim form (straight/curved and s-rims), decoration and even basic vessel form (bowls and constricted mouth globular jars). Le Beau S-shaped Rim type, which included all vessels with s-shaped rim forms, was further divided into four varieties based on decorative technique and decoration motif.

These Le Beau varieties are not to be confused with Le Beau S-Rim Ware as defined by Wood (1967:67-68) from the Terminal Middle Missouri Huff site (32MO11). At that time, Wood defined only one type under this ware: Le Beau Horizontal Cord Impressed. This type includes only vessels with s-shaped rims and cord impressed decoration on the rim exterior in various motifs. It crosscuts three Le Beau S-shaped Rim varieties originally defined by Hurt. Several Le Beau S-Rim Ware types have
been added by Calabrese (1972:19) and Lehmer, Wood and Dill (1978:201-203) which extended this ware to the post-contact period.

A somewhat different approach to the classification of Extended Coalescent ceramics has been taken by Hoffman. Hoffman (1967) defined eight descriptive groups from Molstad Village (39DM234) which vary in terms of rim form and decoration technique. Within two of these groups, two varieties were created, differing on the basis of decoration motif. A hierarchical relationship is implied between his groups and varieties; however, his groups were defined on the basis of attribute association in which a hierarchical order between attributes is not assumed. Wood (1971) used a similar approach in his analysis of the Biesterfeldt site located in southeastern North Dakota.

Hoffman (1968:38-43) used a similar procedure in his classification of ceramics from Over's La Roche Village (39ST9). The groups were called classes, and the varieties differed on the basis of lip thickening. Hoffman's (1968:59-61) classification of the ceramic assemblage from Bower's La Roche site (39ST232) conformed more closely to types previously defined by other workers.

Perhaps the most detailed description of a ceramic assemblage from the Middle Missouri Subarea for its time is Albert C. Spaulding's (1956) report on the Initial Coalescent Arzberger site (39HU6). Spaulding defined two pottery groups, Arzberger and Hughes, detailing the variation found within these groups. The Arzberger Group consists of collared and s-shaped rims whereas the Hughes Group is made up of vessels with straight and curved rim forms. Within each group are a number of types varying in decorative treatment. Although the Arzberger Group has been used by other investigators, the Hughes Group was later absorbed into a number of types typically found in Initial and Extended Coalescent components.

Several additional archeologists who have developed ceramic typologies are Ives (1962) and Caldwell and Jensen (1969). Ives analyzed pottery from a series of Mill Creek sites located in northwest Iowa. Sites assigned to this taxon are closely related to those belonging to
the Initial Variant of the Middle Missouri Tradition. In his study, Ives defined two new wares: Sanford Modified Lip Ware and Mill Creek Ware. The former includes constricted mouth globular jars with short, straight to curved rim forms. Four types, differing in decoration, are included within the ware. Two types (Mitchell Modified Lip, Kimball Modified Lip) were previously defined by Hurt (1951, 1954). Two additional types included in the ware (Sanford Incised Shoulder, Sanford Plain) crosscut several types defined by Hurt (1951, 1954) and Lehmer (1951). Mill Creek Ware encompasses four types: Mill Creek Bowls and Pans, Mill Creek Seed Jars, Mill Creek Vertical Neck and Mill Creek Red Film. These types are not elaborated further in this report due to the variety of vessel forms included within them and their absence from most Initial Middle Missouri components on the Missouri River trench.

In their study of Initial Middle Missouri components in the Big Bend Region, Caldwell and Jensen (1969) constructed an elaborate typology consisting of four hierarchical levels. From most to least inclusive, they formulated two wares, six types, 18 subtypes and 21 varieties. A few types, subtypes and varieties were not assigned to ware groups. Grass Rope Ware vessels have S-shaped rim forms. The types assigned to this ware, Foreman S-rim and Marken S-rim, were differentiated on the basis of angularity of rim form. Foreman S-rim vessels have smooth and gentle S-shaped rims. Marken S-rims are marked by a more angular, thickened S-rim form, similar to Lehmer's (1951:13-14) Monroe Collared Rim type. Cable Ware vessels have straight and curved rim forms. Two types were included in this ware: Anderson Everted Rim and Chamberlain Everted Rim. The former lack decoration on the exterior rim while the latter do not. Stuart Collared Rim and Mitchell Rolled Rim are types not assigned to wares. Subtypes within all types discussed above were differentiated on the basis of decoration technique. Decoration motif was used to divide subtypes into varieties.

The ceramic groups which Caldwell and Jensen (1959) defined crosscut previously defined Initial Middle Missouri pottery types. They abandoned Lehmer's (1951:10-12) differentiation of Anderson Ware into
high and low types, although they retained the term Anderson to refer to vessels with straight and curved rim forms. Several Chamberlain and Foreman groups are similar if not identical to those formulated by Hurt (1951, 1954) and Lehmer (1951). The terms Mitchell and Stuart were derived from Hurt (1951), although the types associated with these names have been extensively redefined. In summary, the scheme proposed by Caldwell and Jensen represents an attempt to clarify typology for a variant which has experienced its share of confusing and non-replicable classificatory systems.

SUMMARY

In summary, Middle Missouri archeologists seem to concur that ceramic groups, no matter how they are defined, should not crosscut major taxonomic units such as the variant or tradition unless there is clear evidence of a cultural continuity. Archeologists such as Lehmer, Wood, and Caldwell and Jensen preferred to define wares in terms of rim form. Subdivisions within the wares were formulated on the basis of variation in decoration. Like them, Hurt felt that types and wares should not crosscut variants unless there was evidence for a continuity. Hurt allowed for more variation within his ceramic groups, particularly in rim form, that did other archeologists. Hurt's early work at Scalp Creek reflected a concern for developing types which were more similar in decoration than rim form. Although Smith allowed for differences in rim form within his Iona and Campbell Creek wares, his classificatory procedures are most similar to Lehmer's. Although Hoffman's approach represents a departure from employing the concepts of ware and type, the resulting classificatory system is very similar in structure to those developed by other archeologists in the area.

It is apparent from this brief historical summary that ceramic classification in the Middle Missouri Subarea has been somewhat unsystematic and to the uninitiated, very confusing. As a result of this situation, an understanding and working knowledge of the cultural-historical
significance of pottery types takes a long time to develop. It is felt that the ceramic keys and additional information presented in this report will reduce the time required to become familiar with the pottery types. Hopefully, this will result in a greater knowledge and appreciation for an artifact class which has played such a key role in our understanding of the culture-history of the Middle Missouri Subarea. The following introductory comments provide information necessary for the proper use of the ceramic identification keys.
INTRODUCTION TO THE KEYS

The structure of the three identification keys presented in Appendix A is designed to reflect a preference of Middle Missouri archeologists to employ certain variables at various points in the formulation of ceramic groups. The keys also facilitate the comparison of ceramic remains. The Initial Middle Missouri key appears in Appendix A, Section 1. The key to Extended and Terminal Middle Missouri ceramic groups is included in Appendix A, Section 2. The Coalescent Tradition ceramic key is presented in Appendix A, Section 3. These keys are based on rimsherds, which can be defined as those portions of ceramic vessels minimally having a lip. Other parts of a vessel may also be present. Definitions of a lip as well as other terms used in this report are defined in Appendix A.

These keys include all ceramic groups which have been defined in published or major unpublished sources. The types developed by Moerman and Jones (n.d.) are not included in the keys because the groups cross-cut the Initial and Extended Middle Missouri components at the Cattle Oiler site. A major assumption in this report is that ceramic groups employed subsequent to when they were first defined use the same criteria as the original definition. Variants of previously defined types unique to a particular site, such as Iona S-rim - Black Partizan Variety (Caldwell 1966a:43-44), are not included in the keys.

Lehmer (1971:28-29) defined the Middle Missouri Subarea as that portion of the Missouri River trench located in North and South Dakota. He assigned all Plains Village period manifestations in the subarea to either the Middle Missouri or Coalescent Tradition (Lehmer 1971:33). Each of these traditions is divided into a series of variants. The Middle Missouri Tradition includes three variants (Initial, Extended and Terminal) whereas the Coalescent Tradition is composed of four variants (Initial, Extended, Post-Contact and Disorganized). For the purposes of this discussion, the Post-Contact and Disorganized Variants are
grouped together as single units hereafter referred to as the Post-Con
tact Coalescent. The keys also take into consideration closely related
ceramic assemblages from off-trench locations in the eastern Dakotas,
 northwest Iowa and southwestern Minnesota. Pawnee and Lower Loup pot-
ttery from Nebraska (Grange 1968), closely related to Coalescent Tradi-
tion ceramics, is not included in the keys as are the pottery types
from the Cambria Village (Knudson 1967). Assemblages from the Hagen
site (Mulloy 1942) and the Heart Butte area (Cooper 1958) have not been
classified and therefore do not appear in the Coalescent Tradition key.
A listing of sites from which the ceramic groups appearing in this re-
port have been defined is provided in Table 1. The location of most of
these sites can be found in Lehmer (1971:Figures 39, 76-77, 79, 82).

It was pointed out earlier that somewhat different variable sets
have been used in the formulation of ceramic groups from the Middle Mis-
souri Subarea. In order to facilitate their use, the keys appearing in
this report use a group of variables in the same hierarchical order.
Procedures for using the keys are included in Appendix A. Other less
objectively defined variables which have entered into the classifica-
tion process and which do not appear in the keys (e.g. paste charac-
teristics, thickness, color) are discussed next.

Use of the identification keys requires an initial separation be-
tween Middle Missouri and Coalescent Tradition ceramics. Information
useful in making these distinctions is presented in Table 2. One of
the most diagnostic differences between the Middle Missouri and Coa-
lescent Traditions is in house form: Middle Missouri Tradition struc-
tures are normally long and rectangular in outline whereas Coalescent
Tradition houses usually exhibit round floor plans.

Since architectural information is not always available, other as-
psects of material culture, in addition to pottery, can be used to dif-
ferentiate traditions. Middle Missouri Tradition components frequently
contain high relative frequencies of Knife River Flint, usually 30% or
more of the stone tool assemblage depending on chipped stone tool tech-
nological class and site location (see Ahler 1977:132-150). Raw
Table 1. Sites from which traditionally formulated ceramic types have been defined.

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<td>Chamberlain Great Oasis (39BR202)</td>
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<tr>
<td>Hitchell (39CH45)</td>
<td>Johnston 1967</td>
</tr>
<tr>
<td>Chapelle Creek (39HU60)</td>
<td>Brown 1967</td>
</tr>
<tr>
<td>Jiggs Thompson (39LM208)</td>
<td>Caldwell and Jensen 1969</td>
</tr>
<tr>
<td>Langdeau (39LM209)</td>
<td>Caldwell and Jensen 1969</td>
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<td>Pretty Head (39LM232)</td>
<td>Caldwell and Jensen 1969</td>
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<tr>
<td>Good Soldier (39LM238)</td>
<td>Neuman 1964</td>
</tr>
<tr>
<td>Breeden (39ST16)</td>
<td>Brown 1974</td>
</tr>
<tr>
<td>Dodd (39ST30)</td>
<td>Lehmer 1951</td>
</tr>
<tr>
<td>Hallam II (39ST38)</td>
<td>A. Johnson 1979</td>
</tr>
<tr>
<td>Gavins Point (39YK203)</td>
<td>Brown 1968</td>
</tr>
<tr>
<td><strong>Extended Middle Missouri</strong></td>
<td></td>
</tr>
<tr>
<td>Cross Ranch (320L14)</td>
<td>Calabrese 1972</td>
</tr>
<tr>
<td>Paul Brave (32SI4)</td>
<td>Hewes 1949</td>
</tr>
<tr>
<td></td>
<td>Wood and Woolworth 1964</td>
</tr>
<tr>
<td>Fire Heart Creek (32SI2)</td>
<td>Lehmer 1966</td>
</tr>
<tr>
<td>Ben Standing Soldier (32SI7)</td>
<td>Hoffman 1970a</td>
</tr>
<tr>
<td>McKensey (39AR201)</td>
<td>Caldwell 1966b</td>
</tr>
<tr>
<td>Thomas Riggs (39HU1)</td>
<td>Kleinsasser 1953</td>
</tr>
<tr>
<td>Glasshoff (39SL42)</td>
<td>McNutt n.d.</td>
</tr>
<tr>
<td>Hallam I (39ST37)</td>
<td>A. Johnson 1979</td>
</tr>
<tr>
<td>John Ketchen (39ST223)</td>
<td>A. Johnson 1979</td>
</tr>
<tr>
<td>Durkin (39ST238)</td>
<td>A. Johnson 1979</td>
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1Sites are listed in order by site number within each taxonomic division.
<table>
<thead>
<tr>
<th>Variant and Site</th>
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<tbody>
<tr>
<td><strong>Terminal Middle Missouri</strong></td>
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</tr>
<tr>
<td>Shermer (32EM10)</td>
<td>Sperry 1968</td>
</tr>
<tr>
<td>Huff (32M011)</td>
<td>Howard 1962</td>
</tr>
<tr>
<td>Demery (39C01)</td>
<td>Wood 1967</td>
</tr>
<tr>
<td></td>
<td>Woolworth and Wood 1964</td>
</tr>
<tr>
<td><strong>Initial Coalescent</strong></td>
<td></td>
</tr>
<tr>
<td>Talking Crow (39BF3)</td>
<td>Smith 1951</td>
</tr>
<tr>
<td>Arzberger (39HU6)</td>
<td>Spaulding 1956</td>
</tr>
<tr>
<td><strong>Extended Coalescent</strong></td>
<td></td>
</tr>
<tr>
<td>No Heart Creek (39AR2)</td>
<td>Hurt 1970</td>
</tr>
<tr>
<td>Demery (39C01)</td>
<td>Woolworth and Wood 1964</td>
</tr>
<tr>
<td>Potts (39C019)</td>
<td>Stephenson 1971</td>
</tr>
<tr>
<td>Molsstad (39DW234)</td>
<td>Hoffman 1967</td>
</tr>
<tr>
<td>Fox Island (39DW230)</td>
<td>Kotch and Starr 1968</td>
</tr>
<tr>
<td>Scalp Creek (39GR1)</td>
<td>Hurt 1952</td>
</tr>
<tr>
<td>Spain (39LM301)</td>
<td>Smith and Grange 1958</td>
</tr>
<tr>
<td>Hosterman (39P07)</td>
<td>Miller 1964</td>
</tr>
<tr>
<td>Gettysberg (39P09)</td>
<td>Coleman 1968</td>
</tr>
<tr>
<td>C.B. Smith (39SL29)</td>
<td>McNutt 1958</td>
</tr>
<tr>
<td>Over's La Roche (39ST9)</td>
<td>Hoffman 1968</td>
</tr>
<tr>
<td>Leavitt (39ST215)</td>
<td>Lehmer and Jones 1968</td>
</tr>
<tr>
<td>Bower's La Roche (39ST232)</td>
<td>Hoffman 1968</td>
</tr>
<tr>
<td>Swan Creek (39WW7)</td>
<td>Hurt 1957</td>
</tr>
<tr>
<td>Spiry (39WW10)</td>
<td>Baerreis and Dallman 1961</td>
</tr>
<tr>
<td>Payne (39WW302)</td>
<td>Wilmeth 1958</td>
</tr>
<tr>
<td><strong>Post-Contact Coalescent</strong></td>
<td></td>
</tr>
<tr>
<td>Amahami (32ME8)</td>
<td>Lehmer, Wood and Dill 1978</td>
</tr>
<tr>
<td>Lower Hidatsa (32ME10)</td>
<td>Lehmer, Wood and Dill 1978</td>
</tr>
</tbody>
</table>
Table 1. Sites from which traditionally formulated ceramic types have been defined (continued).¹

<table>
<thead>
<tr>
<th>Variant and Site</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Post-Contact Coalescent (continued)</strong></td>
<td></td>
</tr>
<tr>
<td>Sakakawea (32ME11)</td>
<td>Lehmer, Wood and Dill 1978</td>
</tr>
<tr>
<td>Rock Village (32ME15)</td>
<td>Lehmer, Wood and Dill 1978</td>
</tr>
<tr>
<td>Nightwalker’s Butte (32ML39)</td>
<td>Lehmer, Wood and Dill 1978</td>
</tr>
<tr>
<td>Bamble (39CA6)</td>
<td>Baerreis and Dallman 1961</td>
</tr>
<tr>
<td>Two Teeth (39BF204)</td>
<td>Smith and Johnson 1968</td>
</tr>
<tr>
<td>Oacoma (39LM26, 39LM27)</td>
<td>Kivett 1958</td>
</tr>
<tr>
<td>Buffalo Pasture (39ST6)</td>
<td>Lehmer and Jones 1968</td>
</tr>
<tr>
<td>Fort George (39ST17)</td>
<td>Hoffman 1970b</td>
</tr>
<tr>
<td>Dodd (39ST30)</td>
<td>Lehmer 1951</td>
</tr>
<tr>
<td>Spiry-Eklo (39WW3)</td>
<td>Baerreis and Dallman 1961</td>
</tr>
<tr>
<td>Swan Creek (39WW7)</td>
<td>Hurt 1957</td>
</tr>
<tr>
<td><strong>Selected sites in the Fort Randall, Big Bend and Oahe Reservoirs</strong></td>
<td>Cooper 1949</td>
</tr>
</tbody>
</table>

| **Sites from Off-Trench Locations**                  |                                    |
| Initial Middle Missouri Related                      |                                    |
| Phipps (13CK21)                                      | Ives 1962                          |
| Broken Kettle (13PM1)                                | Ives 1962                          |
| Kimball (13PM4)                                      | Ives 1962                          |
| Broken Kettle West (13PM25)                          | Henning and Henning 1978           |
| Great Oasis/Low Village (21MU2)                      | Wilford n.d.a, n.d.b               |
| Great Oasis/Low Village (21MU2)                      | E. Johnson 1969                    |
| Great Oasis/Low Village (21MU2)                      | Henning and Henning 1978           |
| Mitchell (39DV2)                                     | Hurt 1954                          |
| Twelve Mile Creek (39HT1)                            | Hurt 1954                          |
| Brandon (39MH1)                                      | Hurt 1954                          |
Table 1. Sites from which traditionally formulated ceramic types have been defined (concluded).  

