STONE TIES:
THE ANALYSIS OF PRATT PHASE MATERIALS
IN SOUTH-CENTRAL KANSAS

A Project by

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STONE TIES: THE ANALYSIS OF PRATT PHASE MATERIALS IN SOUTH-CENTRAL KANSAS

The following faculty members have examined this project for form and content and recommended that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Anthropology.

__________________________________
David T. Hughes, Committee Chair

__________________________________
Donald J. Blakeslee, Committee Member

__________________________________
John Gries, Committee Member
DEDICATION

©To my wife Kristin, sons Sam, Michael, and Joe Mac, my Dad
“But that is the way of the scientist. He will spend thirty years in building up a mountain range of facts with the intent to prove a certain theory; then he is so happy in his achievement that as a rule he overlooks the main chief fact of all that his accumulation proves an entirely different thing.”

ACKNOWLEDGEMENTS

Though I have thought that at times that the acknowledgements done by others may have been just a bit too lengthy, when I look back over the course of this project, I now know why and just how many individuals it takes to complete an exercise such as this. To anyone that I may have missed in these acknowledgements, you have my sincerest apologies but more importantly my gratitude.

To those that follow my heartfelt thanks go to all who assisted me in the development and completion of this project, without your help this project would have been much more limited in depth and scope. To these individuals, and the institutions that they represent, who so willingly offered to me their help and expertise that without this project could never have been completed.

My thanks also go to Don Blakeslee and David Hughes of Wichita State University, Mary Adair at the University of Kansas and Chris Garst and Bob Hoard at the Kansas State Historical Society for allowing me to have long-term access to the Pratt complex materials held in their collections. Without the use of these materials, this project could never have been completed.

Thanks and recognition must be given to the people of Pratt, especially Alan Albers, a Social Studies instructor at the Skyline School, USD #438 in Pratt, who became my primary contact and friend. He took the chance of meeting with me and then proceeded to spend untold hours of his time introducing me to the local avocational collectors, who have so much first hand background information and material from Pratt in their private collections.
Thanks also need to go to Rob Swinson, who donated the Pratt materials now held in the collection at Wichita State University. Roger Clinesmith, who welcomed Alan and me to his home and spent so much time discussing the activities and personalities of the many previous collectors he has known. It was extremely helpful to know some of what cultural materials have been collected, who collected them, the locations that they were found, and in some instances, where they are presently. We also discussed the background of my research, what we hope to find out from this project and what might develop from it in the long term. Alan for the supportive phone calls and the coordination needed for these visits that opened these doors to me, thank you.

Thanks to Thad Henry, and Marsha Brown at the Pratt County Historical Society Museum for the allowing me to have access to all the curated materials and artifacts held there on display. The courtesy and friendship shown to my family and me is and has been greatly appreciated.

To the private collector in Pratt who wishes to remain anonymous, I promised you that I would do as you requested and I have, but I still must acknowledge how much I appreciate your hospitality, openness and the access to all of the carefully stored and meticulously displayed Pratt materials in your personal collection.

To Don Wyckoff, Curator, Department of Archaeology at the Sam Noble Oklahoma Museum of Natural History, thank you for your insight, encouragement and genuine interest in the Pratt complex. My gratitude goes to you for your financial support in helping me fund the obsidian source analysis. Your private support allowed me to increase the obsidian sample size to be analyzed and to include material from many more sites than I would have been able to fund on my own. Thanks for having faith in me when I needed it.
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Mike Dealy, the Manager of the Wichita Operations for the Kansas Geological Survey, thanks for your time and support. Our discussions about the hydrology in Pratt and surrounding counties helped first to develop and then later to support my hypotheses about the settlement patterns of the Pratt complex and were instrumental to the formulation of my conclusions.

To Marcia L. Meier, a fellow a graduate student at Wichita State and now at U.R.S. Corporation in Denver Co. Thanks for teaching me one of those life lessons, that it is not only the question and how a question is asked, but also who it is that you are asking the question of. I learned it a little late but it is still a lesson well learned, but still not always applied. I am continuing to work on your comment about Anthropology being of the most humane of the sciences and the most scientific of the humanities, another concept worth remembering.

To my professors at Appalachian State University, Dr.s Fred Webb and Ken McKinney of the Geology Department, who first taught me how to do research and about the complexity and enormity of time, your lessons were well learned and continue to stay with me all this time.

To Brian Bennett, Greg Reck, Burt Purrington, and Harvard Ayers of the Anthropology Department, thanks for showing me parts of the world I did not know existed and triggering a lifelong interest in a discipline that has become a part of me. To Greg and Brian, I will not
apologize for any of the grief that I may have caused you, but I will, at the minimum consider it.
It was always more fun for me. Thank you.

To David Hughes, at Wichita State University, thanks for “encouraging” me to get out and make contacts with people in the discipline and to just talk and get to know people. It worked. I can never pay you back for all your help, patience and ongoing support especially when I needed it most.

My congratulations and respect to all of those who have gone through the academic exercise of earning a graduate degree. This is not nor should it ever be an easy process and I am sure that most who have traveled this road can remember the alternating exhilaration and frustration that comes throughout the process. The amount of information currently available to the student is wide ranging, involving multiple disciplines and is increasing exponentially. This vast amount of available and easily accessible information not only helps, but also can also confuse the researcher and hinder progress, but for a work to be accurate and usable it can be no other way.

Fighting the utter frustration with the method, direction and scope of this project and being overwhelmed with the desire to just walk away from the research, there were always some who always took the time to encourage and support me to continue and plow through to the end. To these people go my special thanks, because without them I more than likely would have walked away. I have listed them alphabetically because I cannot do otherwise. My command of the English language could never do service to my gratitude to them.

Thanks to Mary Adair, Don Blakeslee, Scott Brosowske, David T. Hughes, Chris Lintz, Donna Roper, Susan Vehik, Virginia Wulfkuhle, and Don Wyckoff for letting me know why we do this.
To my wife, Kristin L. Macaluso thanks and sorry it took so long. I could not have done any of this without you and your support.

It is pretty well understood that we do indeed stand on the shoulders of others, but so much can be said for being able to actually visit with them one on one and to receive their tutelage, friendship and respect. My responsibility to you all is to assimilate at least some portion of what you know and from that choose wisely. My most heartfelt thanks to you all.
This thesis project presents a short archaeological history of what is currently known as the Pratt Complex and a comprehensive analysis of the Pratt artifact assemblages held at Wichita State University, the University of Kansas, and the Kansas State Historical Society. The purpose of this analysis is to provide as detailed a description of these Pratt-related materials as possible in the absence of comprehensive excavations or feature data. This provides the basis for defining the Pratt Phase and for outlining elements of continuing research that needs to be done.
BACKGROUND

It is fortuitous that local collector, Eugene Wing as a young man from Iuka, Kansas, was interested enough in archaeology to initiate correspondence in January 1951, with F.M. Setzler, Head Curator of the Department of Anthropology at the Smithsonian Institution. In Setzler’s first response to Wing, dated February 9, 1951 he reported giving the specimens Wing had sent to Dr. W.R. Wedel for examination. In his letter Setzler states a problem that has plagued the Pratt complex since the beginning with regards to surface finds without cultural affiliations. This is still a nagging problem with regards to the Pratt complex. Eventually Wedel’s review of the 156 specimens that Wing sent to the Smithsonian was published in his *An Introduction to Kansas Archaeology* and provided the definition of the Pratt complex.

Eugene Wing was gracious enough to make available copies of all 15 correspondences with the Smithsonian Institution dated from February 1952 to April 1956. These letters document Wedel’s progressively increasing interest in the materials from Pratt. They are included here in Appendix B.

The decision to analyze the Pratt complex materials was as simple as being able to recognize that the most common lithic materials in the donated Pratt materials inventory was of a type of rock that I had never seen before. The fine-grained rock exhibited a ribbon-like banded pattern, with colors alternating from light maroon grading into a dark reddish color separated by bands of color ranging from white to bluish gray. The lithic material looked to me like a slab of bacon with the fat being a bluish gray in lieu of a fatty white. I knew enough of the local geology in Kansas to realize that this lithic material was not found locally and asked Professor Donald Blakeslee, what kind of rock it was. His response was that the material was from the
Pratt collection and was called Alibates, from a quarry in the Texas panhandle. I was struck by why anyone would expend the effort to carry large amounts of stone such great distances, when reasonably good lithic materials were available locally.

When I asked Dr. Blakeslee who had previously published on the Pratt complex he explained that not much more had been written since Waldo Wedel had made a preliminary description in the late nineteen fifties.