<table>
<thead>
<tr>
<th>Variant and Site</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sites from Off-Trench Locations (continued)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Initial Coalescent Related</strong></td>
<td></td>
</tr>
<tr>
<td>Hendrickson III (32SN403)</td>
<td>Dahlberg 1977</td>
</tr>
<tr>
<td><strong>Post-Contact Coalescent</strong></td>
<td></td>
</tr>
<tr>
<td>Biesterfeldt (32RM1)</td>
<td>Wood 1971</td>
</tr>
<tr>
<td>Hintz (32SN3)</td>
<td>Wheeler 1963</td>
</tr>
</tbody>
</table>

1 Sites are listed in order by site number within each taxonomic division.
Table 2. Diagnostic characteristics of pottery from Plains Village manifestations in the Middle Missouri Subarea by taxonomic unit.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Middle Missouri Tradition</th>
<th>Coalescent Tradition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial</td>
<td>Extended</td>
</tr>
<tr>
<td>Exterior body surface treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple Stamped</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Check Stamped</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Cord Roughened</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Smoothed</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Exterior rim surface treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple Stamped</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Cord Roughened</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Brushed</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Smoothed</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Exterior rim decoration on S-shaped rim forms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cord Impressed</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Incised or Trailed</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Undecorated</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Exterior rim decoration on straight or curved rim forms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cord Impressed</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Incised or Trailed</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Undecorated</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

1 Generally, the symbol for plus (+) indicates that a characteristic is commonly associated with a particular variant. A minus (-) sign means that a trait is present in significantly smaller quantities in some variants as compared to others.
Table 2. Diagnostic characteristics of pottery from Plains Village manifestations in the Middle Missouri Subarea by taxonomic unit (concluded).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Middle Missouri Tradition</th>
<th>Coalescent Tradition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial</td>
<td>Extended</td>
</tr>
<tr>
<td>Lip/lip margin decoration on straight or curved rim forms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cord Impressed</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tool Impressed</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Finger Impressed</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Undecorated</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Nodes or Castellations</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Paste</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Granular, porous, liberally tempered</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Compact, sparsely tempered</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Color</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greys/browns/buffs</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Browns/buffs/oranges</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Thickness</td>
<td></td>
<td></td>
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<tr>
<td>Relatively thick</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Relatively thin</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

\[1\] Generally, the symbol for plus (+) indicates that a characteristic is commonly associated with a particular variant. A minus (-) sign means that a trait is present in significantly smaller quantities in some variants as compared to others.
materials such as Chadron Chert, Flattop Chalcedony, and Solid Quartzites appear to occur in quantities ranging from one to 10 percent of the entire tool assemblages in these sites. On the other hand, Coalescent Tradition sites have proportionately more of these non-Knife River Flint materials, usually about 15% or more of the entire chipped stone tool assemblages for each material. Knife River Flint usually comprises less than 10% of the raw materials in Coalescent Tradition assemblages. Coalescent Tradition sites located in North Dakota have high percentages of Knife River Flint, however. Finally, ground stone celts occur in Middle Missouri Tradition sites and rarely appear in Coalescent Tradition stone tool assemblages.

Additional distinctions can be made on the basis of variation in ceramic assemblages. Initial Middle Missouri ceramic vessels have cord-roughened bodies. In many cases, this primary surface finish is obliterated on the shoulder and rim areas by smoothing. Paste is rather granular and is grit tempered. Color is evenly divided between buffs and greys. Vessel walls are relatively thick. Rim sherds are predominately cord impressed on their exteriors and s-shaped, or straight and undecorated. Incised rims with straight and s-shaped forms occur in smaller quantities as do vessels which are decorated only on the lips. Finally, Initial Middle Missouri ceramic assemblages are characterized by sharp, well defined neck areas on the interior rim and a significantly higher percentage of flat lip forms compared to other Plains Village Tradition assemblages from the subarea.

Extended and Terminal Middle Missouri ceramic assemblages are similar in thickness, paste, color, rim forms and decoration to those of the Initial Variant of the Middle Missouri Tradition except that the former two variants are characterized by simple stamped exterior vessel surfaces. Ceramic assemblages from some Extended Middle Missouri components located in North Dakota also contain relatively high quantities of check stamped body sherds. In the few components assigned to the Modified Initial Middle Missouri taxon, it has been suggested that some vessels with typical Initial Middle Missouri rim characteristics have simple stamped bodies.
(see Lehmer 1971:101, 104-105). Until further systematic analyses are conducted with these Modified Initial Middle Missouri ceramic assemblages, this taxon is considered here to be tentative in nature and therefore does not appear in the keys. Extended and Terminal Variants also have comparatively more vessels with only tool impressions on the lip. Castellations or nodes, small round vertically projecting additions to vessel lips, are almost exclusively confined to Extended and Terminal assemblages. The exteriors of these vessels are also often highly smoothed. S-shaped rims generally have sharp junctures between the upper and lower portions. Cord impressions on the rim exteriors tend to be wider than those found on pottery from other taxonomic units.

Within the Coalescent Tradition, ceramics from Initial Variant components can be differentiated from other variants by the presence of cord-roughened surfaces, similar to the pottery from Initial Middle Missouri assemblages. Approximately one-third of the pottery from Initial Coalescent sites is cord-roughened; the remainder is evenly divided between simple stamped and smoothed exterior vessel surfaces. The paste, color and thickness characteristics are similar to those of the Middle Missouri Tradition. Initial Coalescent assemblages contain moderate numbers of vessels with horizontal incisions applied to the exteriors of straight rims. These assemblages include a high proportion of vessels which either are undecorated on the rim exterior or are decorated only on the lip or lip margins with tool and finger impressions. Unlike Initial Middle Missouri assemblages, Initial Coalescent components have virtually no vessels which are decorated by cord impressing.

Extended Coalescent pottery is predominately smoothed or simple stamped; brushing on the exterior rim occurs in moderate amounts depending on site location. These assemblages can be differentiated from those of other variants by their relatively thin vessel walls; compact, sparsely tempered paste; and light colors ranging from brown through orange. Typical Extended Coalescent assemblages are equally divided between straight or S-shaped rim forms decorated with horizontal lines on their rim exteriors, and vessels with tool impressions applied only on
the lip. Vessel shoulders are commonly decorated with incised or trailed lines in various linear motifs.

All Post-Contact Coalescent components are marked by the presence of EuroAmerican trade items such as metal and glass beads. Like other Coalescent variants, simple stamping is present on exterior vessel surfaces; however, brushing on the rim exteriors is significantly more common than in the Extended Coalescent. Pottery also differs from the earlier Extended Coalescent assemblages by having thicker vessel walls made from granular, grit tempered paste. Colors vary from browns through greys and are generally darker compared to Extended Coalescent pottery. Cord impressed decoration on the rim exterior of straight and s-shaped rims varies in relative frequency depending on site location. In general, cord impressing increases from south to north. Cord impressions on the rim exteriors of straight or curved rims occur for the first time in moderate amounts. Cord impressions on the lip increases from all other earlier variants. Many vessels from Post-Contact assemblages are decorated by finger or tool impressions applied to vessel lips or lip margins.

In order to better understand the relationships between ceramic wares and their component types, Appendix B presents the defining characteristics of the most commonly used types and wares defined for the Plains Village Tradition of the Northern Plains.
REFERENCES CITED

Ahler, S.A.

Baerreis, D.A. and J.E. Dallman

Bowers, A.W.

Brown, L.A.
1967 The Chapelle Creek site (39HU60), South Dakota. Ms. on file, Midwest Archeological Center, National Park Service, Lincoln, Nebraska.


Calabrese, F.A.


Caldwell, W.W.

1966b Archeological investigations at the McKensey Village (39AR201), Oahe Reservoir, central South Dakota. Plains Anthropologist, Memoir 3:4-38.

Caldwell, W.W. and R.E. Jensen

Coleman, J.M.
Cooper, P.L.


Dahlberg, J.

Gant, R.D.

Grange, R.T., Jr.

Henning, D.R. and E.R. Henning

Hewes, G.W.
1949 Pottery from the sites excavated by the 1947 North Dakota field session. *University of Nebraska, Laboratory of Anthropology Note Book* 1:58-67.

Hoffman, J.J.


1970a Artifact descriptions for the Ben Standing Soldier site, 32SI7. Unfinished Ms. on file, Midwest Archeological Center, National Park Service.

1970b Two Arikara villages: a study in Bad River Phase material culture. Ms. on file, Midwest Archeological Center, National Park Service, Lincoln, Nebraska.
Howard, J.H.  

Hurt, W.R., Jr.  


Ives, J.C.  

Johnson, A.M.  
1979  Extended Middle Missouri components in the Big Bend Region, South Dakota. South Dakota Archaeological Society, Special Publications 1.

Johnson, E.  

Johnston, R.B.  

Kivett, M.  
1958  The Oacoma site, Lyman County, South Dakota. Ms. on file, Midwest Archeological Center, National Park Service, Lincoln, Nebraska.
Kivett, M.F. and R.E. Jensen
1976 Archeological investigations at the Crow Creek site (39BF11), Fort Randall Reservoir area, South Dakota. Nebraska State Historical Society, Publications in Anthropology 7.

Kleinsasser, G.

Knudson, R.A.

Kotch, J. and E.L. Starr

Krause, R.A.

Lehmer, D.J.

Lehmer, D.J. and D.T. Jones

Lehmer, D.J., W.R. Wood and C.L. Dill
McNutt, C.H.
1958 Archeological investigation at the C.B. Smith site (39SL29), Oahe Reservoir, South Dakota, 1957. Ms. on file, Midwest Archeological Center, National Park Service, Lincoln, Nebraska.

n.d. The Glasshoff site (39SL42). Ms. on file, Midwest Archeological Center, National Park Service, Lincoln, Nebraska.

Miller, C.F.

Moerman, D.E. and D.T. Jones
n.d. Investigations at the Cattle Oiler site, 39ST224, Big Bend Reservoir, South Dakota. Ms. on file, Midwest Archeological Center, National Park Service, Lincoln, Nebraska.

Mulloy, W.

Neuman, R.W.

Smith, C.S.


Smith, C.S. and R.T. Grange

Smith, C.S. and A.E. Johnson

Spaulding, A.C.
Sperry, J.E.

Stephenson, R.L.
1971 The Potts Village site (39CO19), Oahe Reservoir, north central South Dakota. The Missouri Archaeologist 33.

Tolstoy, P.
1950 Untitled manuscript on Middle Missouri pottery. Ms. on file, Midwest Archeological Center, National Park Service, Lincoln, Nebraska.

Wheeler, R.P.
1954 A check-list of Middle Missouri pottery wares, types, and sub-types. Plains Anthropologist 2:3-22.


Wilford, L.A.
n.d.a The Great Oasis Village. Ms. on file, Department of Anthropology, University of Minnesota, Minneapolis.
n.d.b The Low Village site, 1950. Ms. on file, Department of Anthropology, University of Minnesota, Minneapolis.

Wilmeth, R.

Wood, W.R.


Wood, W.R. (continued)
1971 Biesterfeldt: a Post-Contact Coalescent site on the Northeastern Plains. Smithsonian Contributions to Anthropology 15.

Wood, W.R. and A.R. Woolworth

Woolworth, A.R. and W.R. Wood
APPENDIX A

CERAMIC IDENTIFICATION KEYS
This appendix contains three ceramic identification keys, one each for the Initial and Extended/Terminal Variants of the Middle Missouri Tradition and one for Coalescent Tradition pottery. Within each key, the first division is by rim form, indicated by Roman numerals. The types are then arranged by area of decoration, in upper case letters. The next division is by decoration technique, indicated by Arabic numerals. Variations in decoration motif are labeled with lower case letters. The last two variables to be used, exterior rim surface treatment and lip form, are designated by Arabic numerals and lower case letters enclosed by parentheses, respectively. These variables are defined later in this introduction.

A series of types appear under each set of these defining variables. Each type name is followed by the reference, in parentheses, where it was first defined. In a few cases, it was necessary to divide large inclusive types into smaller subdivisions to facilitate their placement in the keys. In these cases, attribute modifiers are placed in parentheses immediately after the type name and before the literature references. Although the resulting groups were not originally recognized as formal types, the modifiers conform to those used by the authors. Following the reference and after a hyphen are often a series of Roman numerals, letters and/or Arabic numerals separated by commas. Each one of these sets refers to other locations the type is listed in a key under a different set of defining attributes. These designations are constructed in such a manner that if a type occurs in the key two or more times and is differentiated on the basis of a single variable of the lowest order, a single letter or number is listed for each occurrence. For example, in Appendix A, Section 3 the first type to be listed is Hosterman Cord Impressed S-Shaped Rims: Type A. Since this type can also have a smoothed/brushed exterior rim surface treatment, the designation (2) occurs after its first listing in the key. The second listing of the type has a (1) referring back to the first listing of the type. This indicates that as Miller (1964:174) defined this type, there is little variation in it based on the variables used in this key.
An example of a type which is listed under more than one section of the key and differing by two attributes is Colombe Cord Impressed, first listed under IAla(2) of Appendix A, Section 3. In this case, alternative listings of the type appear under c(2) and d(2). The letters designate differences in exterior rim decoration motif, the last two divisions of this kind under cord impressed decoration technique. The numbers refer to smooth/brushed exterior rim surface treatment. In all cases, if a type is listed in a key in more than one place, the alternative locations are listed in the order in which they appear in the keys.

Listed after any alternative locations of a type in a key and separated by a colon are acronyms for variants as employed by Lehner (1971: 193): Extended Middle Missouri (EMM), Terminal Middle Missouri (TMM), Initial Coalescent (IC), Extended Coalescent (EC) and Post-Contact Coalescent (PCC). The Post-Contact Coalescent Variant also includes ceramic groups found in Disorganized Coalescent components. These designations mean that the types with which they are associated generally occur in greatest relative frequencies within the assigned variant. An asterisk behind a variant acronym indicates that a type was defined from a single site and usually not recognized under the same name from additional sites. If acronyms of two or more variants appear, a type is present in higher percentages in the first variant listed if it is separated from the other by a comma. If the variant acronyms are separated by hyphens, the type is present in both variants in approximately the same percentages. Since only Initial Middle Missouri (IMM) types are present in Appendix A, Section 1, no acronyms are used in this key.

Since the purpose of the keys is to organize pottery types in a systematic fashion, neither this appendix nor Appendix B are designed as substitutes for the original type descriptions. These type descriptions usually include photographs or drawings useful in identifying pottery types.
VARIABLE DEFINITIONS

The following are brief descriptions of each of the variables used in the keys. The letters and numbers in parentheses accompanying these descriptions refer to their designations in the keys.

Rim Form. Rim form is the shape of a ceramic vessel between the neck and lip. The lip is that portion of a vessel which does not have parallel vessel walls and is the upper portion of a vessel oriented perpendicularly to a plane resting on the lip. The neck is that point of a vessel interior which has the sharpest convex curve, as viewed from the interior. In many cases, the type of exterior vessel surface treatment changes at the neck. On those vessels which are decorated on the shoulder, shoulder decoration begins at or near the neck. S-shaped rim forms (I) have a profile resembling the letter S. Viewed from the interior, the rim curves outward from the lip then back towards the vessel interior and finally out again at or just above the neck. Occasionally, a small area near the lip is bent outward, giving the rim an extra curve. Middle Missouri archeologists have also defined a "collared" rim form. In most cases, these are basically s-shaped in form with either a sharper bend in the upper portion of the rim than "true" s-rims or a somewhat thickened area in the upper curve of the rim. In any case, the vessel walls are essentially parallel and conform to an s-shaped form. S-shaped rims should not be confused with a "true" collared form which has a straight or curved rim interior and a thickened or wedge-shaped rim exterior. The "true" collared forms, which are uncommon in Middle Missouri ceramic assemblages, are combined with the s-shaped rim form class in this report. Unlike the s-shaped rims which have compound shapes, curved or straight rims (II) have vessel walls which form a straight or curved line between the lip and neck. This line does not change direction like the s-shaped rim forms. Included in these categories are "braced" rim forms. A rim brace is considered to be a lip in this report. Bowls (III) are distinct vessel forms compared to constricted mouth jars with s-shaped, straight or curved rim forms. Bowls do not
have rim areas; vessel walls form a continuous curve from the lip through
the remainder of the vessel. Small parts of the upper portions of bowls
are not to be confused with fragments of s-shaped rims. Bowls are rare
in Middle Missouri assemblages.

Area of Decoration. For the purposes of this report, a ceramic ves-
sel can be divided into two areas: exterior rim and lip or lip margins.
Decoration, or lack of it, on these two areas has been considered to be
important in the formulation of pottery types in the Middle Missouri Sub-
area. Decoration on other vessel areas, such as appendages (handles,
tabs, nodes), the rim interior, shoulder and rim fillet has rarely been
considered in typological formulations. A few types defined for Middle
Missouri Tradition pottery are based on the presence of a rim fillet.
Although vessels with rim fillets can fall within several defined types
without being decorated, decoration on the rim fillet (C) as a separate
decoration area has been included in the Extended/Terminal Middle Mis-
souri key for descriptive purposes. A rim fillet is a cylindrical por-
tion of clay encircling a rim between the lip and neck. The lip and rim
portions of a vessel have been defined in the section describing rim
form. In general, decoration on the exterior rim (A) has been considered
important in forming types, regardless of the presence or absence of dec-
oration on other vessel areas, including the lip. In the absence of dec-
oration on the exterior rim of vessels with straight or curved rim forms,
presence or absence of lip decoration (B) has been considered to be im-
portant. If the lip is decorated with cord impressions or cord wrapped
tool impressions, the rim exterior may also bear these decorations. The
minimum requirement for inclusion in these types is that the lip be dec-
orated with cord or cord wrapped tool impressions. If the rims are s-
shaped, decoration, or lack of it on the lip, is usually irrelevant, as
in the case of Coalescent Tradition pottery. Presence or absence of lip
decoration on vessels with s-shaped rim forms from Extended and Terminal
Middle Missouri components has been considered to be important by some,
however. To account for absence of decoration on certain vessel areas
two attributes, undecorated lip and exterior rim (D) and undecorated

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exterior rim (E), have been created. Category E was created for Coalescent Tradition pottery with s-shaped or "collared" rim forms because decoration, or lack of it, on the lip has not been considered in forming types with this pottery. Decoration area is irrelevant in the classification of bowl forms since further subdivisions have not been made within this form.

Decoration Technique. Six decorative technique classes have been used in these keys: cord impressed (1), cord wrapped tool impressed (2), incised or trailed (3), tool impressed (4), finger impressed (5), and stab and drag (6). A seventh class was created to include those types for which decoration technique has not been used as a criteria for classification. Cord impressions are inferred to have been made by impressing a twisted cord into moist clay. The method of application of these impressions has not been systematically studied. Cord wrapped tool impressions, sometimes called cord wrapped stick decoration, were probably made with a rigid or flexible shaft or core wrapped with twisted cordage. Incised or trailed decorations appear to have been made by dragging a tool made of bone, wood, chipped stone or some other material across moist clay. Although trailing and incising have been differentiated in the literature (the former having lines wider than they are deep and the latter with lines deeper than they are wide), this distinction has rarely been used in the formulation of Middle Missouri pottery types. Tool impressions (sometimes called punctations) were probably made by impressing tools of various materials into moist clay. Although a distinction has been made between tool impressions and trailing/incising, the difference is not always clear when dealing with oblique tool impressions which appear to have been withdrawn from the clay in a dragging motion. In these cases, tool impressions grade into short trailed or incised lines. Finger impressions or pinches are relatively broad decorations on the lip or lip margins. Stab and drag decoration is reserved for those forms of decoration, generally in the form of long linear lines, thought to have been made by alternately trailing/incising and tool impressing a tool in one continuous motion across moist clay.
Decoration Motif. The form or motif of a decoration has frequently played a role in the formulation of ceramic types. One of the most common motifs is the linear field of horizontally trailed/incised lines encircling the exterior rim (a). In addition to this major motif, tool or finger impressions are occasionally found above and/or below the linear field. These finger or tool impressed additions are also associated with many of the remaining motifs to be discussed. Presence or absence of these additional impressions has not been used as a criteria in classification. The motif labeled here as long or short diagonal lines (b) can be made up of a series of diagonal incisions, herringbones, chevrons or triangular plats filled with oblique lines. For examples of some of these motifs on the shoulder areas of Plains Village Tradition pottery, see Wood (1962). Another motif class is composed of diagonal, vertical or horizontal lines in various combinations of either two or three of these orientations (c). Motifs composed of diagonal lines forming triangles or truncated triangles in association with horizontal lines are not included in this category. Variations of this motif are included in the motif of horizontal lines and triangles (f). Coalescent Tradition pottery types similar to this motif are included in motif (c) described above. Another motif consists of a series of nested curved lines forming a rainbow pattern (d), usually interrupting a field of horizontal lines. A crosshatched motif (e) consists of a series of opposed intersecting lines forming a series of squares or diamonds between the lines. Generally, decoration motif has been used to distinguish pottery types if the decoration appears on the exterior rim but not in cases where decoration appears on other vessel areas. A seventh category (g) was created for cases in which decoration motif was not used or did not apply.

Exterior Rim Surface Treatment. Three surface treatments are defined: simple stamped ((1)), brushed ((2)), and cord roughened ((3)). This variable is not included in the two Middle Missouri Tradition keys since it does not vary within a key. That is, Initial Middle Missouri pottery is cord roughened whereas that from the Extended and Terminal
Variants is simple stamped. Simple stamping, thought to have been produced by a grooved or thong wrapped paddle of bone, bark or other material, appears as a series of relatively short parallel or criss-crossing linear depressions several millimeters wide separated by high areas or lands. Cord roughening appears to have been produced through the process of vessel formation by a paddle wrapped with cordage. The edges of the depressions can frequently be distinguished from simple stamping by their irregular margins and presence of cord twists. Brushing is characterized by striations oriented vertically or obliquely to the vessel lip. The striations range from relatively narrow shallow lines to broad deep ones. Brushing was possibly made by dragging bunches of grass or a corn cob over moist clay to produce a rough surface. It appears as though it was a secondary surface treatment applied to vessel rims after the area had been modeled by smoothing or simple stamping. Brushing is most commonly associated with Post-Contact Coalescent assemblages although it does occur on pottery from Extended Coalescent components. The three exterior rim surface treatments are always preceded by the word smoothed. This means that the three treatments can be smoothed to various degrees after application, even to the point of obliteration. Vessels with completely smoothed exterior rims are usually incorporated into types which are most nearly the same in terms of their defining attributes. In Initial Coalescent assemblages where there are two primary exterior rim surface treatments, types characterized by completely smoothed exterior rims are arbitrarily assigned both a cord roughened and simple stamped exterior rim surface treatment.

Lip Form. Thickened lip forms ((a)) are those which have been intentionally thickened by the addition of clay or the formation from existing clay at the top of the lip. The braced rim forms characteristic of Stanley Ware are considered here to have thickened lips rather than a braced rim form. Unthickened lip forms ((b)) do not have intentionally thickened lips, although the application of decoration to the lip may cause these lips to have a thickened appearance. Lip form has been used in the formulation of some Coalescent Tradition types with straight
or curved rim forms. It has not been used to differentiate Coalescent Tradition pottery with s-shaped or collared rim forms nor those types associated with Middle Missouri Tradition occupations.

Earlier in this report, it was noted that the number of variables used in typological formulation has varied, in addition to the order of these variables. Since the keys employ a fixed number of variables, problems arise as to where particular pottery groups are placed in the keys, lacking information on some of the variables. The case of exterior rim surface treatment has been previously discussed. A more common procedure in typological descriptions has been to list certain characteristics of the ceramic groups but not relate the characteristics to each other. For example, a straight rim type may have either a thickened or unthickened lip form and be decorated only on the lip with finger or tool impressions. Based on available descriptions, it has been difficult to determine the associations between lip form and decoration. Do tool impressions occur only on unthickened lips? Since in many cases these attributes did not play a part in the formulation of the types, no criticism is intended. In order to develop the classificatory system appearing in this report, it was necessary to assume that in these cases, all possible attribute associations occurred. This no doubt resulted in the appearance of some types in more places in the keys than necessary. Based on this author's judgment, however, any errors in classification resulting from these assumptions are insignificant.
Appendix A, Section 1
IDENTIFICATION KEY TO MIDDLE MISSOURI TRADITION CERAMICS

Initial Variant

I. S-Shaped or "collared" rim forms
   A. Decoration on the exterior rim (other vessel areas may be decorated)
      1. Cord impressed exterior rim decoration technique (occasional tool or finger impressions above
         and/or below cord impressions)
         a. Horizontal lines exterior rim decoration motif
            Foreman Cord Impressed (Lehmer 1951:9-10)
            Foreman Cord-Impressed (Hurt 1951:44-45)
            Stuart Collared Rim (Hurt 1954)*-3a
            Foreman Horizontal Cord Impressed (Caldwell and Jensen 1969:39)
            Marken Horizontal Cord Impressed (Caldwell and Jensen 1969:40)
            Class 6 (Hoffman 1968:42-43)*-3a
            S-shaped Rim: Horizontal Cord Impressed (Brown 1967:84-85)*
         b. Long or short diagonal lines exterior rim decoration motif
            Foreman Cord Impressed Triangle (Hurt 1954)-f
         e. Crosshatched lines exterior rim decoration motif
            Foreman Cord Impressed Crosshatched (Brown 1974:15)*
            Marken Cord Impressed Crosshatched (Brown 1974:16)*
         f. Horizontal lines and triangles exterior rim decoration motif
            Foreman Cord Impressed Triangle (Hurt 1954)-b
            Foreman Cord Impressed Triangle (Caldwell and Jensen 1969:39)
            Marken Cord Impressed Triangle (Caldwell and Jensen 1969:40)
            S-shaped Rim: Cord Impressed Triangle (Brown 1967:87)*
            Rim Group 11 (Kivett and Jensen 1976:84)*
      3. Incised or trailed exterior rim decoration technique (occasional tool or finger impressions
         above and/or below incising or trailing)
         a. Horizontal lines exterior rim decoration motif
            Foreman Incised (Lehmer 1951:10)*-c,e
            Foreman Incised (Hurt 1954)
            Mitchell Incised (Hurt 1951:41)*-e,IIA3a,IIA3e,IIB4g,IID7g
Stuart Collared Rim (Hurt 1954)*-1a
Foreman Horizontal Incised (Caldwell and Jensen 1969:39)
Marken Horizontal Incised (Caldwell and Jensen 1969:40)
Stuart Horizontal Incised (Caldwell and Jensen 1969:44)
S-shaped Rim: Horizontal Incised (Brown 1967:85)*-c
Rim Group 13 (Kivett and Jensen 1976:84)*
Class 6 (Hoffman 1968:42-43)*-1a

b. Long or short diagonal lines exterior rim decoration motif
Foreman Incised Triangle (Hurt 1954)-f
Foreman Incised Diagonal (Brown 1974:15)*
Marken Incised Diagonal (Brown 1974:16)*

Diagonal, vertical or horizontal lines in various combinations exterior rim decoration motif
Foreman Incised (Lehmer 1951:10)*-a,e
S-shaped Rim: Horizontal Incised (Brown 1967:85)*-a

Crosshatched lines exterior rim decoration motif (occasional single horizontal lines above
and/or below crosshatched lines)
Foreman Incised (Lehmer 1951:10)*-a,c
Mitchell Incised (Hurt 1954)*-a,IIA3a,IIA3e,IIIB4g,IIID7g
Foreman Incised Crosshatch (Caldwell and Jensen 1969:39)
Marken Incised Crosshatch (Caldwell and Jensen 1969:41)
Stuart Incised Crosshatch (Caldwell and Jensen 1969:44)
S-shaped Rim: Crosshatched (Brown 1967:85-87)*
Foreman Cross-Hatched (Ives 1962:20)

f. Horizontal lines and triangles exterior rim decoration motif
Monroe Collared Rim (Lehmer 1951:13-14)*
Foreman Incised Triangle (Hurt 1954)-b
Mitchell Broad Tailed (Hurt 1954)*-IIA3f,IIIB4g
Foreman Incised Triangle (Caldwell and Jensen 1969:39)
Marken Incised Triangle (Caldwell and Jensen 1969:40-41)
S-shaped Rim: Incised Triangle (Brown 1967:87-88)

4. Tool impressed exterior rim decoration technique

g. Not used as a criterion for classification-exterior rim decoration motif
Stuart Tool Impressed (Caldwell and Jensen 1969:44)
Foreman Plain (Ives 1962:20)-B4g,D7g

B. Decoration on the lip (other vessel areas may be decorated except the exterior rim)

4. Tool impressed lip decoration technique
g. Not used as a criterion for classification—lip decoration motif
   Foreman Plain (Ives 1962:20)-A4g,D7g

D. Undecorated lip and exterior rim (other vessel areas may be decorated)
7. Not applicable—lip or exterior rim decoration technique
   g. Not applicable—lip or exterior rim decoration motif
      Foreman Plain (Lehmer 1951:10)
      Foreman Plain (Hurt 1954)
      Kimball Plain (Hurt 1951:48)
      Twelve Mile Black on Gray (Hurt 1954)*-IID7g
      Foreman Plain (Caldwell and Jensen 1969:39)
      Marken Plain (Caldwell and Jensen 1969:41)
      Stuart Plain (Caldwell and Jensen 1969:44)
      Foreman Plain (Ives 1962:20)-A4g,B4g
      S-shaped Rim: Plain Rim (Brown 1967:88)*