While in the process of developing this project that was initially to analyze materials donated to Wichita State by Rob Swinson I learned that the Kansas State Historical Society also had a quantity of Pratt materials. The Department of Archaeology kindly loaned all fifteen boxes of Pratt materials held in their inventories.

As the initial analysis progressed, Mary Adair at University of Kansas made me aware that there was a third collection of Pratt materials that could be made available for analysis. These materials had been stored and labeled using the long-standing Kansas Geological Survey alpha designation for Pratt County, (PR) and not the (PT) designation used by the K.S.H.S. and archaeologists throughout the state. Researchers need to be aware that there is a potential for confusion when identifying some of the older site collections that may be identified using the older Kansas Geological Survey designations (Appendix C). These two collections, when combined with the materials held at Wichita State University, allowed me to study a larger representative sample and to adequately describe the material components that make up the Pratt complex.
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<td>21.</td>
<td>Chupadero Black on White Sherd Section, 14PTUNK-WSU</td>
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<td>22.</td>
<td>Pot Private Collection published in the Pratt Tribune 4/10/09</td>
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<td>23.</td>
<td>Daub 14PT1KU</td>
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<td>24.</td>
<td>Bison Tibia Proximal View Undrilled 14PT1KU</td>
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<td>25.</td>
<td>Bison Tibia Lateral View Showing Battering14PT1KU</td>
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<td>26.</td>
<td>Bison Tibia Drilled and Battered 14PT1KU</td>
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<td>27.</td>
<td>Bison Tibia Distal Beveled Edge 14PT1KU</td>
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<td>28.</td>
<td>Bone Awls 14PT1KU</td>
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<td>29.</td>
<td>Bone Awls 14PT1KU</td>
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<td>30.</td>
<td>Scapula Hoes Heavy Use Wear High Polish</td>
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<td>31.</td>
<td>Bone Rasp 14PT1KSHS</td>
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<td>32.</td>
<td>Unfinished Bone Whistle 14PT411KSHS</td>
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<td>33.</td>
<td>Burned Corn Cobs 14PT1KU</td>
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<td>34.</td>
<td>Burned Corn Kernels 14PT1KU</td>
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<td>35.</td>
<td>Gene and Marci Wing of Mobile Alabama 2011</td>
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CHAPTER 1

INTRODUCTION

The Pratt Complex is a cluster of sites located in Pratt County, Kansas approximately seventy-seven miles due west of Wichita with registered sites located predominately in and around the town of Pratt. Most of these sites are situated on terraces located adjacent to the two branches of the South Fork of the Ninnescah River (Figure 1).

The Pratt Complex is one of the least researched archaeological complexes of the Middle Ceramic Period (A.D. 1100-1500). There has been little formal archaeological investigation, and the information that is available is based on Waldo Wedel’s review of less than two hundred artifacts. In order to document the complex more thoroughly I have created a database of the material remains available to me. My analysis is based on Pratt artifact collections donated to Wichita State University, the Kansas State Historical Society and the University of Kansas.

This research has three primary components. The first is a database that will be available to professional and avocational archaeologists investigating the Pratt Complex. The second is to determine whether the inclusion of the Lewis site (14PA307) in the Pratt complex is valid. The third is to use the available information to redefine the taxonomic position and to delineate the spatial distribution of the Pratt complex.

To date Waldo Wedel (1959: 503-512) provides the only definitive description of the Pratt complex. His description was developed from review of the 150 artifacts submitted to him by Eugene Wing. Wedel placed the Pratt Complex temporally between 1400 and 1500 A.D., based on Stanley Stubbs analysis of the southwestern ceramics (Wedel 1959: 505) collected by
Eugene Wing and sent by him to the Smithsonian. Since this placement there have been two radiocarbon dates established. These dates, funded by the Kansas State Historical Society, are median probability dates from 14PT304 and 14PT420 with dates of A.D. 1336 and 1456 respectively (Hoard 2006: 322).
Figure 1. Pratt Sites distribution along the South Fork of the Ninnescah River.
Included in this project will be a short discussion of an excavation conducted in the early 1960s by Earl Monger at the Lewis site, (14PA307) in Larned Kansas. This site, located approximately fifty miles north and slightly west of Pratt is a multi-component site, and Monger attributes the materials from Level E. to the Pratt “Focus” (Monger 1970: 14). William Ranney, Master’s thesis, (Ranney 1994) describes in detail the excavations conducted by Monger at the Lewis Site.

At this time, a considerable amount of Pratt Complex material is held in local collections, and only limited access has been allowed. These private collections were viewed by invitation during the course of this project, and it my hope that these can be incorporated into the database at some future date. The Pratt County Museum has also graciously offered their support and access to the materials in their possession. These materials are incorporated in this thesis.

Laboratory work involved the identification, measurement, and photography of diagnostic materials in the collections. Mary Adair analyzed a corn sample submitted to her by Dr. Don Blakeslee. Dating analysis of these materials was not conducted since provenience of these organic materials could not be verified.

A random and hopefully representative sample of 30 pieces of obsidian was selected from six different sites and submitted to M. Steven Shackley, University of California at Berkeley, for source analysis. X-Ray fluorescence testing was used to establish the source areas of these materials, with the intent to identify suspected contact and possible trade networks with groups outside of the Pratt area.

Ceramics collected in the study area were evaluated and identified by surface finish, decoration, temper and rim size and orientation when possible. Photographs of the ceramic
artifacts that could not be attributed south central Kansas were sent to Regge Weisman at the Office of Archaeological Studies in Santa Fe for evaluation as to their type and origin.
**Collections Examined**

**Wichita State University**

The collection of material from 17 different Pratt sites currently held at Wichita State were donated to Dr. Blakeslee by Rob Swinson. All the materials in the W.S.U. collection are from surface finds and provenance is minimal. When analyzed these donated materials were given the same site number as they were identified with by Mr. Swinson.

**The Kansas State Historical Society**

Materials from 18 Pratt complex sites that were received on loan from the Kansas State Historical Society were analyzed. What was procedurally different in the analysis of the Kansas State Historical Society materials was that, at the request of the Society, all materials had to be maintained exactly as delivered. No washing, resorting or reassembling of materials was allowed. This did not affect the analytical procedures used for this study. The only drawback was the increased time needed to complete the analysis, but this was far outweighed by the benefit of greatly increasing the overall count of the materials available.

**The University of Kansas**

Materials loaned to by the University of Kansas all came from site 14PT1 and had been sorted into categories such as ceramics, lithics, and organics. At Dr. Adair’s request, none of the materials received were washed or reassembled, and all artifacts were returned in exactly the same condition as when loaned.
The University of Southern Maine

There is a fourth institutional collection currently held in the Department of Geography and Anthropology at the University of Southern Maine, in Portland. These materials were collected during the early 1960s at site 14PT1, by the now deceased Dr. Paul Barker, English professor at the University of Southern Maine. These materials, to my knowledge, have never been formally analyzed. I was not able to borrow this collection but photographs of the materials held at the University of Southern Maine were received. These appear to show artifacts consistent with the materials held in Kansas. I have included full page color plates of these pictures in Appendix A.

Local Collectors

I inspected several private collections whose owners requested not be included in this project. Nevertheless, it is worth noting that these collections contained considerable quantities of turquoise, ground stone implements and ceramics not seen in any of the three institutional collections. The differences between the private and institutional collections were primarily in quality and in the case of the turquoise, quantity. The other materials held in the private and institutional collections are strikingly similar to each other, and I found nothing in the private collections that would change or modify the findings of the analysis of the institutional collections.

Each of the private collectors was made aware of the goals and findings of my research and the similarities of what had been found between theirs and the institutional collections. I discussed the archaeological and historical significance of their collections with the private collectors. I encouraged the collectors to, at minimum, document all that they could about the
materials in their collections and to consider donating them to the institution of their choice for proper analysis and long-term curation. I genuinely hope that these avocational collectors will allow themselves to be given the credit that their interests and labors truly deserve.
Physiographic Setting

Pratt County is located in south central Kansas in a narrow east west oriented tongue of the High Plains Physiographic region, sandwiched between the Arkansas River lowlands to the north and the Red hills to the south (Schoewe 1949: 276, Fig.22).

The landscape of Pratt County consists of dissected, gently rolling plains, with steeper grades along major steams. Sand hills make up the northern and western sections of the county and are comprised of both active and stable dune types. The active dunes are made up of finer sized sand and can develop to an elevation of fifty feet. The stable dunes are much more frequent throughout the county and are held in place by vegetation and a rudimentary soil that minimizes movement and dune height.