II. Straight or curved rim forms
A. Decoration on the exterior rim (other vessel areas may be decorated)
   1. Cord impressed exterior rim decoration technique (occasional tool or finger impressions above
      and/or below cord impressions)
      a. Horizontal lines exterior rim decoration motif
         Anderson High Rim (Lehmer 1951:11-12)*-3f,B4g,D7g
         Chamberlain Simple Cord-Impressed (Hurt 1951:47)*
         Chamberlain Cord Impressed (Hurt 1954)
         Chamberlain Horizontal Cord Impressed (Caldwell and Jensen 1969:43)
         Group 8 (Johnston 1967:46-47)*
         Anderson Cord Impressed Horizontal (Brown 1974:16-17)*
         Straight Rim: Horizontal Cord Impressed (Brown 1967:73-74)*
      f. Horizontal lines and triangles exterior rim decoration motif
         Chamberlain Cord-Impressed Triangle (Hurt 1951:46-47)
         Straight Rim: Cord Impressed Triangle (Brown 1967:77-78)*
         Anderson Cord Impressed Triangle (Brown 1974:17)*
   3. Incised or trailed exterior rim decoration technique (occasional tool or finger impressions
      above and/or below incising or trailing)
      a. Horizontal lines exterior rim decoration motif
         Mitchell Incised (Hurt 1954)*-IA3a,IA3e,e,B4g,D7g
         Chamberlain Incised Shoulder (Hurt 1954)*-f
         Chamberlain Horizontal Incised (Caldwell and Jensen 1969:43)
Chamberlain Incised (Ives 1962:16)-f
Group 4 (Johnston 1967:41-42)*
Anderson Incised Horizontal (Brown 1974:17)*
Chamberlain Incised (Brown 1974:18)*
Straight Rim: Horizontal Incised (Brown 1967:75-76)*
Great Oasis High Rim (Henning and Henning 1978:17-22)-b,c,f,B4g,D7g
Great Oasis Trailed (Brown 1968:120-121)*-b,c
Great Oasis Incised (Wilford n.d.a:25)-c,e,f
Class IX A (Wilford n.d.a:6-7)*
Group F (E. Johnson 1969)*

b. Long or short diagonal lines exterior rim decoration motif
Chamberlain Incised Triangle (Hurt 1954)-f
Group 6 (Johnston 1967:44-45)*-f
Great Oasis High Rim (Henning and Henning 1978:17-22)-a,c,f,B4g,D7g
Great Oasis Trailed (Brown 1968:120-121)*-a,c
Group I (E. Johnson 1969)*

c. Diagonal, vertical or horizontal lines in various combinations exterior rim decoration motif
Great Oasis High Rim (Henning and Henning 1978:17-22)-a,b,f,B4g,D7g
Great Oasis Trailed (Brown 1968:120-121)*-a,b
Great Oasis Incised (Wilford n.d.a:25)-a,e,f
Class IX C (Wilford n.d.a:7)*-f
Class IX D (Wilford n.d.a:7)*
Group B (E. Johnson 1969)*-f
Group C (E. Johnson 1969)*
Group D (E. Johnson 1969)*
Group G (E. Johnson 1969)*
Group H (E. Johnson 1969)*

e. Crosshatched lines exterior rim decoration motif
Mitchell Incised (Hurt 1954)*-IA3a,IA3e,a,B4g,D7g
Chamberlain Incised Crosshatch (Caldwell and Jensen 1969:43)
Chamberlain Cross-Hatched (Ives 1962:17)
Great Oasis Incised (Wilford n.d.a:25)*-a,c,f
Class IX B (Wilford n.d.a:6-7)*-f
Group E (E. Johnson 1969)*

f. Horizontal lines and triangles exterior rim decoration motif
Anderson High Rim (Lehmer 1951:11-12)*-1a,B4g,D7g
Chamberlain Incised Triangle (Hurt 1954)-b
Mitchell Broad Trailed (Hurt 1954)*-IA3f,B4g
Chamberlain Incised Shoulder (Hurt 1954)*-a
Chamberlain Incised Triangle (Caldwell and Jensen 1969:43)
Chamberlain Incised (Ives 1962:16)-a
Group 5 (Johnston 1967:42-44)*
Group 6 (Johnston 1967:44-45)*-b
Straight Rim: Horizontal Incised (Brown 1967:75-76)
Straight Rim: Incised Triangle (Brown 1967:78)
Great Oasis High Rim (Henning and Henning 1978:17-22)-a,b,c,B4g,D7g
Great Oasis Incised (Wilford n.d.:25)-a,c,e
Class IX B (Wilford n.d.a:7)*-e
Class IX C (Wilford n.d.a:7)*-c
Group A (E. Johnson 1969)*
Group B (E. Johnson 1969)*-c

B. Decoration on the lip (other vessel areas may be decorated except the exterior rim)

1. Cord impressed lip decoration technique
   g. Not used as a criterion for classification-lip decoration motif
   Anderson Cord Impressed Zigzag (Caldwell and Jensen 1969:42)
   Anderson Cord Impressed Crosshatch (Caldwell and Jensen 1969:42)
   Anderson Cord Impressed Diagonal (Caldwell and Jensen 1969:42)

4. Tool impressed lip decoration technique (occasional finger impressions on outer lip margin on
   Sanford Incised Shoulder, Mitchell Modified Lip and Kimball Modified Lip types)
   g. Not used as a criterion for classification-lip decoration motif
   Anderson High Rim (Lehmer 1951:11-12)*-Ala,A3f,D7g
   Anderson Low Rim (Lehmer 1951:11-12)*-D7g
   Kimball Modified Lip (Hurt 1951:49)-5g,C4g
   Foreman Flared-rim (Hurt 1951:50)*
   Mitchell Modified Lip (Hurt 1954)
   Mitchell Broad Trailed (Hurt 1954)*-IA3f,A3f
   Mitchell Incised (Hurt 1954)*-IA3a,IA3e,A3a,A3e,D7g
   Anderson Tool Impressed (Caldwell and Jensen 1969:42)
   Anderson Incised Crosshatch (Caldwell and Jensen 1969:42)
   Anderson Incised Herringbone (Caldwell and Jensen 1969:42)
Mitchell Tool Impressed (Caldwell and Jensen 1969:45)
Mitchell Incised (Caldwell and Jensen 1969:45)
Sanford Incised Shoulder (Ives 1962:13-14)-5g
Mitchell Modified Lip (Ives 1962:14)
Kimball Modified Lip (Ives 1962:14-15)-5g
Chamberlain Punctate Lip (Ives 1962:17-18)
Straight Rim: Plain Rim (Brown 1967:78-80)*-D7g
Outcurved Rims (Brown 1967:80-82)*-D7g
Anderson Tool Impressed Ovoid (Brown 1974:17)*
Anderson Tool Impressed Crosshatched (Brown 1974:17)*
Anderson Tool Impressed Diagonal (Brown 1974:17)*
Anderson Incised Diagonal (Brown 1974:17)*
Group 7 (Johnston 1967:45-46)*-D7g
Group 9 (Johnston 1967:47-48)*
Class 5 (Hoffman 1968:42-43)*-D7g
Rim Group 12 (Kivett and Jensen 1976:84)*-D7g
Anderson Plain (A. Johnson 1979:29, 65-66, 111, 116)*-D7g
Great Oasis High Rim (Henning and Henning 1978:17-22)-A3a, A3b, A3c, A3f, D7g
Great Oasis Wedge Lip (Henning and Henning 1978:22-24)-D7g
Great Oasis Plain (Wilford n.d.b:25)-D7g
Class VIII (Wilford n.d.a:7)*

5. Finger impressed lip decoration technique
   g. Not used as a criterion for classification-lip decoration motif
      Kimball Modified Lip (Hurt 1951:49)-4g, C4g
      Sanford Incised Shoulder (Ives 1962:13-14)-4g
      Kimball Modified Lip (Ives 1962:14)-4g

C. Decoration on the rim fillet (other vessel areas may be decorated)
   4. Tool impressed rim fillet decoration technique
      g. Not used as a criterion for classification-rim fillet decoration motif
         Kimball Modified Lip (Hurt 1951:49)-B4g, R5g
         Twelve Mile Red Filmed (Hurt 1954)*-D7g

D. Undecorated lip and exterior rim (other vessel areas may be decorated)
   7. Not applicable-lip or rim decoration technique
      g. Not applicable-lip or rim decoration motif
         Anderson High Rim (Lehmer 1951:11-12)*-A1a, A3f, B4g
Anderson Low Rim (Lehmer 1951:12)*-B4g
Maxon Flared-rim (Hurt 1951:48-49)*
Mitchell Incised (Hurt 1954)*-IA3a, IA3e, A3a, A3e, B4g
Twelve Mile Red Filmed (Hurt 1954)*-C4g
Twelve Mile Black on Gray (Hurt 1954)*-ID7g
Anderson Plain (Caldwell and Jensen 1969:42)
Mitchell Plain (Caldwell and Jensen 1969:45)
Sanford Plain (Ives 1962:15)
Chamberlain Plain (Ives 1962:17)
Straight Rim: Plain Rim (Brown 1967:78-80)*-B4g
Outcurved Rims (Brown 1967:80-82)*-B4g
Group 7 (Johnston 1967:45-46)*-B4g
Kimball Plain (Gant 1967:33-34)*
Great Oasis High Rim (Henning and Henning 1978:17-22)-A3a, A3b, A3c, A3f, B4g
Great Oasis Wedge Lip (Henning and Henning 1978:22-24)-B4g
Great Oasis Plain (Wilford n.d.b:25)-B4g
Great Oasis Plain (Brown 1968:120)*
Class 5 (Hoffman 1968:42-43)*-B4g
Group A (Neuman 1964:308-310)*
Rim Group 12 (Kivett and Jensen 1976:84)*-B4g
Anderson Plain (A. Johnson 1979:29, 65-66, 111, 116)*-B4g
Class I (Wilford n.d.a:7)*
Class II (Wilford n.d.a.:7)*

III. Bowl rim forms
A. Decoration on the exterior rim (other vessel areas may be decorated)
   7. Not used as a criterion for classification-exterior rim decoration technique
      g. Not used as a criterion for classification-exterior rim decoration motif
         Twelve Mile Incurved Rim (Hurt 1954)*-E7g
E. Undecorated exterior rim (other vessel areas may be decorated)
   7. Not applicable-exterior rim decoration technique
      g. Not applicable-exterior rim decoration motif
         Twelve Mile Incurved Rim (Hurt 1954)*-A7g
Appendix A, Section 2
IDENTIFICATION KEY TO MIDDLE MISSOURI TRADITION CERAMICS
Extended and Terminal Variants

I. S-shaped or "collared" rim forms
A. Decoration on the exterior rim (other vessel areas may be decorated)
   1. Cord impressed exterior rim decoration technique (occasional tool or finger impressions above and/or below cord impressions)
      a. Horizontal lines exterior rim decoration motif
         Fort Yates Cord-Impressed (Kleinsasser 1953:27):EMM*
         Fort Yates Cord-Impressed (Hewes 1949:65-66)-f,TMM,EMM
         Fort Yates Cord-Impressed Rim (Wood and Woolworth 1964:20-21)-f,2a:TMM,EMM
         Le Beau Cord-Impressed (Wood 1967:67-68)-d,f,TMM,EMM
         Group 3a (Caldwell 1966b:17)-3a:EMM*
      d. Horizontal lines and rainbow exterior rim decoration motif
         Le Beau Cord-Impressed (Wood 1967:67-68)-a,f,TMM,EMM
         Fort Rice Cord-Impressed (Woolworth and Wood 1964:100)-f,2a:TMM*
      f. Horizontal lines and triangles exterior rim decoration motif
         Fort Yates Cord-Impressed (Hewes 1949:65-66)-a:TMM,EMM
         Fort Yates Cord-Impressed Rim (Wood and Woolworth 1964:20-21)-a,2a:TMM,EMM
         Le Beau Cord-Impressed (Wood 1967:67-68)-a,d,TMM,EMM
         Fort Rice Cord-Impressed (Woolworth and Wood 1964:100)-d,2a:TMM*
         Aldren Cord-Impressed (Kleinsasser 1953:27):EMM*
         Huff Rainbow (Howard 1962:30)-2a,3f:TMM*
   2. Cord wrapped tool impressed exterior rim decoration technique
      a. Horizontal lines exterior rim decoration motif (occasional triangular lines interrupting horizontal lines)
         Fort Yates Cord-Impressed Rim (Wood and Woolworth 1964:20-21)-1a,1f:TMM,EMM
         Fort Rice Cord-Impressed (Woolworth and Wood 1964:100)-1d,1f:TMM*
         Huff Rainbow (Howard 1962:30)-1f,3f:TMM*
   3. Incised or trailed exterior rim decoration technique (occasional tool or finger impressions above and/or below incising or trailing)
a. Horizontal lines exterior rim decoration motif
   Fort Yates Horizontal Incised Variant (Hoffman 1970a:17-18):EMM*
   Riggs Incised (Kleinsasser 1953:27-28)-d,f:EMM*
   Le Beau Trailed (Calabrese 1972:19)-d:EMM
   Fort Rice Trailed (Woolworth and Wood 1964:101)-f:TMM*
   Group 3a (Caldwell 1966b:17)-1a:EMM*

b. Horizontal lines and rainbow exterior rim decoration motif
   Le Beau Trailed (Calabrese 1972:19)-a:EMM
   Riggs Incised (Kleinsasser 1953:27-28)-a,f:EMM*

c. Crosshatched lines exterior rim decoration motif (occasional single horizontal line above cross-
hatched lines, or tool or finger impressions below crosshatched lines)
   Fort Yates Fine Incised (Hewes 1949:64-65)-IIA3e:EMM*
   Fort Yates Cross-Hatched Rim (Wood and Woolworth 1964:21):EMM*
   Fort Yates Incised (Lehner 1966:29-31)-f:TMM-EMM

d. Horizontal lines and triangles exterior rim decoration motif
   Fort Yates Incised (Lehner 1966:29-31)-e:TMM-EMM
   Fort Yates Zone Incised Variant (Hoffman 1970a:18):EMM*
   Riggs Incised (Kleinsasser 1953:27-28)-a,d:EMM*
   Fort Rice Trailed (Woolworth and Wood 1964:101)-a:TMM*
   Huff Rainbow (Howard 1962:30)-1f,2a:TMM*

B. Decoration on the lip (other vessel areas may be decorated except the exterior rim)
4. Tool impressed lip decoration technique

   g. Not used as a criterion for classification-lip decoration motif
   Fort Yates Decorated Lip (Sperry 1968:45):TMM,EMM
   Riggs Plain (Kleinsasser 1953:28-29)-D7g:EMM*
   Group 3b (Caldwell 1966b:17-18):EMM*

D. Undecorated lip and exterior rim (other vessel areas may be decorated)
7. Not applicable-lip or exterior rim decoration technique

   g. Not applicable-lip or exterior rim decoration motif
   Riggs Plain (Kleinsasser 1953:28-29)-B4g:EMM*
   Fort Yates Plain (Lehner 1966:30):TMM-EMM
   Le Beau Plain (Calabrese 1972:19):EMM
   Type 6 (Hewes 1949:62-63):EMM*

II. Straight or curved rim forms
A. Decoration on the exterior rim (other vessel areas may be decorated)
3. Incised or trailed exterior rim decoration technique
   a. Horizontal lines exterior rim decoration motif
      Fort Yates Plain (Hewes 1949:66-67)-B4f,B5g,D7g:EMM*
      Riggs Horizontal Incised Variant (Hoffman 1970a:13-14):EMM*
   e. Crosshatched lines exterior rim decoration motif (occasional single horizontal line above
      crosshatched lines)
      Fort Yates Fire Incised (Hewes 1949:64-65)-IA3e:EMM*
      Riggs Cross-Hatched Rim (Wood and Woolworth 1964:19):EMM*
      Riggs Incised Rim (Lehmer 1966:29-31)-f:TMM-EMM
   f. Horizontal lines and triangles exterior rim decoration motif
      Riggs Incised Rim (Wood and Woolworth 1964:19-20):EMM*
      Riggs Incised Rim (Lehmer 1966:29-31)-e:TMM-EMM
      Riggs Horizontally Incised Rim (McNutt n.d.:12):EMM*

4. Tool impressed exterior rim decoration technique
   g. Not used as a criterion for classification-exterior rim decoration motif
      Riggs Punctate (Lehmer 1966:29-31):TMM,EMM
      Riggs Straight Rim (Kleinsasser 1953:22-25)-5g,B3a:EMM*

5. Finger impressed exterior rim decoration technique
   g. Not used as a criterion for classification-exterior rim decoration motif
      Riggs Straight Rim (Kleinsasser 1953:22-25)-4g,B3a:EMM*

B. Decoration on the lip (other areas may be decorated except the exterior rim)
1. Cord impressed lip decoration technique
   g. Not used as a criterion for classification-lip decoration motif
      Riggs Plain Rim (Wood and Woolworth 1964:16-19)-4g,5g:EMM*

3. Incised or trailed lip decoration technique
   a. Horizontal lines lip decoration motif
      Riggs Straight Rim (Kleinsasser 1953:22-25)-A4g,A5g:EMM*

4. Tool impressed lip decoration technique
   g. Not used as a criterion for classification-lip decoration motif
      Fort Yates Plain (Hewes 1949:66-67)-5g,A3d,B7g:EMM*
      Riggs Flared Rim (Kleinsasser 1953:25-26)-5g:EMM*
      Riggs Plain Rim (Wood and Woolworth 1964:16-19)-1g,5g:EMM*
      Riggs Decorated Lip (Lehmer 1966:29-31):EMM,TMM
      Riggs Filleted Rim (Sperry 1968:40-41)-5g,C4g:TMM,EMM*
      Riggs Undecorated Rim (McNutt n.d.:10):EMM*
Riggs Linear Indented Rim (McNutt n.d.:10-11): TMM*
Huff Incised Lip (Howard 1962:30-31): TMM*
Huff Notched Lip (Howard 1962:32)-5g:TMM*
Huff Punctate Lip (Howard 1962:32): TMM*
Group 1 (Caldwell 1966b:16-17)-D7g: EMM*
Group 2 (Caldwell 1966b:17)-D7g: EMM*
Type 7 (Hewes 1949:63)-D7g: EMM*
Type 8 (Hewes 1949:63-64)-D7g: EMM*

5. Finger impressed lip decoration technique
   g. Not used as a criterion for classification-lip decoration motif
      Fort Yates Plain (Hewes 1949:66-67)-4g,A3a,D7g: EMM*
      Riggs Flared Rim (Kleinsasser 1953:25-26)-4g: EMM*
      Riggs Plain Rim (Wood and Woolworth 1964:16-19)-1g,4g: EMM*
      Riggs Pinched Rim (Wood and Woolworth 1964:20): TMM-EMM
      Riggs Filleted Rim (Sperry 1968:40-41)-4g,C4g: TMM, EMM*
      Huff Notched Lip (Howard 1962:32)-4g: TMM*

C. Decoration on the rim fillet (other vessel areas may be decorated)

4. Tool impressed-rim fillet decoration technique
   g. Not used as a criterion for classification-rim fillet decoration motif
      Riggs Punctated (Kleinsasser 1953:29): EMM*
      Riggs Punctate (Hoffman 1970a:10-11): EMM*
      Riggs Filleted Rim (Wood 1967:65): TMM, EMM
      Riggs Filleted Rim (Sperry 1968:40-41)-B4g,B5g: TMM, EMM*

D. Undecorated lip and exterior rim (other vessel areas may be decorated)

7. Not applicable-lip or rim decoration technique
   g. Not applicable-lip or rim decoration motif
      Fort Yates Plain (Hewes 1949:66-67)-A3a,B4g,B5g: EMM*
      Riggs Plain (Lehmer 1966:29-31): EMM, TMM
      Huff Plain (Howard 1962:31-32): TMM*
      Group 1 (Caldwell 1966b:16-17)-B4g: EMM*
      Group 2 (Caldwell 1966b:17)-B4g: EMM*
      Type 7 (Hewes 1949:63)-B4g: EMM*
      Type 8 (Hewes 1949:63-64)-B4g: EMM*
Appendix A, Section 3

IDENTIFICATION KEY TO COALESCENT TRADITION CERAMICS

I. S-Shaped or "collared" rim forms
A. Decoration on the exterior rim (other vessel areas may be decorated)
   1. Cord impressed exterior rim decoration technique (occasional tool or finger impressions above
      and/or below cord impressions)
      a. Horizontal lines exterior rim decoration motif
         (1). Smoothed/simple stamped exterior rim surface treatment
             Hosterman Cord Impressed S-Shaped Rims: Type A (Miller 1964:175)-(2):EC*
                Group 4 (Hoffman 1967:36-37)-(2):EC*
             Rim Group 9 (Kivett and Jensen 1976:84)-5g(1),E7g(1):IC*
             Melville Cord Impressed (Wheeler 1963:199-200)-(2),c(1),c(2),d(1),d(2):PCC*
         (2). Smoothed/brushed exterior rim surface treatment
             Le Beau S-Shaped Rim: Le Beau Horizontal Cord Impressed Variety (Hurt 1957:41):PCC-EC
                Colombe Cord Impressed (Lehmer and Jones 1968:28-29)-c(2),d(2):PCC
                Group 4 (Hoffman 1967:36-37)-(1):EC*
             Hosterman Cord Impressed S-Shaped Rims: Type A (Miller 1964:175)-(1):EC*
                Melville Cord Impressed (Wheeler 1963:199-200)-(1),c(1),c(2),d(1),d(2):PCC*
             S-Rim Category (parallel horizontal lines) (Baerreis and Dallman 1961:476-477)-3a(2):PCC*
      c. Diagonal, vertical or horizontal lines in various combinations exterior rim decoration motif
         (1). Smoothed/simple stamped exterior rim surface treatment
             Melville Cord Impressed (Wheeler 1963:199-200)-a(1),a(2),(2),d(1),d(2):PCC*
             Deapolis Collared Rim (Lehmer, Wood and Dill 1978:208-211)-E7g(1):PCC*
         (2). Smoothed/brushed exterior rim surface treatment
             Le Beau S-Shaped Rim: Miscellaneous Variations (Hurt 1957:43)-4g(2):PCC-EC
                Colombe Cord Impressed (Lehmer and Jones 1968:28-29)-a(2),d(2):PCC
                Melville Cord Impressed (Wheeler 1963:199-200)-a(1),a(2),(1),d(1),d(2):PCC*
             S-Rim Category (parallel diagonal lines bounded by horizontal lines) (Baerreis and
                Dallman 1961:476-477)-3c(2):PCC*
      d. Horizontal lines and rainbow exterior rim decoration motif
(1). Smoothed/simple stamped exterior rim surface treatment
  Hosterman Cord Impressed S-Shaped Rims: Type B (Miller 1964:175)-(2):EC*
  Melville Cord Impressed (Wheeler 1963:199-200)-a(1),a(2),(2),c(1),c(2):PCC*
(2). Smoothed/brushed exterior rim surface treatment
  Le Beau S-Shaped Rim: Rygh Rainbow Cored Variety (Hurt 1957:42-43):PCC,EC*
  Colombe Cord Impressed (Lehmer and Jones 1968:28-29)-a(2),c(2):PCC
  Hosterman Cord Impressed S-Shaped Rims: Type B (Miller 1964:175)-(1):EC*
  Melville Cord Impressed (Wheeler 1963:199-200)-a(1),a(2),(1),c(1),c(2):PCC*
  S-Rim Category (various rainbow patterns) (Baerreis and Dallman 1961:476-477):PCC*
2. Cord wrapped tool impressed exterior rim decoration technique (occasional tool or finger impressions above and/or below cord wrapped tool impressions)
g. Not used as a criterion for classification-exterior rim decoration motif
   (1). Smoothed/simple stamped exterior rim surface treatment
      Melville Wrapped-Stick Impressed (Wheeler 1963:200)-(2):PCC*
   (2). Smoothed/brushed exterior rim surface treatment
      Le Beau Cord Wrapped Rod (Hurt 1957:39):PCC
      Melville Wrapped-Stick Impressed (Wheeler 1963:200)-(1):PCC*
3. Incised or trailed exterior rim decoration technique (occasional tool or finger impressions above, below or interrupting incising or trailing)
a. Horizontal lines exterior rim decoration motif
   (1). Smoothed/simple stamped exterior rim surface treatment
      Group I, variety 1 (Hoffman 1967:32-33)-(2):EC*
      Group 8 (Hoffman 1967:42-43)-b(1),c(1):EC*
      Class 3 (Hoffman 1968:41)-b(1),c(1),4g(1):EC*
      La Roche Incised "S" Rim Type (Stephenson 1971:53-54)-(2),b(1),b(2),c(1),c(2),4g(1),
      4g(2):EC*
      Iona S-Rim: Variety A (Smith and Grange 1958:101):EC-PCC
      Wheeler Horizontal-incised Rim (Hurt 1952:76)-IIA3a(1)(a):EC*
      Wheeler S-Shaped Rim (Hurt 1970:186)-b(1),c(1),4g(1):EC*
      Arzberger Horizontal Incised (Spaulding 1956:139-141)-(3):IC
      Hosterman Incised S-Shaped Rims (parallel horizontal line incised) (Miller 1964:174-175)-(2):EC*
      Recurved Rims, Horizontally Incised and Pinched/Punctated (Woolworth and Wood 1964:101-102):EC*
      Group 3 (Kotch and Starr 1968:321):EC*
Group 1 (Coleman 1968:235): EC*
Group 3 (Coleman 1968:236): EC*
Group 4 (Coleman 1968:236): EC*
Rim Group 6 (Kivett and Jensen 1976:83)-b(1): PCC*

(2) Smoother brushed exterior rim surface treatment
Le Beau S-Shaped Rim: Le Beau Incised S-Rim Variety (Hurt 1957:41-42)-b(2)c(2): EC, PCC
La Roche Incised "S" Rim Type (Stephenson 1971:53-54)-a(1),b(1),b(2),c(1),c(2),4g(1),
4g(2): EC*
Group 1, variety 1 (Hoffman 1967:32-33)-(1): EC*
Le Beau Incised (Lehmer, Wood and Dill 1978:201-202)-6a(2): PCC*
Hosterman Incised S-Shaped Rims (parallel horizontal line incised) (Miller 1964:174-175)-
(1): EC*
S-Rim Category (parallel horizontal lines) (Baerreis and Dallman 1961:476-477)-1a(2): PCC*

(3) Smoothed/cord roughened exterior rim surface treatment
Campbell Creek Collared (Smith 1951:39-40): IC
Arzberger Horizontal Incised (Spaulding 1956:139-141)-(1): IC
b. Long or short diagonal lines exterior rim decoration motif
(1) Smoothed/simple stamped exterior rim surface treatment
La Roche Incised "S" Rim Type (Stephenson 1971:53-54)-a(1),a(2),(2),c(1),c(2),4g(1),
4g(2): EC*
Group 1, variety 2 (Hoffman 1967:33-34)-c(1),4g(1): EC*
Class 3 (Hoffman 1968:41)-a(1),c(1),4g(1): EC*
Group 8 (Hoffman 1967:42-43)-a,(1),c(1): EC*
Cadotte Collared: Variety A (Smith and Johnson 1968:15-16)-(2),4g(1),4g(2): PCC, EC
Cadotte Collared: Variety B (Smith and Johnson 1968:15-16)-(2): PCC, EC
Cadotte Collared: Variety C (Smith and Johnson 1968:15-16)-(2): PCC, EC
Iona S-Rim: Variety B (Smith and Grange 1958:101)-4g(1): PCC-EC
Iona S-Rim: Variety C (Smith and Grange 1958:101): PCC-EC
Wheeler Incised Triangle Rim (Hurt 1952:75): EC*
Wheeler Deep Trailed Rim (Hurt 1952:76-77)-4g(1), IIA3b(1)(a), IIA4g(1)(a): EC*
Wheeler S-Shaped Rim (Hurt 1970:186)-a(1),c(1),4g(1): EC*
Arzberger Diagonal Incised (Spaulding 1956:145-148)-(3): IC
Hosterman Incised S-Shaped (vertical and/or diagonal line incised, herringbone incised,
line block) (Miller 1964:174-175)-(2),c(1),c(2),4g(1),4g(2): EC*
Recurved Rims, Obliquely Incised and Pinched/Punctate (Woolworth and Wood 1964:102)-(3):
EC*
Group 6 (Coleman 1968:236): EC*
Group 5, variety 1 (Kotch and Starr 1968:322): EC*
Group 5, variety 2 (Kotch and Starr 1968:322): EC*
Group 11 (Johnston 1967:49-50) - e(1), 5g(1): PCC*
Rim Group 6 (Kivett and Jensen 1976:83) - a(1): PCC*
Oacoma Recurved (Kivett 1958:115-116) - 4g(1), E7g(1): PCC*
Nance Pinched Collar (Kivett 1958:117-119) - e(1): PCC*

(2) Smoothed/brushed exterior rim surface treatment
Le Beau S-Shaped Rim: Le Beau Incised S-Rim Variety (Hurt 1957:41-42) - a(2), c(2): EC, PCC
La Roche Incised "S" Rim Type (Stephenson 1971:53-54) - a(1), a(2), (1), c(1), c(2), 4g(1), 4g(2): EC*
Cadotte Collared: Variety A (Smith and Johnson 1968:15-16) - (1), 4g(1), 4g(2): PCC, EC
Cadotte Collared: Variety B (Smith and Johnson 1968:15-16) - (1): PCC, EC
Cadotte Collared: Variety C (Smith and Johnson 1968:15-16) - (1): PCC, EC
Colombe Tool Impressed (Lehmer and Jones 1968:28-29) - 4g(2): PCC
Hosterman Incised S-Shaped (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:174-175) - (1), c(1), c(2), 4g(1), 4g(2): EC*
S-Rim Category (parallel diagonal lines) (Baerreis and Dallman 1961:476-477): PCC*

(3) Smoothed/cord roughened exterior rim surface treatment
Arzberger Diagonal Incised (Spaulding 1956:145-148) - (1): IC
Recurved Rims, Obliquely Incised and Pinched/Punctate (Woolworth and Wood 1964:102) - (1): EC*
c. Diagonal, vertical or horizontal lines in various combinations exterior rim decoration motif

(1) Smoothed/simple stamped exterior rim surface treatment
Group 3 (Hoffman 1967:42-43) - a(1), b(1): EC*
Class 3 (Hoffman 1968:41) - a(1), b(1), 4g(1): EC*
Group 1, variety 2 (Hoffman 1967:33-34) - b(1), 4g(1): EC*
La Roche Incised "S" Rim Type (Stephenson 1971:53-54) - a(1), a(2), b(1), b(2), (2), 4g(1), 4g(2): EC*
Wheeler S-Shaped Rim (Hurt 1970:186) - a(1), b(1), 4g(1): EC*
Hosterman Incised S-Shaped (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:174-175) - b(1), b(2), (2), 4g(1), 4g(2): EC*

(2) Smoothed/brushed exterior rim surface treatment
Le Beau S-Shaped Rim: Le Beau Incised S-Rim Variety (Hurt 1957:41-42) - a(2), b(2): EC, PCC
La Roche Incised "S" Rim Type (Stephenson 1971:53-54)-a(1),a(2),b(1),b(2),(1),4g(1),
4g(2):EC*
Hosterman Incised S-Shaped (vertical and/or diagonal line incised, herringbone incised,
line block) (Miller 1964:174-175)-b(1),b(2),(1),4g(1),4g(2):EC*
S-Rim Category (parallel diagonal lines bounded by horizontal lines) (Baerreis and
Dallman 1961:476-477)-1c(2):PCC*
e. Crosshatched lines exterior rim decoration motif
(1). Smoothed/simple stamped exterior rim surface treatment
Group II (Johnston 1967:49-50)-b(1),5g(1):PCC*
Nance Pinched Collar (Kivett 1958:117-119)-b(1):PCC*
(3). Smoothed/cord roughened exterior rim surface finish
Arzberger Crosshatched (Spaulding 1956:141-145):IC
4. Tool impressed exterior rim decoration technique
g. Not used as a criterion for classification exterior rim decoration motif
(1). Smoothed/simple stamped exterior rim surface treatment
La Roche Incised "S" Rim Type (Stephenson 1971:53-54)-3a(1),3a(2),3b(1),3b(2),3c(1),
3c(2),(2):EC*
Group 1, variety 2 (Hoffman 1967:33-34)-3b(1),3c(1):EC*
Class 3 (Hoffman 1968:41)-3a(1),3b(1),3c(1):EC*
Cadotte Collared: Variety A (Smith and Johnson 1968:15-16)-3b(1),3b(2),(2):PCC,EC
Cadotte Collared: Variety D (Smith and Johnson 1968:15-16)-(2):PCC,EC
Iona S-Rim: Variety B (Smith and Grange 1958:101)-3b(1):PCC-EC
Compound Curved Rim (Brown 1967:63-66):PCC*
Wheeler Deep Trailed Rim (Hurt 1952:76-77)-3b(1),IIA3b(1)(a),IIA4g(1)(a):EC*
Wheeler S-Shaped Rim (Hurt 1970:186)-3a(1),3b(1),3c(1):EC*
Hosterman Incised S-Shaped (vertical and/or diagonal line incised, herringbone incised,
line block) (Miller 1964:174-175)-3b(1),3b(2),3c(1),3c(2),(2):EC*
Oacoma Recurved (Kivett 1958:115-116)-3b(1),E7g(1):PCC*
Recurved Rims, Pinched in Mid-Rim (Woolworth and Wood 1964:102-103)-5g(1):EC*
Oacoma Inverted Lip (Kivett 1958:119-121):PCC*
(2). Smoothed/brushed exterior rim surface treatment
La Roche Incised "S" Rim Type (Stephenson 1971:53-54)-3a(1),3a(2),3b(1),3b(2),3c(1),
3c(2),(1):EC*
Le Beau S-Shaped Rim: Miscellaneous Variations (Hurt 1957:42)-1c(2):PCC-EC
Cadotte Collared: Variety A (Smith and Johnson 1968:15-16)-3b(1),3b(2),(1):PCC,EC
Cadotte Collared: Variety D (Smith and Johnson 1968:15-16)-(1):PCC,EC
Colombe Tool Impressed (Lehmer and Jones 1968:28-29)-3b(2):PCC
Hosterman Incised S-Shaped (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:174-175)-3b(1),3b(2),3c(1),3c(2),(1):EC*