Climate

The climate of Pratt County is semiarid with moderate but variable precipitation and a high rate of evaporation. During hot summer days, the heat is relieved in part by good air movement. Winters are moderate with occasional severe cold periods of short duration. Mean monthly temperatures range from 82°F in July to 24°F in January. The maximum and minimum temperatures are-24°F in 1899 and 115°F reported in both 1911 and 1936, (Layton, 1973: 4).

Minimum and maximum measured rainfall amounts are 10.96” in 1956 and 39.30” in 1957. The average annual rainfall for Pratt County is 24.04” with over two-thirds of the total falling in the form of heavy thunderstorms (Layton 1973: 4).
Hydrology

All of the streams and rivers in Pratt County are part of the Arkansas River drainage system. The perennial South Fork of the Ninnescah River is the largest and most significant in the county, with a drainage area of 256 square miles (KGS Geohydrology of Pratt county: http://www.kgs.ku.edu/General/Geology/Pratt/03_geog.html). It flows west to east through the central portion of Pratt County (Figure 2) and eventually merges with the Arkansas River near the Sumner and Cowley County lines. Pratt complex sites are primarily located adjacent to the junction of the South Fork and West Branch of the South Fork of the Ninnescah River, near the center of the town of Pratt. The intermittent Chikaskia River and its Sand Creek tributary in the southeastern corner of the county drain in an east to southeasterly direction where they join the Salt Fork of the Arkansas River in Kay County Oklahoma. Turkey Creek, like the Ninnescah, is also a perennial stream located in the southwestern corner of Pratt County. It drains south and enters the Medicine Lodge River in Barber County. The South Fork of the Ninnescah River, Turkey and Rattlesnake Creek are all permanently flowing artesian spring or seep fed streams. Rattlesnake Creek, located in the extreme northwestern corner of the county, flows to the north and is without any significant drainage within Pratt County.
Figure 2. Plan view of Pratt County and the South Fork of the Ninnescah River

(Perry et al. 2004: 499).
In a paper titled “Origins of Names of Kansas Streams” J.R. Mead, (1903: 216) states that the, “Ninnescah River” is an Osage (Dakota) [sic] name, meaning “good spring water,” from the great number of springs coming out of the tertiary gravels of its upper course”. The 1870 Map of Kansas and Colorado, in the David Rumsey Collection, and Rufus Blanchard’s 1869 Map of Kansas at the Kansas State Historical Society spell it Ne Ne Scah and Nin ne Scah respectively, and both follow the label with ”Good River”.

The U.S.G.S. estimated mean flow measurements data gathered at the four monitoring stations closest to the core cluster of Pratt complex provide an estimate of 8712 g.p.m. of potable water flowing within a five mile radius of the juncture of the two branches of South Fork (Perry, et al. 2004: 499). It is likely that even higher rates were available to the prehistoric peoples occupying the area. Hydrologist Mike Dealy of the Kansas Geological Survey in Wichita, (personal communication) states that even with the water table dropping over the last few decades as a result of increased pivot well irrigation in the county, flow rates and the water table in Pratt county continue to remain high.

The source of the Ninnescah River is not a single point spring. Instead the river forms from the discharge of multiple seeps that ooze from the ground without distinct streams being formed. Base flow of the South Fork becomes evident just west of the town of Pratt where permanent stream flow begins. This zone is not rigidly defined or a fixed location but a response to both surface and subsurface conditions. The location where the base flow becomes visible is not stationary and can move over time. In the case of the South Fork of the Ninnescah it is likely to be trending very slowly to the east. This base flow zone is visible in aerial photos west of the
city of Pratt. This becomes apparent where the denser vegetation and stands of trees can be seen along the streambed and where agricultural activity is not conducted due to soil saturation.

It is important to the definition of the Pratt phase to discuss the change in the quality of water in the South Fork that occurs ten miles east of Pratt, near the town of Cairo. A.M. Diaz (Diaz 1965: 3-4) states that "The deterioration of water quality in the South Fork by the inflow of saline waters has been known for many years. Parker and Bailey of the U.S. Geological Survey reported in 1911 that the concentration of chloride in the water of the South Fork Ninnescah increased considerably in the area between Pratt and Kingman. However, the increase was attributed, (at that time) to inflow from salt mines near Kingman. The occurrence of saline inflow to the river from the slough area between Cairo and Cunningham was reported by the U.S. Bureau of Reclamation in administrative reports of low-flow studies made in 1956. Donald Layton reports that as a result of the subsurface geology “a sudden increase in the flow and in the concentration of dissolved solids in the South Fork of the Ninnescah River occurs near Cairo [and]…is attributed in part to the upward leakage of saline water from underlying Permian rocks (Layton 1973: 13). This deterioration in the quality of water, with the total dissolved solids measured at ten times the standard for fresh water, will allow the establishment of an eastern boundary of the Pratt Phase at the western most limits of the town of Cairo."
Geology

The surface deposits of Pratt County are Pleistocene age aeolian and fluvial deposits, primarily silts, sand and gravel. These deposits combine to form a geologic sequence approximately 355 feet thick that underlies all of Pratt County. Of these units it is the Grand Island, Sappa, and Yarmouth formations that are the most significant and are the primary source of fresh water delivered to the surface by way of artesian springs creating the South Fork of the Ninnescah River (KGS Table 2: http://www.kgs.ku.edu/General/Geology/Pratt/04_rock.html)

Soils

The exposed surface soils found in Pratt County are classified in the Meade and Sanborn formations (Horsch et al. 1968: 49). These soils are primarily fine-grained wind-blown sand and loess that overlies reworked outwash sediment made up of sand, silt, and clay. These coarser sediments can be exposed by the erosional action of the entrenched South Fork of the Ninnescah River and Turkey Creek.

There are nine soil associations found within Pratt County. Four of these associations are found in the study area adjacent to the Ninnescah River described (Horsch et al. 1968: 2-7). Closest to the Ninnescah is the “Zenda-Waldeck association: Nearly level soils that have a sandy to loamy surface layer and loamy subsoil.” The second is made up by the “Shellabarger-Albion-Farnum association: “nearly level to strongly sloping sandy loams that are deep and moderately deep and have a subsoil of sandy clay loam to clay loam; underlain by gravel in places.” The third is the “Farnum-Ost-Clark association: Nearly level to moderately sloping loams and nearly level to strongly sloping, calcareous clay loams that have a subsoil of clay loam”. The fourth association, the Naron-Farnum, is located close to origins of the West Branch of the South Fork and the South Fork of the Ninnescah River. The Naron-Farnum association is described as:
“nearly level to moderately sloping fine sandy loams and loams that have a subsoil of sandy clay or clay loam” (Horsch et al. 1968: General Soil Map, Soil Associations). Further west of the study area soils are primarily of fine sands with sandy subsoil’s or fine sandy loams. This dune sand area just to the immediate northwest of the town of Pratt has no known archaeological sites, Pratt phase or otherwise, and will be used to define the northwestern boundary of the Pratt phase.
CHAPTER 3

PREVIOUS PRATT COMPLEX INVESTIGATIONS

There are several studies related directly to the Pratt complex, the first and foremost being the analysis of 150 artifacts loaned by Eugene Wing, to Waldo Wedel, of the Smithsonian Institution, for analysis. The earliest reference to the initial exchanges of materials between Wing and Wedel is found in a letter in which Wedel acknowledges the receipt of a package of artifacts from Mr. Wing. It is from the analysis of these and additional materials donated by Mr. Wing and Wedel’s subsequent visit to Pratt in July of 1954 that form the basis for Wedel's definition of the Pratt complex (Wedel 1959: 503-512).

The second source for primary information related to the Pratt complex comes from a series of excavations done by Earl Monger, the former president of the Kansas Anthropological Association (Monger 1970: 13-14). He uncovered material in Group 3 (Level E) at the Lewis site (14PA307) in Larned that he attributes to the Pratt focus [sic], that is positioned below Great Bend Aspect components (Group 2) and above what he suspects is a Smoky Hill Aspect (Group 4) of the Middle Ceramic period earlier than the Pratt focus materials.

In his University of Kansas Masters thesis, William Ranney “Refining the Pratt Complex: Evidence from the Lewis Site” (Ranney 1994) gives a comprehensive and detailed review of Mongers’ excavations. Ranney concludes several points in his thesis. First, in agreement with Monger, that Level E. assemblage predates the Great Bend materials that are found immediately above Level E. The ceramics in Level E are primarily cordmarked and sand tempered with some combined sand and carbonate tempering present. Tool styles from Level E. are similar to the Great Bend materials found at 14PA307 and may reflect some continuity between Pratt and
Great Bend sites. Most significantly Ranney suggests, again in agreement with Monger, that the lack of horticultural tools indicates that this may have been a hunting camp (Ranney 1994: 86-87).