(3). Smoothed/cord roughened exterior rim surface treatment
Arzberger Plain (Spaulding 1956:137-139)-5g(3):IC

5. Finger impressed exterior rim decoration technique
g. Not used as a criterion for classification-exterior rim decoration motif
(1). Smoothed/simple stamped exterior rim surface treatment
Recurred Rim, Pinched in Mid-Rim (Woolworth and Wood 1964:102-103)-4g(1):EC*
Group 11 (Johnston 1967:49-50)-3b(1),3e(1):PCC*
Rim Group 9 (Kivett and Jensen 1976:84)-1a(1),E7g(1):PCC*

(3). Smoothed/cord roughened exterior rim surface treatment
Arzberger Plain (Spaulding 1956:137-139)-4g(3):IC

6. Stab and drag exterior rim decoration technique (occasional tool or finger impressions above and/or below stab and drag lines)
a. Horizontal lines exterior rim decoration motif
(2). Smoothed/brushed exterior rim surface treatment
Akaska Stab and Drag: Variety A (Hurt 1957:45):EC,PCC
Le Beau Incised (Lehmer, Wood and Dill 1978:201-202)-3a(2):PCC*

E. Undecorated exterior rim (other vessel areas may be decorated)
7. Not applicable-exterior rim decoration technique
g. Not applicable-exterior rim decoration motif
(1). Smoothed/simple stamped exterior rim surface treatment
Le Beau S-Rim, Plain (Wilmeth 1958:6):EC
La Roche Plain "S" Rim (Stephenson 1971:55)-(2):EC*
Group 2 (Hoffman 1967:34-35):EC*
Cadotte Collared: Variety E (Smith and Johnson 1968:15-16)-(2):PCC,EC
Iona S-Rim: Variety D (Smith and Grange 1958:101):PCC-EC
Hosterman Plain S-Shaped (Miller 1964:175)-(2):EC*
Recurred Rims, Plain (Woolworth and Wood 1964:103):EC*
Oacoma Recurved (Kivett 1958:115-116)-A3b(1),A4g(1):PCC*
Group 4 (Kotch and Starr 1968:321-322):EC*
Group 2 (Coleman 1968:235):EC*
Rim Group 9 (Kivett and Jensen 1976:84)-A1a(1),A5g(1):PCC*
Deapolis Collared Rim (Lehmer, Wood and Dill 1978:208-211)-A1c(1):PCC*
Group III: Subgroup A (Dahlberg 1977:175-176)-(3)?
Group III: Subgroup B (Dahlberg 1977:176)-(3)?

(2). Smoothed/brushed exterior rim surface treatment
La Roche Plain "S" Rim (Stephenson 1971:55)-(1):EC*
Cadotte Collared: Variety E (Smith and Johnson 1968:15-16)-(1):PCC,EC
Colombe Plain (Lehner and Jones 1968:28-29):PCC
Hosterman Plain S-Shaped (Miller 1964:175)-(1):EC*
Le Beau Plain (Lehner, Wood and Dill 1978:203):PCC*
S-Rim Category (plain) (Baerreis and Dallman 1961:476-477):PCC*
Melville Scored (Wheeler 1963:201):PCC*

(3). Smoothed/cord roughened exterior rim surface treatment
Group III: Subgroup A (Dahlberg 1977:175-176)-(1)?
Group III: Subgroup B (Dahlberg 1977:176)-(1)?

II. Straight or curved rim forms
A. Decoration on the exterior rim (other vessel areas may be decorated)
   1. Cord impressed exterior rim decoration technique (occasional tool or finger impressions above and/or below cord impressions, lip not cord impressed)
      a. Horizontal lines exterior rim decoration motif
         (1). Smoothed/simple stamped exterior rim surface treatment
            (a). Thickened lip form
               Group 5 (Hoffman 1967:37-38)-(b):EC*
               Hosterman Vertical Rims (cord impressed) (Miller 1964:177-178)-(b),(2)(b):EC*
            (b). Unthickened lip form
               Group 5 (Hoffman 1967:37-38)-(a):EC*
               Hosterman Vertical Rims (cord impressed) (Miller 1964:177-178)-(a),(2)(b):EC*
         (2). Smoothed/brushed exterior rim surface treatment
            (a). Thickened lip form
               Hosterman Vertical Rims (cord impressed) (Miller 1964:177-178)-(1)(a),(1)(b),(b):EC*
               Plain, Smoothed Rims (Wood 1971:31)-(b),D7g(2)(a),D7g(2)(b):EC*
            (b). Unthickened lip form
               Hosterman Vertical Rims (cord impressed) (Miller 1964:177-178)-(1)(a),(1)(b),(a):EC*
               Plain, Smoothed Rims (Wood 1971:31)-(a),D7g(2)(a),D7g(2)(b):EC*

2. Cord wrapped tool impressed exterior rim decoration technique
   a. Horizontal lines exterior rim decoration motif
(2). Smoothed/brushed exterior rim surface treatment
   (a). Thickened lip form
      Steamboat Cord Wrapped Rod (Hurt 1957:43-44)-(b), B2g(2)(a), B2g(2)(b): PCC, EC
   (b). Unthickened lip form
      Steamboat Cord Wrapped Rod (Hurt 1957:43-44)-(a), B2g(2)(a), B2g(2)(b): PCC, EC

3. Incised or trailed exterior rim decoration technique (occasional tool or finger impressions above, below or interrupting incising or trailing)
   a. Horizontal lines exterior decoration motif
      (1). Smoothed/simple stamped exterior rim surface treatment
         (a). Thickened lip form
            Group 6, variety 1 (Hoffman 1967:38-40)-(b): EC*
            La Roche Horizontal Incised: Class 1, variety 1 (Hoffman 1968:39-40): EC*
            La Roche Incised Straight Rim Type (Stephenson 1971:51-53)-(b), (2)(a), (2)(b): EC*
            La Roche Horizontally Incised (Lehmer and Jones 1968:52-54)-(b): EC*
            Iona Horizontal Incised (Smith and Grange 1958:100-101): EC, PCC
            Wheeler: Horizontal-incised Rim (Hurt 1952:76)-IA3a(1): EC*
            Hosterman Vertical Rims (parallel horizontal line incised) (Miller 1964:177-178)-(b), (2)(a), (2)(b): EC*
            Russell Horizontal Incised Rim: C.B. Smith Variety (McNutt 1958:31-33)-(b): EC*
            Category B (Cooper 1949:303-304)-(b): EC*
            Straight Rim: Horizontal Incised (Brown 1967:68)-(b): EC*
         (b). Unthickened lip form
            Group 6, variety 1 (Hoffman 1967:38-40)-(a): EC*
            La Roche Horizontal Incised: Class 1, variety 2 (Hoffman 1968:40): EC*
            La Roche Horizontal Incised: Wheeler Variety (Hoffman 1968:59-60): EC*
            La Roche Incised Straight Rim (Stephenson 1971:51-53)-(a), (2)(a), (2)(b): EC*
            La Roche Horizontally Incised (Lehmer and Jones 1968:52-54)-(a): EC*
            Grey Cloud Horizontal Incised (Smith and Grange 1958:102-103): EC
            Horizontally Incised Rim, Hughes Group (Spaulding 1956:153-154)-(3)(b): IC*
            Flaring Rims, Horizontally Incised (Woolworth and Wood 1964:96-97)-c(1)(b), 6g(1)(b): EC*
            Hosterman Vertical Rims (parallel horizontal line incised) (Miller 1964:177-178)-(a), (2)(a), (2)(b): EC*
            Straight Rim: Horizontal Incised (Brown 1967:68)-(a): EC*
            Russell Horizontal Incised Rim: C.B. Smith Variety (McNutt 1958:31-33)-(a): EC*
Category B (Cooper 1949:303-304)-(a):EC*
Group 2 (Kotch and Starr 1968:319-321):EC*
Rin Group 7 (Kivett and Jensen 1976:83-84):PCC*
Group I: Subgroup C (Dahlberg 1977:170-171):?

(2). Smoothed/brushed exterior rim surface treatment
(a). Thickened lip form
Nordvold Horizontal Incised (Hurt 1957:44-45)-(b):EC,PCC
La Roche Incised Straight Rim (Stephenson 1971:51-53)-(1)(a),(1)(b),(b):EC*
Hosterman Vertical Rims (parallel horizontal line incised) (Miller 1964:177-178)-(1)(a),(1)(b),(b):EC
(b). Unthickened lip form
Nordvold Horizontal Incised (Hurt 1957:44-45)-(a):EC,PCC
La Roche Incised Straight Rim (Stephenson 1971:51-53)-(1)(a),(1)(b),(a):EC*
Hosterman Vertical Rims (parallel horizontal line incised) (Miller 1964:177-178)-(1)(a),(1)(b),(a):EC*

(3). Smoothed/cord roughened exterior rim surface treatment
(b). Unthickened lip form
Horizontal Incised Rim, Hughes Group (Spaulding 1956:153-154)-(1)(b):IC*
Lisbon Horizontally Incised (Wood 1963:231-232):?

b. Long or short diagonal lines exterior rim decoration motif

(1). Smoothed/simple stamped exterior rim surface treatment
(a). Thickened lip form
Group 7 (Hoffman 1967:41-42)-(b),(2)(a),(2)(b),4g(1)(a),4g(1)(b),4g(2)(a),4g(2)(b):EC*
La Roche Diagonally Incised (Lehmer and Jones 1968:52-54)-(b):EC*
P-L Diagonal Incised: Iona Variety (Hoffman 1968:41-42, 60)-4g(1)(a):EC*
Iona Diagonal Incised (Smith and Grange 1958:100)-(c)(1)(a),4g(1)(a):EC
Straight Rim: Diagonal Incised (Brown 1967:67-68)-(b):EC*
Wheeler Deep Trailed Rim (Hurt 1952:76-77)-IA3b(1),IA4g(1),4g(1)(a):EC*
Hosterman Vertical Rims (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:177-178)-(b),(2)(a),(2)(b),c(1)(a),c(1)(b),4g(1)(a),4g(1)(b),4g(2)(a),4g(2)(b):EC*
(b). Unthickened lip form
Group 7 (Hoffman 1967:41-42)-(a),(2)(a),(2)(b),4g(1)(a),4g(1)(b),4g(2)(a),4g(2)(b):EC*
La Roche Diagonally Incised (Lehmer and Jones 1968:52-54)-(a):EC*
P-L Diagonal Incised: Wheeler Variety (Hoffman 1968:41-42, 60)-4g(1)(b):EC*
Straight Rim: Diagonal Incised (Brown 1967:66-68)-(a):EC*
Other Incised Rim, Hughes Group (Spaulding 1956:153-157)-(3)(b),c(1)(b),c(3)(b):EC*
Hosterman Vertical Rims (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:177-178)-(a),(2)(a),(2)(b),c(1)(a),c(1)(b),4g(1)(a),4g(1)(b),4g(2)(a),4g(2)(b):EC*
Flaring Rims, Obliquely Incised (Woolworth and Wood 1964:97-98):EC*

(2). Smoothed/brushed exterior rim surface treatment
(a). Thickened lip form
Group 7 (Hoffman 1967:41-42)-(1)(a),(1)(b),(b),4g(1)(a),4g(1)(b),4g(2)(a),4g(2)(b):EC*
Hosterman Vertical Rims (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:177-178)-(1)(a),(1)(b),(b),c(1)(a),c(1)(b),4g(1)(a),4g(1)(b),4g(2)(a),4g(2)(b):EC*
(b). Unthickened lip form
Group 7 (Hoffman 1967:41-42)-(1)(a),(1)(b),(a),4g(1)(a),4g(1)(b),4g(2)(a),4g(2)(b):EC*
Hosterman Vertical Rims (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:177-178)-(1)(a),(1)(b),(a),c(1)(a),c(1)(b),4g(1)(a),4g(1)(b),4g(2)(a),4g(2)(b):EC*

(3). Smoothed/cord roughened exterior rim surface treatment
(b). Unthickened lip form
Other Incised Rim, Hughes Group (Spaulding 1956:153-157)-(1)(b),c(1)(b),c(3):IC*
c. Diagonal, vertical or horizontal lines in various combinations exterior rim decoration motif
(1). Smoothed/simple stamped exterior rim surface finish
(a). Thickened lip form
Iona Diagonal Incised (Smith and Grange 1958:100)-b(1)(a),4g(1)(a):EC
Hosterman Vertical Rims (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:177-178)-b(1)(a),b(1)(b),b(2)(a),b(2)(b),(b),4g(1)(a),4g(1)(b),4g(2)(a),4g(2)(b):EC*
(b). Unthickened lip form
Flaring Rims, Horizontally Incised (Woolworth and Wood 1964:96-97)-a(1)(b),6g(1)(b):EC*
Other Incised Rim, Hughes Group (Spaulding 1956:153-157)-b(1)(b),b(3)(b),(3)(b):IC*
Hosterman Vertical Rims (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:177-178)-b(1)(a),b(1)(b),b(2)(a),b(2)(b),(a),4g(1)(a),4g(1)(b),4g(2)(a),4g(2)(b):EC*

(3). Smoothed/cord roughened exterior rim surface treatment
(b). Unthickened lip form
Other Incised Rim, Hughes Group (Spaulding 1956:153-157)-b(1)(b),b(3)(b),(1)(b):IC*

4. Tool impressed exterior rim decoration technique
g. Not used as a criterion for classification-exterior rim decoration motif
(1). Smoothed/simple stamped exterior rim surface treatment
(a). Thickened lip form
Group 7 (Hoffman 1967:41-42)-3b(1)(a),3b(1)(b),3b(2)(a),3b(2)(b),(b),(2)(a),(2)(b):EC*
P-L Diagonal Incised: Iona Variety (Hoffman 1968:41-42, 60)-3b(1)(a):EC*
Iona Diagonal Incised (Smith and Grange 1958:100)-3b(1)(a),3c(1)(a):EC*
Wheeler Deep Trailed Rim (Hurt 1952:76-77)-IA3b(1),IA4g(1),3b(1)(a):EC*
Hosterman Vertical Rims (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:177-178)-3b(1)(a),3b(1)(b),3b(2)(a),3b(2)(b),3c(1)(a),3c(1)(b),(b),(2)(a),(2)(b):EC*

(b). Unthickened lip form
Group 7 (Hoffman 1967:41-42)-3b(1)(a),3b(1)(b),3b(2)(a),3b(2)(b),(a),(2)(a),(2)(b):EC*
Hosterman Vertical Rims (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:177-178)-3b(1)(a),3b(1)(b),3b(2)(a),3b(2)(b),3c(1)(a),3c(1)(b),(a),(2)(a),(2)(b):EC*

(2). Smoothed/brushed exterior rim surface treatment
(a). Thickened Lip form
Group 7 (Hoffman 1967:41-42)-3b(1)(a),3b(1)(b),3b(2)(a),3b(2)(b),(1)(a),(1)(b),(b):EC*
Le Beau Punctate (Hurt 1957:40-41)-(b):PCC-EC
Hosterman Vertical Rims (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:177-178)-3b(1)(a),3b(1)(b),3b(2)(a),3b(2)(b),3c(1)(a),3c(1)(b),(1)(a),(1)(b),(b):EC*

(b). Unthickened lip form
Group 7 (Hoffman 1967:41-42)-3b(1)(a),3b(1)(b),3b(2)(a),3b(2)(b),(1)(a),(1)(b),(a):EC*
Le Beau Punctate (Hurt 1957:40-41)-(a):PCC-EC
HOSTERMAN VERTICAL RIMS (vertical and/or diagonal line incised, herringbone incised, line block) (Miller 1964:177-178)-3b(1)(a),3b(1)(b),3b(2)(a),3b(2)(b),3c(1)(a),3c(1)(b),(1)(a),(1)(b),(a):EC*
6. STAB AND DRAG EXTERIOR RIM DECORATION TECHNIQUE
   g. NOT USED AS A CRITERION FOR CLASSIFICATION-EXTERIOR RIM DECORATION MOTIF
      (1) Smoothed/simple stamped exterior rim surface treatment
          (b) Unthickened lip form
              Flaring Rims, Horizontally Incised (Woolworth and Wood 1964:96-97)-3a(1)(b),3c(1)(b):EC*
      (2) Smoothed/brushed exterior rim surface treatment
          (a) Thickened lip form
              Akaska Stab and Drag: Variety B (Hurt 1957:45)-(b):EC,PCC
          (b) Unthickened lip form
              Akaska Stab and Drag: Variety B (Hurt 1957:45)-(a):EC,PCC

B. DECORATION ON THE LIP (OTHER VESSEL AREAS MAY BE DECORATED EXCEPT THE EXTERIOR RIM FOR LIP DECORATION TECHNIQUES 3-5)
   1. CORD IMPRESSED LIP DECORATION TECHNIQUE
      g. NOT USED AS A CRITERION FOR CLASSIFICATION-LIP DECORATION MOTIF
         (1) Smoothed/simple stamped exterior rim surface treatment
            (a) Thickened lip form
                Stanley Cord Impressed (Lehmer 1951:7-8)-(2)(a),2g(1)(a),2g(2)(a):PCC
                Outcurved Rim: Cord Impressed (Brown 1967:60-61)-(2)(a):PCC*
                Category A (Cooper 1949:303)-(2)(a),4g(1)(a),4g(2)(a),5g(1)(a),5g(2)(a),D7g(1)(a),D7g(2)(a):PCC*
                Buchanan Cord Impressed (Wheeler 1963:193-194)-(b):PCC*
                Pingree Cord Impressed (Wheeler 1963:196):PCC*
                Colfax Corded Brace (Hoffman 1970b:85-88):PCC*
                Knife River Cord Impressed (Lehmer, Wood and Dill 1978:190-195)-(b),(2)(a),(2)(b):PCC*
            (b) Unthickened lip form
                Talking Crow Cord Impressed (Smith 1951:35-36)-(2)(b):PCC
                Knife River Cord Impressed (Lehmer, Wood and Dill 1978:190-195)-(a),(2)(a),(2)(b):PCC*
Buchanan Cord Impressed (Wheeler 1963:193-194)-(a):PCC*

(2). Smoothed/brushed exterior rim surface treatment
   (a). Thickened lip form
      Stanley Cord Impressed (Lehmer 1951:7-8)-(1)(a),2g(1)(a),2g(2)(a):PCC
      Intermediate Cord Impressed (Baerreis and Dallman 1961:467-468):PCC
      Outcurved Rim: Cord Impressed (Brown 1967:60-61)-(1)(a):PCC*
      Category A (Cooper 1949:303)-(1)(a),4g(1)(a),4g(2)(a),5g(1)(a),5g(2)(a),D7g(1)(a),
      D7g(2)(a):PCC*
      Cord Impressed Rims (Wood 1971:30-31)-(b):PCC*
      Knife River Cord Impressed (Lehmer, Wood and Dill 1978:190-195)-(1)(a),(1)(b),(b):
PCC*

   (b). Unthickened lip form
      Talking Crow Cord Impressed (Smith 1951:35-36)-(1)(b):PCC
      Cord Impressed Rims (Wood 1971:30-31)-(a):PCC*
      Knife River Cord Impressed (Lehmer, Wood and Dill 1978:190-195)-(1)(a),(1)(b),(a):
PCC*

2. Cord wrapped tool impressed lip decoration technique
   g. Not used as a criterion for classification-lip decoration motif
   (1). Smoothed/simple stamped exterior rim surface treatment
      (a). Thickened lip form
         Stanley Cord Impressed (Lehmer 1951:7-8)-1g(1)(a),1g(2)(a),(2)(a):PCC
      (b). Unthickened lip form
         Buchanan Wrapped-Stick Impressed (Wheeler 1963:195):PCC*
   (2). Smoothed/brushed exterior rim surface treatment
      (a). Thickened lip form
         Steamboat Cord Wrapped Rod (Hurt 1957:43-44)-A2a(2)(a),A2a(2)(b),(b):PCC,EC
         Stanley Cord Impressed (Lehmer 1951:7-8)-1g(1)(a),1g(2)(a),(1)(a):PCC
         Cord-Wrapped Rod-Impressed Rims (Wood 1971:27-30)-(b):PCC*
      (b). Unthickened lip form
         Steamboat Cord Wrapped Rod (Hurt 1957:43-44)-A2a(2)(a),A2a(2)(b),(a):PCC,EC
         Cord-Wrapped Rod-Impressed Rims (Wood 1971:27-30)-(a):PCC*

3. Incised or trailed lip decoration technique
   a. Horizontal Tines lip decoration motif
      (1). Smoothed/simple stamped exterior rim surface treatment
         (a). Thickened lip form
Stanley Tool Impressed (Lehmer 1951:6-7)-(2)(a),4g(1)(a),4g(2)(a):PCC
Colfax Braced (Kivett 1958:113-115)-4g(1)(a):PCC*
Colfax Tooled Brace (Hoffman 1970b:85-87)-4g(1)(a):PCC*
Knife River Incised (Lehmer, Wood and Dill 1978:198)-(b),(2)(a),(2)(b):PCC*
(b). Unthickened lip form
Knife River Incised (Lehmer, Wood and Dill 1978:198)-(a),(2)(a),(2)(b):PCC*
(2). Smoothed/brushed exterior rim surface treatment
(a). Thickened lip form
Stanley Tool Impressed (Lehmer 1951:6-7)-(1)(a),4g(1)(a),4g(2)(a):PCC
Knife River Incised (Lehmer, Wood and Dill 1978:198)-(1)(a),(1)(b),(b):PCC*
(b). Unthickened lip form
Knife River Incised (Lehmer, Wood and Dill 1978:198)-(1)(a),(1)(b),(a):PCC*
(3). Smoothed/cord roughened exterior rim surface treatment
(b). Unthickened lip form
Lisbon Undecorated (Wood 1963:231-232)-4g(3)(b),5g(3)(b),D7g(3)(b):?*

4. Tool impressed lip decoration technique
4g. Not used as a criterion for classification-lip decoration motif
(1). Smoothed/simple stamped exterior rim surface treatment
(a). Thickened lip form
Group 3 (decorated lip) (Hoffman 1967:35-36)-(b),(2)(a),(2)(b):EC*
La Roche Plain Straight Rim (Stephenson 1971:54-55)-(b),(2)(a),(2)(b),D7g(1)(a),
D7g(1)(b),D7g(2)(a),D7g(2)(b):EC*
La Roche Decorated Lip (Lehmer and Jones 1968:52-54)-(b):EC*
Class 2, variety 1 (Hoffman 1968:40-41)-5g(1)(a)
Stanley Tool Impressed (Lehmer 1951:6-7)-3a(1)(a),3a(2)(a),(2)(a):PCC
Iona Indented (Smith and Grange 1958:98-100):EC,PCC
Straight Rim: Plain Rim (Brown 1967:68, 70)-(b),5g(1)(a),5g(1)(b),D7g(1)(a),D7g(1)
(b):EC*
Wheeler Ridged Rim (Hurt 1952:73-74)-(b):EC*
Wheeler Plain Rim (Hurt 1952:74-75)-(b):EC*
Wheeler Indented (Hurt 1970:186)-(b):EC*
Hughes Beveled (Spaulding 1956:165-167)-(3)(a),5g(1)(a),5g(3)(a):IC*
Flaring Rims, Beveled or Braced (Woolworth and Wood 1964:98-99):EC*
Hosterman Vertical Rims (plain, simple stamped) (Miller 1964:177-178)-(b),5g(1)(a),
5g(1)(b):EC*
Category A (Cooper 1949:306)-1g(1)(a),1g(2)(a),(2)(a),5g(1)(a),5g(2)(a),D7g(1)(a),
   D7g(2)(a):PCC*
Category C (Cooper 1949:306)-(b):PCC,EC*
Russell Plain Rim: C.B. Smith Variety (McNutt 1958:29-31):EC*
Rim Group 8 (Kivett and Jensen 1976:84)
Colfax Braced (Kivett 1958:113-115)-3a(1)(a):PCC*
Colfax Tooled Brace (Hoffman 1970b:85-87)-3a(1)(a):PCC*
Colfax Plain Brace (Hoffman 1970b:85-89)-5g(1)(a):PCC*
Group I: Subgroup A (Dahlberg 1977:164, 168)-(b),(3)(a),(3)(b):?
Group II: Subgroup A (Dahlberg 1977:173-174)-(3)(a):?

(b). Unthickened lip form
Group 3 (decorated Tip) (Hoffman 1967:35-36)-(a),(2)(a),(2)(b):EC*
Class 2, variety 2 (Hoffman 1968:41)-5g(1)(b),D7g(1)(b):EC*
La Roche Plain Straight Rim (Stephenson 1971:54-55)-(a),(2)(a),(2)(b),D7g(1)(a),
   D7g(1)(b),D7g(2)(a),D7g(2)(b):EC*
La Roche Decorated Lip (Lehmer and Jones 1968:52-54)-(a):EC*
Talking Crow Straight Rim (Smith 1951:36-37)-D7g(1)(b):PCC,EC
Talking CrowIndented (Lehmer and Jones 1968:30)-(2)(b):PCC
Straight Rim: Plain Rim (Brown 1967:68, 70)-(a),5g(1)(a),5g(1)(b),D7g(1)(a),D7g(1)
   (b):EC*
Wheeler Ridged Rim (Hurt 1952:73-74)-(a):EC*
Wheeler Plain Rim (Hurt 1952:74-75)-(a):EC*
Wheeler Indented (Hurt 1970:186)-(a):EC*
Campbell Creek Indented (Smith 1977:67)-(3)(b),5g(1)(b),5g(3)(b):IC
Plain Rims, Hughes Group (Spaulding 1956:157-164)-(3)(b),D7g(1)(b),D7g(3)(b):IC*
Category C (Cooper 1949:306)-(a):EC*
Hosterman Vertical Rims (plain, simple stamped) (Miller 1964:177-178)-(a),5g(1)(a),
   5g(1)(b):EC*
Group 1 (Kotch and Starr 1968:317-319)-D7g(1)(b):EC*
Group 8 (Coleman 1968:237):EC*
Group 10 (Johnston 1967:48-49):PCC*
Rim Group 1 (Kivett and Jensen 1976:82):PCC*
Rim Group 3 (Kivett and Jensen 1976:82-83):PCC*
Nance Plain Rim (Kivett 1958:109-113)-D7g(1)(b):PCC*
Buchanan Incised-Trailed (Wheeler 1963:193):PCC*
Buchanan Tool Impressed (Wheeler 1963:194):PCC*
Buchanan Punctated (Wheeler 1963:194-195):PCC*
Group I: Subgroup A (Dahlberg 1977:164, 168)-(a), (3)(a), (3)(b):

(2). Smoothed/brushed exterior rim surface treatment
(a). Thickened lip form
Le Beau Tool Impressed: Variety A (Hurt 1957:43):PCC-EC
Group 3 (decorated lip) (Hoffman 1967:35-36)-(1)(a), (1)(b), (b):EC*
La Roche Plain Straight Rim (Stephenson 1971:54-55)-(1)(a), (1)(b), (b), D7g(1)(a), D7g
(1)(b), D7g(2)(a), D7g(2)(b):EC*
Stanley Tool Impressed (Lehmer 1951:6-7)-3a(1)(a), 3a(2)(a), (1)(a):PCC
Outcurved Rim: Tool Decorated (Brown 1967:57-62)-(1)(a):PCC*
Akaska Tool Impressed (Hurt 1957:46):EC, PCC
Hosterman Vertical Rims (plain, brushed) (Miller 1964:177-178)-(b), 5g(2)(a), 5g(2)(b):
EC*
Intermediate Tool Impressed (Baerreis and Dallman 1961:469):PCC
Category A (Cooper 1949:303)-1g(1)(a), 1g(2)(a), (1)(a), 5g(1)(a), 5g(2)(a), D7g(1)(a),
D7g(2)(a):PCC*
Tool-Impressed Rims (Wood 1971:31)-(b):PCC*
Knife River Tool Impressed (Lehmer, Wood and Dill 1978:195-196)-(b):PCC*

(b). Unthickened lip form
Group 3 (decorated lip) (Hoffman 1967:35-36)-(1)(a), (1)(b), (a):EC*
La Roche Plain Straight Rim (Stephenson 1971:54-55)-(1)(a), (1)(b), (a), D7g(1)(a), D7g
(1)(b), D7g(2)(a), D7g(2)(b):EC*
Talking Crown Indented (Lehmer and Jones 1968:30)-(1)(b):PCC
Talking Crown Brushed (Smith 1951:34-35)-5g(2)(b), D7g(2)(b):PCC
Talking Crown Indented (Smith 1951:35):PCC
Hosterman Vertical Rims (plain, brushed) (Miller 1964:177-178)-(a), 5g(1)(a), 5g(1)(b):
EC*
Tool-Impressed Rims (Wood 1971:31)-(a):PCC*
Knife River Tool Impressed (Lehmer, Wood and Dill 1978:195-196)-(a):PCC*

(3). Smoothed/cord roughened exterior rim surface treatment
(a). Thickened lip form
Hughes Beveled (Spaulding 1956:165-167)-(1)(a), 5g(1)(a), 5g(3)(a):IC*
Group I: Subgroup A (Dahlberg 1977:164, 168)-(1)(a), (1)(b), (b):
Group II: Subgroup A (Dahlberg 1977:173-174)-(1)(a):

(b). Unthickened lip form
5. Finger impressed lip decoration technique

g. Not used as a criterion for classification-lip decoration motif

(1). Smoothed/simple stamped exterior rim surface treatment

(a). Thickened lip form

Class 2, variety I (Hoffman 1968:40-41)-4g(1)(a):EC*
Stanley Pinched (occasional isolated cord or tool impressions on lip) (Lehmer and Jones 1968:26-27)-(2)(a):PCC
Campbell Creek Pinched (1951:38)-(3)(a):IC
Hughes Beveled (Spaulding 1956:165-167)-4g(1)(a),4g(3)(a),(3)(a):IC*
Hosterman Vertical Rims (plain, simple stamped) (Miller 1964:177-178)-4g(1)(a),4g(1)(b),(b):EC*
Category A (Cooper 1949:303)-1g(1)(a),1g(2)(a),4g(1)(a),4g(2)(a),(2)(a),D7g(1)(a),D7g(2)(a):PCC*
Outcurved Rim: Finger Impressed (Brown 1967:57-63)-(2)(a):PCC*
Straight Rim: Plain Rim (Brown 1967:68, 70)-4g(1)(a),4g(1)(b),(b),D7g(1)(a),D7g(1),D7g(2)(a):EC*
Knife River Pinched (Lehmer, Wood and Dill 1978:196-197)-(2)(a),D7g(1)(b):PCC*
Group II: Subgroup B (Dahlberg 1977:174-175)-(3)(a):?
Colfax Plain Brace (Hoffman 1970b:85-89)-4g(1)(a):PCC*