In 1993 Randall M. Theis, of the Kansas State Historical Society, excavated an exposed, half-destroyed pit that had been uncovered during a construction project at 14PT304. According to the site report the excavation uncovered “butchered bison bone, three pottery sherds, one alternately beveled knife section, three flakes of debitage (two of Alibates flint) and two digging stick tips” K.S.H.S. Site report 14PT304.

In April of 1994, Martin Stein excavated a bell, shaped feature at 14PT420 and submitted a report to the K.S.H.S. where it is on file. It is from these two sites, 14PT304 and 14PT420, excavated by Theis and Stein respectively, that the only two formal features have been identified. It is also from these two sites that the wood and charcoal samples were collected and later radiocarbon dated to give us our only formal dates for Pratt.

Randy Theis and Tim Weston both of the K.S.H.S. returned to site 14PT420 in August of 2003, and after revisiting the previous excavation they determined that though the site may be “damaged or destroyed on the surface but that it still has archaeological potential in the form of trash filled storage pits that have yet to be discovered” and added this revision to the original site report on file with the K.S.H. S. Tim Weston also contributed to the Pratt Complex literature with a physical and cultural overview of the area, with his recommendations in his “Phase II Investigations along U.S. Highway 54 between Pratt and Kingman in Western Kingman and Eastern Pratt Counties (Weston 2002).

The general lack of published primary material related to the Pratt complex assemblages does not preclude the fact that many authors have and continue to reference the complex. With
that said, I have not been able to find any work that does not at some point reference, or totally depend on Wedel’s original 1959 work to either preface or use in their descriptions of the Pratt complex.

Scott Brosowske and C. Tod Bevitt discuss the Pratt Complex in a chapter titled “The Middle Ceramic Period in Southern Kansas and Beyond” (Brosowske and Bevitt 2006: 80-205). Here they describe the proposed spatial and temporal distribution, material assemblages, subsistence and mortuary practices and features of the Pratt Complex (Brosowske Bevitt 2006: 191).

James H. Gunnerson presents a brief overview of the Pratt complex that can be found in his publication Archaeology of the High Plains (Gunnerson 1987: 92-93). Here he combines the findings of both Wedel’s Pratt analysis and Monger’s work at the Lewis site, to create a brief interpretation of their findings. Gunnerson also suggests the probable positioning of Pratt with antecedent, contemporary and succeeding culture groups of the Plains.

Tom Witty’s work at the Seuser site (14RH301), also known as the Schloemer site, located adjacent to the Walnut Creek near Rush City, Kansas (Witty 1970). This site was excavated over a three-day period as part of the Kansas Anthropological Association Fall dig and whose report is on file with the Kansas State Historical Society. This is included here due to it mention of the Pratt Complex. Witty’s report states that “In general the inventory, (14RH301), suggested a mixture of Southern Plains such as the nearby Pratt Complex, and the Central Plains such as the Upper Republican Aspect or Smoky Hill Aspect (Witty 1970: 3) but without access to the details of what these interpretations were based on it can only be used as a point of reference until the unpublished manuscript related to site 14RH301 (Bevitt 1995) becomes available.
The overwhelming majority of cultural material analyzed here was collected by avocational enthusiasts and then donated to the three state institutions. Analysis of all materials, except for a 30 count sampling of obsidian, was done in the Anthropology Department at Wichita State University. This analysis was done with the support of Doctors David Hughes and Donald Blakeslee, using the available equipment and resources of the Department. Dr. Steven Shackley at the University of California, Berkeley, performed the obsidian source analysis and issued his report on a thirty-count sample of the obsidian material attributed to the Pratt Complex.

Throughout this project it was necessary to identify materials that were identified as being collected from the same site but held in different collections. This was done by adding a suffix to the standard site alpha numeric designators. The WSU suffix was used for materials held at Wichita State University, KU for materials from the University of Kansas and KSHS for all materials held at the Kansas State Historical Society. It is important to note that these suffixes do not represent different sites, but only the different collections where they are held.

**Lithics**

Lithic analysis was completed and done in several steps to produce a functional database. The first step was to separate the lithic assemblage from each of the institutional collections by site and then further into groups of similar identifiable lithic materials. A count was conducted
to identify the frequency of each identifiable lithic material. This was then assembled onto a Excel spreadsheet by site number. This spreadsheet, with one column for material type and one for site number, allows the identification of both material frequency totals and the material percentages by site to be formulated for all Pratt complex sites. Further lithic analysis was conducted to identify tool type. The categories used in this analysis contain a breakdown by material but also include the identification of specific tool types and classes. The analysis was conducted as follows: Tools were identified by site, material, tool type, classification, style, artifact number and written description. Each artifact was weighed to the nearest 0.1g, with length and width measurements made at the maximum dimension of each artifact.

Unidentifiable lithic materials were placed in their own category and were included as such in the overall frequency counts.

Ceramics

Ceramic analysis was conducted to create a database of basic ceramic traits including surface finish, temper, rim orientation, rim decoration, and thickness, to create a basic description of the ceramics inventory of the Pratt Complex.

To maintain the integrity of each collection, all ceramic analysis was conducted by site. After separating rims from body sherds, all of the ceramic material was analyzed by collection, for the attributes listed above. The categories of surface finish include burnished, simple stamp, cord marked rough, cord marked, cord marked smoothed, undetermined, plain, and Southwestern. This initial surface finish sorting was then followed measuring the weight of each sherd to the nearest 0.1g, using an Ohaus, Scout II, Model SC6010 digital scale. The next step was to identify the temper of each ceramic artifact by visual inspection. If temper could not be
identified it was listed as unknown. The tempering material categories are: grog, sand and bone, unknown, grit, sand, and combined sand and shell. The thickness of each body sherd was then measured to the nearest 0.1mm. Height and length measurements for each ceramic fragment were not taken for this study as no useful or functional research information could be gained by presenting these metrics of shattered ceramics. It is felt that using only the identifiable criteria of temper, surface finish markings and the thickness of the ceramic inventory would be more in line with the goals of this project and for any future comparative studies.

For rim sherds, site number, surface finish, temper, thickness, weight, rim orientation, rim thickness and height, markings and the estimated radius of the rim were recorded. Any ceramic traits that could not be clearly or correctly identified were marked as unknown or unidentifiable. Rim orientation was the most difficult trait to accurately identify. Most rim sherds were too small to determine rim orientation accurately. In this analysis only the clearly discernible orientations were identified with all of the remaining rim orientations being classified as unknown. Daub was identified separately from the ceramics.

**Faunal Remains**

The extremely large number of bone shatter fragments and the condition of these materials in all three collections made the analysis of faunal materials complicated. Only large and readily identifiable tools were listed as such. Shell is also included in the faunal analysis but only as a numeric count as it was not possible to identify species from the fragments available.

All faunal materials, including tools, bone fragments and bone shatter were visually identified, analyzed and itemized using basic descriptions. Site and artifact number, count, net weight, physical dimensions, evidence of cultural modification, processing, and specific
descriptive notes were taken when warranted. All bone materials where possible were inspected and identified as burned, unburned or calcined.

A portion of the faunal materials received on loan were bagged and could only be identified as bone shatter in lot measurements. These shattered materials were identified by site and were quantified as lot quantities by weight. These lots were then included in the weight of the total bone sample. No further attempt was made to identify or sort this heavily fragmented material.

**Floral Remains**

The analysis of 124.9 grams of floral materials from five different sites is limited due to the collection methods. Except for the floral material collected at 14PT304 and 14PT420 by the Kansas State Historical Society, all material was collected without formal records of provenance other than site number. The floral remains consisted of charcoal, charcoal mixed with soil, corn kernels and cobs, and some unidentified seeds. A sample of corn from 14PT1 was submitted by Dr. Don Blakeslee to Dr. Mary Adair at the University of Kansas for analysis. Her data relating to Pratt complex site 14PT1, is included in the floral analysis section of this report. The material analyzed by Dr. Adair was not submitted for radiocarbon dating as it lacked any identifiable context.
CHAPTER 5
LITHICS ANALYSIS

Raw Materials

Lithic materials were sorted by material type and the specific frequency of occurrence computed. 2,527 lithic artifacts from the three institutional collections were analyzed and cataloged as part of this project. Alibates flint, with a count of 1,743, makes up 69% of the total. An unexpected finding was that Florence A chert from the southern Flint Hills and obsidian also rank uniformly high in the lithic inventory totals. Together Alibates flint (69%), Florence A chert (6%) and obsidian (5%), constitute 80% of the total lithic inventory (Figure 3).