(b). Unthickened lip form

Class 2, variety 2 (Hoffman 1968:41)-4g(1)(a),4g(1)(b):EC*
Talking Crow Pinched (Lehmer and Jones 1968:30)-(2)(b):PCC
Campbell Creek Indented (Smith 1977:67)-4g(1)(b),4g(3)(b),(3)(b):IC
Hosterman Vertical Rims (plain, simple stamped) (Miller 1964:177-178)-4g(1)(a),4g(1)(b),(a):EC*
Knife River Pinched (Lehmer, Wood and Dill 1978:196-197)-(a),(2)(a),(2)(b):PCC*
Straight Rim: Plain Rim (Brown 1967:68, 70)-4g(1)(a),4g(1)(b),(a),D7g(1)(a),D7g(1)(b):EC*

(2). Smoothed/brushed exterior rim surface treatment

(a). Thickened lip form

Stanley Wavy Rim (Lehmer 1951:6):PCC*
Stanley Pinched (occasional isolated cord or tool impressions on lip) (Lehmer and Jones 1968:26-27)-(1)(a):PCC
Le Beau Finger Indented (Hurt 1957:39-40):PCC
Hosterman Vertical Rims (plain, brushed) (Miller 1964:177-178)-4g(2)(a),4g(2)(b),
(b):EC*
Intermediate Wavy Rim (Baerreis and Dallman 1961:470):PCC
Category A (Cooper 1949:303)-1g(1)(a),1g(2)(a),4g(1)(a),4g(2)(a),1(a),D7g(1)(a),
D7g(2)(a):PCC*

Pinched, Plain Rims (Wood 1971:31)-(b):PCC*
Knife River Pinched (Lehmer, Wood and Dill 1978:196-197)-(1)(a),(1)(b), (b):PCC*
Outcurved Rim: Finger Impressed (Brown 1967:57-63)-(1)(a):PCC*

(b). Unthickened lip form

Talking Crow Pinched (Lehmer and Jones 1968:30)-(1)(b):PCC
Talking Crow Brushed (Smith 1951:34-35)-4g(2)(b),D7g(2)(b):PCC
Hosterman Vertical Rims (plain, brushed) (Miller 1964:177-178)-4g(1)(a),4g(1)(b),
(a):EC*

Pinched, Plain Rims (Wood 1971:31)-(a):PCC*
Knife River Pinched (Lehmer, Wood and Dill 1978:196-197)-(1)(a),(1)(b),(a):PCC*

(3). Smoothed/cord roughened exterior rim surface treatment

(a). Thickened lip form

Campbell Creek Pinched (Smith 1951:38)-(1)(a):IC
Hughes Beveled (Spaulding 1956:165-167)-4g(1)(a),4g(3)(a),(1)(a):IC*
Group II: Subgroup B (Dahlberg 1977:174-175)-(1)(a):

(b). Unthickened lip form

Campbell Creek Indented (Smith 1977:67)-4g(1)(b),4g(3)(b),(1)(b):IC
Lisbon Tool Impressed (Wood 1963:231-232)-4g(3)(b):?
Lisbon Undecorated (Wood 1963:231-233)-3a(3)(b),4g(3)(b),D7g(3)(b):?
Group I, Subgroup E (Dahlberg 1977:172):

D. Undecorated lip and exterior rim (other vessel areas may be decorated)
7. Not applicable—lip or exterior rim decoration technique
g. Not applicable—lip or exterior rim decoration motif
(1). Smoothed/simple stamped exterior rim surface treatment

(a). Thickened lip form

- Group 3 (undecorated lip) [Hoffman 1967:35-36]-(b),(2)(a),(2)(b):EC*  
  La Roche Plain Straight Rim [Stephenson 1971:54-55]-B4g(1)(a),B4g(1)(b),B4g(2)(a),  
  B4g(2)(b),(b),(2)(a),(2)(b):EC*  
  Stanley Plain [Lehmer 1951:8]-(2)(a):PCC*  
  Category A [Cooper 1949:303]-B1g(1)(a),B1g(2)(a),B4g(1)(a),B4g(2)(a),B5g(1)(a),B5g  
  (2)(a),(2)(a):PCC*
  Knife River Plain [Lehmer, Wood and Davis 1978:198-199]-(b),(2)(a),(2)(b):PCC*
  Straight Rim: Plain Rim [Brown 1967:67-68]-4g(1)(a),4g(1)(b),5g(1)(a),5g(1)(b),(b):  
  EC*

(b). Unthickened lip form

- Class 2, variety 2 [Hoffman 1968:41]-B4g(1)(b),B5g(1)(b):EC*  
- Group 3 (undecorated lip) [Hoffman 1967:35-36]-(a),(2)(a),(2)(b):EC*  
- La Roche Plain Straight Rim [Stephenson 1971:54-55]-B4g(1)(a),B4g(1)(b),B4g(2)(a),  
  B4g(2)(b),(a),(2)(a),(2)(b):EC*
- Straight Rim: Plain Rim [Brown 1967:67-68]-4g(1)(a),4g(1)(b),5g(1)(a),5g(1)(b),(a):  
  EC*
- Talking Crow Straight Rim [Smith 1951:36-37]-B4a(1)(b):PCC*  
- Talking Crow Plain [Lehmer and Jones 1968:30]-(2)(b):PCC*  
- Campbell Creek Plain [Smith 1951:38-39]-(3)(b):IC,EC-PCC*  
- Plain Rim, Hughes Group [Spaulding 1956:157-164]-B4g(1)(b),B4g(3)(b),(3)(b):IC*  
- Buchanan Undecorated [Wheeler 1963:195]:PCC*  
- Rim Group 2 [Kivett and Jensen 1976:82]:PCC*  
- Rim Group 4 [Kivett and Jensen 1976:83]:PCC*  
- Group 1 (Kotch and Starr 1968:317-319)-B4g(1)(b):EC*  
- Nance Plain Rim [Kivett 1958:109-113]-B4g(1)(b):PCC*  
- Knife River Plain [Lehmer, Wood and Davis 1978:198-199]-(a),(2)(a),(2)(b):PCC*  
- Group I: Subgroup D [Dahlberg 1977:171-172]-(3)(b):?

(2). Smoothed/brushed exterior rim surface treatment

(a). Thickened lip form

- Le Beau Plain [Hurt 1957:40]:PCC*  
- Group 3 (undecorated lip) [Hoffman 1967:35-36]-(1)(a),(1)(b),(b):EC*
La Roche Plain Straight Rim (Stephenson 1971:54-55)-B4g(1)(a),B4g(1)(b),B4g(2)(a),
B4g(2)(b),(1)(a),(1)(b),(b):EC*
Akaska Plain (Hurt 1957:46):EC
Stanley Plain (Lehmer 1951:8)-(1)(a):PCC
Category A (Cooper 1949:303)-B1g(1)(a),B1g(2)(a),B4g(1)(a),B4g(2)(a),B5g(1)(a),B5g(2)(a),(1)(a):PCC*
Intermediate Plain (Baerreis and Dallman 1961:466):PCC
Plain, Smoothed Rims (Wood 1971:30)-A1a(2)(a),A1a(2)(b),(b):PCC*
Plain, Brushed Rims (Wood 1971:31)-(b):PCC*
Rim Group 5 (Kivett and Jensen 1976:83):PCC*
Knife River Plain (Lehmer, Wood and Dill 1978:198-199)-(1)(a),(1)(b),(b):PCC*
(b). Unthickened lip form
Group 3 (undecorated lip) (Hoffman 1967:35-36)-(1)(a),(1)(b),(a):EC*
La Roche Plain Straight Rim (Stephenson 1971:54-55)-B4g(1)(a),B4g(1)(b),B4g(2)(a),
B4g(2)(b),(1)(a),(1)(b),(a):EC*
Talking Crow Brushed (Smith 1951:34-35)-B4g(2)(b),B5g(2)(b):PCC
Talking Crow Plain (Lehmer and Jones 1968:30)-(1)(b):PCC
Plain, Brushed Rims (Wood 1971:31)-(a):PCC*
Knife River Plain (Lehmer, Wood and Dill 1978:198-199)-(1)(a),(1)(b),(a):PCC*
(3). Smoothed/cord roughened exterior rim surface treatment
(b). Unthickened lip form
Campbell Creek Plain (Smith 1951:38-39)-(1)(b):IC,EC-PCC
Campbell Creek Cord Roughened (Smith 1951:39)-B4g(3)(b):IC
Campbell Creek Cordmarked (Smith 1977:66)-B4g(3)(b):IC
Plain Rim, Hughes Group (Spaulding 1956:157-164)-B4g(1)(b),B4g(3)(b),(1)(b):C*
Flaring Rims, Cord Roughened (Woolworth and Wood 1964:99)-B4g(3)(b):?*
Lisbon Undecorated (Wood 1963:231-233)-B3a(2)(b),B4g(3)(b):?*
Group I: Subgroup D (Dahlgren 1977:171-172)-(1)(b):?
Group I: Subgroup F (Dahlgren 1977:172-173):?

III. Bowl rim forms
E. Undecorated exterior rim (other vessel areas may be decorated)
7. Not applicable-exterior rim decoration technique
g. Not applicable-exterior rim decoration motif
Le Beau Bowls (Hurt 1957:37-38):PCC
APPENDIX B
DEFINING ATTRIBUTES OF WARES AND TYPES
Each table in this appendix lists commonly used wares and their component types by the variables used in their formulation. Bowl forms are excluded. Initial Middle Missouri groups appear in Table B-1, Extended and Terminal Middle Missouri wares and types in Table B-2 and pottery from Coalescent Tradition components in Table B-3. The variables included in these tables follow those used in the keys. The tables also associate each ware with the variants in which they occur most frequently, based on percentages. Acronyms (Lehmer 1971:193) are used for each variant as follows: Initial Middle Missouri (IMM), Extended Middle Missouri (EMM), Terminal Middle Missouri (TMM), Initial Coalescent (IC), Extended Coalescent (EC), and Post-Contact Coalescent (PCC). Pottery from the Disorganized Coalescent Variant (DC) is included within the Post-Contact Coalescent Variant. If acronyms of two or more variants appear after a ware, the ware most frequently present in the variant is listed first. Variants separated by hyphens indicate that a ware is found in approximately equal relative frequencies in both variants. Le Beau S-Rim Ware (Table B-2) has been found in Extended Middle Missouri and Post-Contact Coalescent components.
<table>
<thead>
<tr>
<th>Wares and Types</th>
<th>Rim Form</th>
<th>Area of Decoration</th>
<th>Decoration Technique</th>
<th>Exterior Rim Decoration Motif</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I S-shaped or &quot;collared&quot;</td>
<td>II Straight or curved</td>
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</tr>
<tr>
<td>Grass Rope Ware</td>
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Table B-1. Presence (+) or absence (-) of defining attributes of commonly used ceramic wares and types for the Initial Variant of the Middle Missouri Tradition (continued).

<table>
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<th>Wares and Types</th>
<th>Rim Form</th>
<th>Area of Decoration</th>
<th>Decoration Technique</th>
<th>Exterior Rim Decoration Motif</th>
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<td></td>
<td>I-S-shaped or &quot;collared&quot;</td>
<td>II Straight or curved</td>
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<tr>
<td>Anderson Tool Impressed</td>
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<td>Wares and Types</td>
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<td>II</td>
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<td>B</td>
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<td>---------------------------------</td>
<td>----</td>
<td>-----</td>
<td>--------</td>
<td>--------</td>
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<td>Types Unassigned to Wares</td>
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</tr>
<tr>
<td>Lehmer (1954)</td>
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<td>Monroe Collared Rim</td>
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Table B-1. Presence (+) or absence (-) of defining attributes of commonly used ceramic wares and types for the Initial Variant of the Middle Missouri Tradition (continued).
<table>
<thead>
<tr>
<th>Wares and Types</th>
<th>Rim Form</th>
<th>Area of Decoration</th>
<th>Decoration Technique</th>
<th>Exterior Rim Decoration Motif</th>
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<tbody>
<tr>
<td>Anderson Flared Rim Ware (Lehner 1951)</td>
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<tr>
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<td>Chamberlain Cord-impressed Triangle</td>
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<td>+</td>
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<td>+</td>
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<tr>
<td>Ives (1962)</td>
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<td>Sanford Modified Lip Ware (Ives 1962)</td>
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Table B-1. Presence (+) or absence (-) of defining attributes of commonly used ceramic wares and types for the Initial Variant of the Middle Missouri Tradition (concluded).

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<th>Wares and Types</th>
<th>Rim Form</th>
<th>Area of Decoration</th>
<th>Decoration Technique</th>
<th>Exterior Rim Decoration Motif</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>I S-shaped or &quot;collared&quot;</td>
<td>II Straight or curved</td>
<td>A Exterior rim</td>
<td>B Lip or lip margins</td>
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<td>Lehmer (1951)</td>
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</tr>
<tr>
<td>Foreman Incised</td>
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<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Foreman Plain</td>
<td>+</td>
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<td>-</td>
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<tr>
<td>Hurt (1951, 1954)</td>
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<td>Foreman Cord Impressed</td>
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<td>-</td>
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<tr>
<td>Foreman Plain</td>
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<td>-</td>
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<tr>
<td>Ives (1962)</td>
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<td>Foreman Cross-Hatched</td>
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Table B-2. Presence (+) or absence (-) of defining attributes of commonly used ceramic wares and types for the Extended and Terminal Variants of the Middle Missouri Tradition.

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<th>Rim Form</th>
<th>Area of Decoration</th>
<th>Decoration Technique</th>
<th>Exterior Rim Decoration Motif</th>
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<td>A</td>
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<td>B</td>
<td>2</td>
<td>d</td>
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<td>Fort Yates Incised</td>
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<td></td>
<td>3</td>
<td>e</td>
</tr>
<tr>
<td>Fort Yates Decorated Lip</td>
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<td>4</td>
<td>f</td>
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<td>Fort Yates Plain</td>
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<td>5</td>
<td>g</td>
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<tr>
<td>Le Beau S-Rim Ware (PCC, TMM)</td>
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<td>Le Beau Plain</td>
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<td>Riggs Ware (EMM, TMM)</td>
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<td>Riggs Punctate</td>
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<td>Riggs Filleted Rim</td>
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<td>Riggs Plain</td>
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</tbody>
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Key:
- I: S-shaped or "collared"
- II: Straight or curved
- A: Exterior rim
- B: Lip or lip margin
- C: Rim fillet
- D: Undec. lip & ext. rim
- 1: Cord impressed
- 2: Cord wrapped or trailed
- 3: Incised or trailed
- 4: Tool impressed
- 5: Finger impressed

+ indicates presence
- indicates absence
Table B-3. Presence (+) or absence (-) of defining attributes of commonly used ceramic wares and types for the Coalescent Tradition.

<table>
<thead>
<tr>
<th>Wares and Types</th>
<th>Rim Form</th>
<th>Area of Decoration</th>
<th>Decoration Technique</th>
<th>Exterior Rim Decoration Motif</th>
<th>Exterior Rim Surf. Treat</th>
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Table B-3. Presence (+) or absence (-) of defining attributes of commonly used ceramic wares and types for the Coalescent Tradition (continued).

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<tr>
<th>Wares and Types</th>
<th>Rim Form</th>
<th>Area of Decoration</th>
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<th>Exterior Rim Decoration Motif</th>
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Table B-3. Presence (+) or absence (-) of defining attributes of commonly used ceramic wares and types for the Coalescent Tradition (continued).

<table>
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<tr>
<th>Wares and Types</th>
<th>Rim Form</th>
<th>Area of Decoration</th>
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<th>Exterior Rim Decoration Motif</th>
<th>Exterior Rim Surf. Treat.</th>
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<td></td>
<td>I-S shaped or &quot;collared&quot;</td>
<td>II Straight or curved</td>
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<td>B Lip or lip margins</td>
<td>D Undec. lip &amp; extr. rim</td>
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