Further analysis was performed on a random sample of thirty obsidian artifacts. This was done to try to establish a source region for the one hundred and twenty obsidian artifacts found in the three collections. These samples were picked without bias for color, shape, size or site other than to include as many sites as possible within the constraints of the budget. The analysis of these thirty specimens was supported by a generous donation by Dr. Don Wyckoff, of the Sam Noble Museum of Natural History in Oklahoma City, Oklahoma. Two obsidian artifacts were not selected randomly. These specimens from 14PT409 were a yellowish green color and were selected for analysis specifically due to their unique coloring.

Obsidian source analysis was performed in March 2009 by Dr. Steven Shackley of the University of California at Berkley. An EDXRF spectrometer was used to identify the elemental composition of all thirty samples selected. Of the thirty samples analyzed, 15 (50%) were identified as being from the Valles Rhyolite (Cerro del Medio), N.M. This is significant according to Shackley because he states that this specific material “has not yet been located in secondary contexts outside the caldera, and if so had to be originally procured in the caldera.
proper” (Shackley 2009: 4). The 11 samples from the Cerro Toledo Rhyolite, N.M., and the one artifact from El Rechuelos, N.M., can be collected from secondary sources, due to erosional transfer of material. One artifact was sourced to Obsidian Cliff, WY. The two distinctive yellow green flakes were identified as from Sierra de Pachuca, in the State of Hidalgo, east of Mexico City. Obsidian from this source is rare in Kansas with only 5 flakes being identified so far (Appendix G).

The primary source region for the obsidian found in Pratt sites is northern New Mexico. It is also the closest available source but still approximately four hundred miles away from Pratt. That there are obsidian artifacts from source areas approximately 1000 miles away in Wyoming and somewhere between 1400 and 2000 miles away (depending on the route taken to the source areas in south central Mexico), implies but does not prove that some form of exchange or down the line activities were occurring with the people located in Pratt.

**Tools**

Initial sorting of tools was conducted by separating chipped stone from ground stone artifacts. Chipped stone tools were then separated into unifacial and bifacial forms. Chipped stone and ground stone forms constitute 98% of the total stone tool inventory at Pratt sites (Figure 4).

Included in the collections are two artifacts that were roughly worked into either chopping or battering tools. Both of these artifacts were made from an unidentified quartzite. These two tools from site 14PT302-506WSU, one a partially worked and severely battered large cobble and the other with a sharper working edge, were difficult to assign an actual function. By
shape and size alone they were likely to be hand held tools used in the processing of bone (Plate 4).

**Chipped Stone**

**Bifacial forms**

Artifacts were determined to be bifacial if there was clear evidence of deliberate modification to both faces of an edge. A total of 310 bifacial forms were identified from all sites. In this total there are 161 points (52%), 76 Flakes (25%), 28 (9%) alternately beveled knifes, 19 (6%) bifacial knives, and 17 (5%) awls/perforators/drills. Five bifacial choppers (2%) and 4 (1%) bifacial scrapers complete the chipped stone bifacial inventory (Figure 6).

Points identified in these three collections differ little if any, save for source material, from what is found in typical Middle Ceramic tool kits for the region. The two most frequent styles of point identified are the side notched Washita points (44%) and the triangular Fresno (43%). These two styles make up 87% of the identifiable point total (Figure 6). The raw count was seventy Washita points (Plate 1) and sixty-nine Fresno points. There were 10 (6%) corner notched points 9 (6%) of points that could not be identified due to damage and 1 (1%) stemmed point. The corner notched and stemmed points are without provenience but may imply that the Pratt core area may have been occupied prior to the Middle Ceramic period.

**Unifacial forms**

A total of 399 unifacial artifacts were identified. This was broken down into six categories, unifacial flakes 232 (58%), end scrapers 136 (34%), side scrapers 20 (5%), unifacial knives 8 (2%), gravers 2 (1%) and a single triangle-shaped uniface that may have been a fragment of a larger artifact (Figure 7).
**Ground Stone**

Nine sites produced 32 ground stone tools (Figure 8). Abraders are the most frequently occurring ground stone artifacts (Plate 5). Of the seventeen sandstone abraders identified, eleven were from the 14PT1KU collection, three from the State Historical Society collections, and the remaining three from the WSU collection.

Unidentifiable ground stone fragments that were determined to be unidentifiable were classified and identified by their composition. One of these ground stone fragments donated from an unknown site to the W.S.U. collection and identified as an abrader is distinguished not only by its weight, of over 1600 grams, but by its multifunctional configuration. This roughly loaf shaped artifact of silicified sediment, measuring 124mm x 115mm x 66mm, cataloged as 14PTUNK-07, shows perpendicular grooves on opposing sides of the artifact. What the initial function or final use as an abrader, with grooves of similar length, width and depth, oriented the way they are is not known (Plate 5).

**Exotics**

Exotic lithic materials are limited to materials not readily available or found naturally in Central or Western Kansas. Groundstone exotic objects include turquoise, malachite, hematite and red pipestone (Plates 8, through 12).

In the institutional collections, only three pieces of polished and drilled turquoise were identified. Along with these, one small, unworked pebble of malachite suspected to have originated in Arizona was identified by Dr. Sal Mazzulo of the Wichita State University Department of Geology. It is important to mention that this small number of turquoise artifacts
contrasts strongly with the large quantities of drilled ornamental turquoise now held in private collections. The red pipestone consists of a single drilled and unburned pipe fragment from 14PT409. A pipe found at 14PT1 and now held in a private collection was also inspected and identified as red pipestone and a picture of this pipe was published in the Pratt Tribune (Plate 12). Until other pipes have been identified in the Pratt area it would not be prudent to state that this style is characteristic of a Pratt pipe.
Figure 3. Lithic Frequency All Material All Sites.

Figure 4. Tool Form Frequency for All Sites.
Figure 5. Bifacial Tool Frequency for All Sites.

Figure 6. Point Style Frequency for All Sites.
Figure 7. Unifacial Tool Frequency for All Sites.

Figure 8. Ground stone Tool Frequency All Sites.
Plate 1. Alibates Washita Points 14PT1WSU.

Plate 2. Alibates Unifacial End scrapers 14PT1WSU.
Plate 3. Quartzite Chopping Battering Tools
14PT302-506 WSU.

Plate 4. Sandstone Abraders 14PT1KU.

Plate 5. Multi Groove Abrader of Silicified Sediment 14PTUNK-WSU.
Plate 6. N.P.S. Ranger Ed Day near large quarry pit in Alibates Flint Quarries National Monument Fritch, Tx. 06/09.

Plate 8. Turquoise Ornament 14PT409WSU

Plate 9. Hematite Pendant 14PT1KU

Plate 10. Turquoise Ornaments 14PT1KSHS

Plate 11. Malachite Pebble 14PT1KU

Plate 12. Red Pipestone Pipe from Private Collection Published in Pratt Tribune. 4/09/10
**Ceramic Analysis**

The category identified as cord marked is made up of sherds that evidenced characteristics of both the cord marked smooth and cord marked rough categories. The cord marked undetermined category is used on sherds that in most cases were too small to clearly identify, but that evidenced enough surface finish to be classified as cord marked. Surface finish analysis of the 1815 ceramic artifacts held in the three institutional assemblages (Figure 9) show a predominance of cord marked pottery. The analysis of all sherds indicating any cord markings (Plate 13), resulted in Cord marked smoothed over being dominant with (48%) of the total, followed by cord marked with (10%), cord marked rough (5%) and cord marked undetermined (2%) of the total. All cord marked surface finish artifacts when combined equal 65% of all the finish types.

Pottery without a cord marked surface finish was categorized as plain finish (Plate 14). These 285 unmarked sherds made up 16% of all sherds identified. Simple stamped and burnished finishes were also present but statistically insignificant to the overall percentage with 4, (0.2%) and 2, (0.1 %) respectively.

The undetermined finish category is used to describe any ceramic fragments that did not fit within any of the other categories. This in most cases is a result of fragment size. It is important to note that several different cord marked finish types were all identified on the larger ceramic artifact fragments. If even a small portion of these unidentified sherds are were to be classified as having a cord marked surface finish the category would increase the total percentage to more than seventy percent of all identifiable surface finishes.
Temper analysis of all the ceramic materials (Figure 10) now being held in the Pratt collections produced an even more definitive result than did the surface finish analysis. Ninety one percent of all ceramic materials investigated were identified as having been tempered with sand exclusively. Temper made from a mixture of sand and bone constitutes the next highest percentage with seven percent of the total. The final identifiable category of temper consisted of a mixture of sand and shell and this makes up one percent of the total analyzed materials used for tempering. Unidentified tempering material found in 11 artifacts made up less than one percent of the ceramic materials reviewed. Sand and grit temper was seen in seven sherds.

Body thickness measurements (Figure 11) were included in this analysis as a readily identifiable metric that could possibly be used in a study of comparable pottery sherds from the region. Seventy six percent of the total body sherds analyzed fall between 4.0 and 6.9mm thick.

Rim height analysis was done only on sherds with an identifiable rim, neck and shoulder, in the hope of establishing a usable metric for the shape of the pottery found in Pratt. In a sample of 40 rims 74% (29) had rim heights between 15 and 34.9mm (Figure 12). Rim sherds with heights between 35 and 49.9mm make up 18% (7) of the total. Only 4 rims, or 10%, were identified as less than 14.9 mm in height.

The largest ceramic artifact personally viewed, was a severely damaged cord marked pot with a diagonally impressed rim (Plate 15) now under reconstruction by students at the Skyline High School, under the supervision of Alan Albers. This pot and is estimated to have had an orifice of 21cm and a rim height of between 60-70mm (Plate 14). An accurate estimate of the overall size of the pot could not be determined at this point during the reconstruction.
Lip thickness of all identifiable rim sherds was established for 107 rim sherds. This count includes the sherds analyzed for rim height. These sherds average 5.5 mm in thickness with 82 percent falling within the range of 4.0 to 6.9 mm (Figure 13).

Plain rims constitute 56% (60) of 107 specimens analyzed, while 34% (36) had diagonally impressed marks on the lip (Plate16). Only 3% (3) of the 107 rims analyzed showed simple incised linear motifs. The remaining 7% (8) rim fragments identified as indeterminate were of a size large enough to be identified as part of a rim, but with markings that were indistinct (Figure 14).

Rim orientation, (Figure 15) whether insloping, vertical or flared was almost impossible to determine. Few rim fragments contain the rim, neck, shoulder and body components such that rim orientation could be correctly identified. Only rims that contained all three of these components were placed into a specific category. Rims that were not readily identifiable were categorized graphically as Indeterminate, and these made up eighty two percent of the total rims analyzed.

Rims found in the three Pratt collections were primarily of three basic forms, direct, rolled, and S-form. No collared or recurved collared rims were identified. Appliques were rarely found on any of the ceramic fragments. Only one pair of parallel tab appliques (Plate 17) from 14PT1WSU and one single pinched tab on an artifact from 14PT1KSHS were identified.

It needs to be noted that ceramics from the three collections are not entirely devoid of markings. Incising, rim pinching and small punctate markings have all been found, but in extremely low frequencies on Pratt ceramics, but on the whole ceramic decoration, are either diagonally impressed rims, or nonexistent.
A single fragment from a small incised dark gray clay pipe is in the 14PT1WSU collection (Plate 18). This pipe appears to be virtually identical to a pipe from Pecos reported by A.V. Kidder (1932: 161).

Two distinct Southwestern pottery styles were identified from within the University of Kansas collection. These six artifacts were identified by Regge Weisman as Taos incised, and Rio Grande glaze vessels, each consisting of three sherds.

Only one Black on Red sherd (Plate 19) and a single Chupadero Black on White sherd (Plates 20-21) both having come from an unidentified site were identified. Though very few (8) of these Southwestern sherds have been identified in the Pratt materials, they are in quantities that are not sufficient to draw any valid conclusions as to the importance of their origin. Privately held collections contain much larger quantities of southwestern ceramic materials than are available to this study and as they become available for analysis, the suspected ties can be more firmly established.

This project is lucky to have had a photograph of a single reassembled, though complete, direct rim, but conically shaped pot. This pot is now held in a private collection and a photograph of it was published in the Pratt tribune April 9, 2010. This photograph is included as it is one of several intact pots of the same configuration that I have viewed. These reassembled pots were all typically cord marked with and semi-conical bases with diagonally impressed lips on direct rims (Figure 22).

Thirty one daub fragments were found at six different sites in the three collections, with only one artifact from 14PT1KU clearly showing organic impressions (Plate 23). That daub fragments were found at several different sites in the Pratt area may be indicative of the use of daub in the construction of houses.
Figure 9. Ceramic Surface Finish Analysis.

Figure 10. Ceramic Temper Analysis.
Figure 11. Ceramic Body Thickness Range Analysis.

Figure 12. Ceramic Rim Height Analysis.
Figure 13. Ceramic Lip Thickness Analysis.

Figure 14. Ceramic Lip Markings.
Figure 15. Ceramic Rim Orientation Analysis.
Plate 13. Cord Roughened body sherd

Plate 14. Plain body Sherd 14PT1WSU.
Plate 15. Impressed Pot Rim Courtesy of Alan Albers 14PT408

Plate 16. Vessel Section 14PT1KU.
Plate 17. Ceramic Tab Appliqué 14PT1WSU.

Plate 18. Impressed Ceramic Pipe Fragment, 14PT1WSU with Pecos Pipe (Kidder: 161(a)).

Plate 19. Black on Red Sherd 14PTUNK WSU.
Plate 20. Chupadero Black on White, 14PTUNK WSU.

Plate 21. Chupadero Black on White Cross Section. 14PTUNK-WSU.

Plate 22. Pot Private Collection Published in the Pratt Tribune 04/09/10.

Plate 23. Daub 14PT1KU.
Faunal Analysis

The sample of faunal material analyzed totaled slightly more than fifteen kilograms from eighteen sites. Seventy nine percent of it (11.920g) by weight came from 14PT304 and 14PT420, the two sites excavated by K.S.H.S. personnel. Another eleven percent (1644g) from 14PT1 was donated to the University of Kansas without provenience information (Figure 16).

No attempt was made to identify the minimum numbers of individuals, and species are included only when clearly identifiable. The large amounts of bone shatter in these collections make such analysis impossible. Unidentified mammal bone made up 58% of the total faunal material. Bison comprise another 36% of the total. Mussel and turtle shell, three deer bones and 21 tooth fragments were identified separately from bone shatter. These were predominately were bison tooth fragments and 1 canid tooth (Figure 17). The vast majority of the unidentified bone is more than likely bison. When sorted, the size and heft of this material falls into the bison/elk category. Given that there was only one positively identified elk component, all the remainder more than likely derives from bison. This unidentified material is heavily shattered and fragmented, the thickness and overall heft of the larger fragments placed in this category could safely be interpreted as bison. Only three identifiable deer bones were identified during the course of this analysis. In order to develop a more detailed and substantial faunal analysis it is necessary that it must be developed from a much larger sample size, extracted from formal excavations and then subjected to formal species analysis.

The bone analysis by weight (Figure 18) was constructed as an attempt to identify the weight of specific fragments related to the entire inventory, and show the preponderance of bone fragments found to intact bone. The 11.9 Kilograms of bone shatter fragments identified from a total fifteen kilograms of faunal material constitute 79% of the total faunal material inventory.
Even with this markedly unequal distribution of weight the chart is useful in displaying the metrics of the specific weights of the categories as selected, and that bone shatter makes up the most significant percentage of the faunal inventory.

A graph illustrating bone processing (Figure 19) was constructed as a part of the overall analysis of faunal materials, as each identifiable bone fragment was also inspected for signs of exposure to fire. Analytical categories include unburned, calcined (white), and burned (black). Unburned fragments were classified as such with fragments burned to white classified as calcined and fragments burned black simply as burned. Unburned bone makes up 60% of the inventory with 29% and 10% for calcined and burned respectively.

Forty-three identifiable bone tools were in the three collections (Figure 20). Bison scapula fragments showing signs of use wear totaled 22 artifacts equaling 51% of the total. The second most frequent of the bone tools identified were the ten awl/perforator fragments, 23% of the totals. Eight bison tibia digging stick fragments make up 19% of the total. Also present were two bison rib rasps and one incomplete bird bone whistle.

Plates 24 through 27, illustrate an incomplete bison tibia digging stick/flesher. The photos illustrate the initial shaping of the tool by the use of a hammerstone to batter and rough out the overall form prior to grinding the edges smooth and beveling the bit end of the tool. The drilling to allow for insertion of a handle has not been started, and this could indicate that this task may have been one of the last steps taken during the construction of a digging stick. It is not known if this construction sequence is typical of all digging sticks/fleshers, but this particular tool shows that after the distal end of the tibia is removed that initial rough shaping of the tool was done by heavy battering.
Seven bone awls and perforators were identified in the K.U. materials from 14PT1 with an additional three found in the Historical Society’s 14PT1 collection. Of these ten artifacts two of the awls from the 14PT1KU collection show a marked similarity to awls, or what Kidder identifies as a “rib edge polisher and a rib edge awl” from Pecos (Kidder 1932: 229). These two artifacts are triangular along the long axis and blunted at one end (Plate 28 lower right and Plate 29, top and bottom) and may be similar to ones found at the Antelope Creek sites in Northern Texas Panhandle (Lintz 2009 personal conversation). These similarities are not to be interpreted as definitive proof of a connection between the Southwest (Antelope Creek) and Pratt but another of the indicators or similarities alluding to these possible connections.

I have included a plate illustrating two examples of bison scapula fragments to illustrate heavy use wear and very high polish (Plate 30). Definitive use for these two artifacts is not known but that they were heavily used, more than likely in a horticultural activity, is clearly evident.

The rasps, one illustrated in (Plate 31) and the single unfinished bone whistle (Plate 32) are included in the tool category as they have been clearly constructed with the intent to fulfill a specific purpose. These were the only three sounding implements identified in the Pratt collections.

The analysis of all materials identified as bone from all of the three inventories clearly show that bison was the primary source of meat protein. Seventy nine percent of all the material was identified as bone shatter and, of that number, thirty nine percent were found to be either calcined or burned. This indicates that the processing of bone for marrow and or grease was an activity intensely conducted in Pratt. No cranial or vertebral elements of bison were found in any of the three collections examined. Bison horn and dentition have been identified in the
photographs donated by the University of Southern Maine (Appendix A), in contrast with the elements analyzed here where there is a lack of these elements.

**Figure 16. Bone Weight by Collection.**

![Weight by Collection Chart]

Total weight = 15,050.56 gr
Figure 17. Faunal Identification by Count.

Figure 18. Bone Identification by Weight.
Figure 19. Bone Processing Percentages.

Figure 20. Identifiable Bone Tools All Sites.
Unfinished Bison Tibia Digging Stick from 14PT1KU Collection.

Plate 24. Bison Tibia Proximal View Undrilled 14PT1KU.

Plate 25. Bison Tibia Lateral View showing Battering 14PT1KU.
Unfinished Bison Tibia Digging Stick from 14PT1KU Collection.

Plate 26. Bison Tibia Drilled and Battered 14PT1KU.

Plate 27. Bison Tibia Distal Beveled Edge 14PT1KU.
Plate 28. Bone Awls 14PT1KU.

Plate 29. Bone Awls 14PTKU.
Plate 30. Scapula Hoes Heavy Use Wear High Polish 14PT1KU.

Plate 31. Bone Rasp 14PT1KSHS.

Plate 32. Unfinished Bone Whistle 14PT411KSHS.
Organics Analysis

The three institutional collections yielded a total of 124.92 grams of burned organics from four different sites. Corn cobs and kernels (Plates 33-34) were identified in the 14PT1WSU, 14PT415WSU, and 14PT1KSHS, collections and totaled 86 grams. Out of this total, 81.79 grams of burned corn were from two site collections donated by Rob Swinson. Several unsuccessful attempts were made to solicit funding for radiocarbon dating of random samples from these two sites. Because the samples had no verifiable provenience, no one could justify the expense of radiocarbon dating.

The wood charcoal samples collected from sites 14PT304, and 14PT420, totaled 35.32 grams, and it is from the samples from these two sites that the two radiocarbon dates for the Pratt Phase were established.

An uncounted and unidentified number of loose seeds approximately 1mm in diameter, spherical in shape and weighing in total 3.6g were identified from site 14PT1WSU complete the organic totals.

Adair (2007) provides a comparison of maize characteristics was developed from five different sites in Kansas. One of these samples, from 14PT1, was submitted by Dr. Donald Blakeslee. Her report also includes the Middle Ceramic Lundeen site, (14MD306) (Bevitt, 1999: 69) near Fowler Kansas with dates between A.D. 1237 to 1425, the Tobias site (14RC8) of the Little River Focus from the early fifteenth century, and two historic sites, the Pawnee Indian Museum State Historic Site (14RP1), and Fools Chief Village (14SH305). The graphic portion of Dr. Adair’s report published in Current Archaeology in Kansas (Adair 2007: 6) is included here and shows that corn with three specific row patterns were identified in the Pratt sample. 8 row (15%), 10 ten-row (80%) and 12 row (5%), and no 14 row (Figure 21). The high percentage
of 10-row corn in the Pratt sample is distinct and exceeds by a great margin the percentages of ten-row corn at any of the other four Plains sites that were included in the analysis. It should also be noted that the mean cob diameter of the corn analyzed from Pratt is much lower than any from the other four sites. It is possible for the same variety of corn to evidence different row counts but the use of row counts to illustrate patterns is valid. The relatively small sample used for comparative purposes from the Pratt site may or may not be representative of all Pratt sites. What it does accurately show, and in detail is that maize was indeed available at Pratt sites, and that it was predominately the ten row variety.

The inherent problem that comes from any analysis when using a small sample size is that if the sample submitted was collected from a single site without provenience, the data becomes a snapshot of an unclear source for Pratt.

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Figure 21. Comparisons of Maize characteristics from five Kansas sites
Plate 33. Burned Corn Cobs 14PT1KU.

Plate 34. Burned Corn Kernels 14PT1KU.
Radiocarbon Dates

There are only two radiocarbon dates available for Pratt Phase sites. These were established using wood charcoal samples from sites 14PT304 and 14PT420. Median dates from these two sites are A.D. 1336 and 1456 respectively. These samples were submitted for analysis to the Radiocarbon Laboratory at the University of Texas at Austin and compiled by the University of Washington Quaternary Isotope Lab, whose reports are included in this project (Hoard 2006: 322). Samples from 14PT304 (TX-7940) dated 650, +/- 90 BP for which the median calibrated date is A.D.1336 and the second sample from 14PT420 (TX-8147) dated 470, +/- 100 BP with a median calibrated age of A.D. 1456 are the only definitive dates for Pratt. Details are of these two samples are shown in the lower chart portion of Appendix H. showing where the two dates overlap at approximately A.D. 1400. This coincides with the earliest of Wedel’s published estimate for Pratt based on Stubb’s evaluation of Southwestern sherds. The sample of just two dates is totally inadequate to establish a range for the Pratt Phase occupation or its relationship to other temporally overlapping groups in the region.

Mortuary Practices

There is a single mortuary feature currently attributed to the Pratt phase. This was identified at site 14BA401. The site is located fifteen miles directly south of the town of Pratt in Barber County. It was described “where a child was discovered in a flexed position on the floor of a bell shaped pit” (Brosowske and Bevitt 2006: 195). They also acknowledge in the text that the burial was disturbed and that the affiliation of the burial is in question. This burial is included in the discussion because of its relative proximity to Pratt phase area and may not be representative of the actual mortuary practices conducted in the Pratt phase as none have been
identified in the Pratt phase core area of sites. The reference is included only because it does mention finding flexed burials in the Pratt phase region, that may be contemporary with the Pratt phase occupations, but this does in fact, distinctly contrast with the lack of any known burials being found anywhere within the Pratt phase.

My interviews with several current residents of Pratt yielded no usable information related to burials in the Pratt phase. Several residents of Pratt have described in private interviews that there had been a single burial unearthed in Pratt, but this was without provenience or any formal documentation as to the type or disposition of the burial. That there is only a single unverified burial for the entire Pratt phase area is significant as one would expect that during the suspected period of occupation, and with the large number of sites identified, burials if conducted in the Pratt phase would be more visible in the record. This is not the case to date for Pratt and the lack of burials shows more similarity to the practice of not burying the dead as identified in Great Bend Aspect sites, but contrasting with the several different types of burials practiced by groups in the Southern plains.

Architectural Features

No formal data related to dwellings has been published for any of the sites in Pratt County. Interestingly, one bit of information gathered while conducting interviews with the local residents about the mortuary practices in Pratt County was that the locals thought that the bodies were placed on scaffolds and that these (arbors) had been seen at several locations. When I asked why they thought that they were arbors, they reported seeing four post molds laid out in to a rectangular shape in the soil. These were the only references made by Pratt residents to this rectangular form and I suspect that it is much more likely to be representative of a dwelling than a mortuary scaffold.
I have included the only two drawings available that illustrate structures (Figures 22-23). These represent features identified by Earl Monger during the excavation of Level E. at 14PA307 (Ranney 1994: 41-42). Ranney commenting on these features states that “House 5 in level E gives every indication of being a grass house” (Ranney 1994: 67).

These features exposed from the Larned excavations at 14PA307 may be representative of Pratt phase dwellings but they are more than fifty miles north of Pratt and far too distant to be definitively identified as Pratt phase dwellings.
Figure 22. Ranney Figure 11 Level E. feature drawing.
Figure 23. Ranney Figure 12 Level E. plotted artifacts.
Figure 21. Plan View of House 5, Level E.

Figure 24. Ranney Figure 21 Plan View House 5 Level E.
CHAPTER 6
DISCUSSION

It is time to discard the more than five decade’s old Pratt complex and begin defining the
Pratt Phase. I use Willey and Phillips’ definition of a phase: “an archaeological unit possessing
traits sufficiently characteristic to distinguish it from all other units similarly conceived, whether
of the same or other cultures or civilizations, spatially limited to the order of magnitude of a
locality or region and chronologically limited to a relatively brief interval of time” (Willey 1958:
22). I feel all of the criteria required to make this change have been met by the data assembled
here.

The lithic tools and the ceramics from Pratt Phase sites differ little from the Middle
Ceramic period inventories of the region. What does distinguish Pratt Phase lithics from other
regional inventories is the extremely high frequency of Alibates, 69% of the total, used to
manufacture lithic tools. It is not uncommon to find Alibates in small amounts throughout
Kansas, but it is the high frequency of this material that distinguishes the Pratt Phase from the
others. The next most common lithic materials are the relatively local Florence A chert and
obsidian. The obsidian comes primarily from northern New Mexico. When combined these two
materials they make up twelve percent of the total. This ratio pattern of 69% Alibates flint, 6%
Florence A chert, and 6% obsidian approximates the lithic signature for the Pratt phase.

The types and frequency of lithic tools identified during this analysis are important to the
definition of the Pratt phase. The triangular Fresno points are rarer in Central Plains Mosaic sites
but make up a 43% of the point inventory for Pratt. The side notched Washita points constitute
fully 44% of the Pratt point inventory. These two point types suggest similarities to both the
Great Bend Aspect sites and Central Plains Mosaic tool kits. The large percentage of scrapers,
blades and stone awls tend to be more common in the southern plains but are in no way distinctive only to the Pratt phase. What the data do imply is that with the high number of scrapers and blades present throughout the inventory is indicative of the importance of bison processing activities to the peoples of the Pratt Phase. These types of lithic tools and the faunal inventories, combined with the large amount of bone shatter present, support this idea that the faunal activities in Pratt were primarily focused on faunal processing activities with the actual activity of hunting bison being conducted away from the primary cluster of Pratt phase sites. This contrasts with Great Bend Aspect site assemblages, where all skeletal parts of the bison are present in the site inventories but shows similarities to the Pratt inventory as bison, deer and elk are again all present as part of the economy.

Pratt pots are primarily globular with slightly tapered or round bases. No flattened or conical bases were identified during the analysis. Cord-marked finishes dominate the ceramic inventory, comprising 65% of the total. Plain surfaces are the next most common surface finish and are 16% of the total. Pratt ceramics are almost exclusively sand-tempered with 91% of all ceramics falling into this category. Little useful information about decorative styles could be acquired as Pratt phase ceramics are primarily without decorative additions and appear to be strictly utilitarian other than occasional diagonal lip impressions. Diagonal lip impressions on Pratt phase rims show similarity to the lip impressions found on Great Bend Aspect pots, but in contrast to these few similarities Pratt phase pots are characteristically without handles and none exhibited the flattened bases found in Great Bend assemblages. Though statistically insignificant and without provenience it should be mentioned that in the K.S.H.S. collections and similar to ceramic artifacts identified as Great Bend Aspect were four simple stamped sherds at 14PT401, and two burnished sherds from 14PT420.
Only a few sherds of Southwestern pottery, pieces of turquoise and malachite are present in the assemblages analyzed here. This having been said, there are considerably more southwestern ceramics, drilled shell beads and turquoise, now being held in private collections than are reported here. The intensity of interaction with Southwestern societies is high when compared to other Kansas complexes and is misrepresented by the lack of the Southwestern materials held in the collections analyzed.

To establish a clear and accurate definition of what was occurring at Pratt phase sites during the Middle Ceramic period, the formal analysis of organic materials must be expanded. This should include the identification of not only the types of organics present, but also the spatial extent and intensity of the horticultural activities conducted in Pratt phase area. The analysis of a larger sample of organic materials from multiple sites needs to be conducted for Pratt. This is critical in the determination of whether the relative lack of maize now identified, reflects accurately the intensity and of maize production and processing at Pratt phase sites. The analysis of the relatively small amount of burned organic materials and the related bone processing tools used for processing corn that were found in the Pratt collections does imply that horticulture was conducted in the Pratt phase core area and that from these there is the potential for intensive horticultural activity as yet undiscovered in the loamy soils and terraces just to the east and west of the town of Pratt (Figures 25-26).
Figure 25. KGS Soils Distribution for Pratt County

Figure 26. Topographic map 2m Contour Centered on Town of Pratt, symbol located at juncture of the two branches of South Fork of the Ninnescah River, by David T. Hughes.
The known Pratt phase sites are clustered in and around the town of Pratt adjacent to the Ninnescah River. The soils where these sites are located consist of loamy and sandy soils surrounding both the north and south branches of the river. This area of small bluffs and low terraces along the river that would have been available for cultivation from just west of the center of Pratt, to approximately ten miles east of Pratt. It is here near Cairo, where the South Fork of the Ninnescah becomes naturally contaminated with gypsum and other mineral salts. It is from this point, ten miles east of Pratt, near the town of Cairo, that I position the eastern most extent of the Pratt Phase. The northern and western boundaries of the Pratt phase are established by the Pratt Sand Hills dunes. The southern boundary for the Pratt phase has not yet been as clearly determined. I will propose though by using the limiting factors of potable water and the soils available, that the southern boundary be established at the northern edge of the Red Hills in Barber County. With only three widely spaced sites on record in northern Barber County, it is logical at this time to tentatively place the southern Pratt phase boundary here. There is potential for additional Pratt Phase sites to be found in southern Pratt and northern Barber counties, but that these should only be included into the Pratt phase, if the material assemblages and chronology warrant inclusion.

Formal field research data from the Pratt Phase core area is restricted to a pair of phase two site reports. The new taxonomic positioning of the Pratt Complex as the Pratt Phase will exclude Earl Monger’s work at 14PA307. This exclusion by necessity would also have to exclude William Ranney’s assessment of the Monger excavations related to the Pratt Complex. This is based on the lack of any horticultural tools being identified in the artifact inventory. The K.S.H.S excavation in Barber County will also be excluded from the Pratt phase until it can be clearly tied to the Pratt Phase core area by the identification of similar burial practices yet to be
found in Pratt. It is clear that the frequency of 56% Alibates found in Level E, at 14PA307 is similar to but less than what is found in the Pratt phase lithic analysis but also the mix of materials does not match Pratt Phase materials. Ranney’s Table 11, (Ranney 1994: 58) show that Alibates make up 56.2% of the lithic total from Level E. The second most common lithic material in Level E is Smoky Hill Jasper with 31.6% of the inventory. Florence A chert, and obsidian in the Pratt inventories are equal at 6% each and comprise 12% of the total where in the 14PA307 inventory they make up only 0.5% and 0.2% respectively. The mixes are distinctively different between the two inventories. It is extremely interesting to note the increase in the frequency of Alibates as the Larned site levels become more recent and that the frequency of Florence A and obsidian never become significant percentages. This difference in lithic frequency and the lack of horticultural tools at 14PA307 Level E clearly distinguishes the Pratt Phase sites and 14PA307 as potentially related but identifiably separate entities. The continued use of the taxon Pratt complex or the more ambiguous and widely used Pratt related sites at this point in the archaeological investigation is no longer justified or sustainable.

By establishing the Pratt phase as a separate taxonomic entity begs the question of the relationship of the Pratt phase to other contemporaneous groups along the porous, flexible and sometimes arbitrary cultural boundaries established for the region. That the Pratt phase’s heavy reliance on Alibates flint and obsidian as the materials of choice for the manufacture of lithic tools, both originating from the south and west of the core area is difficult to explain. Trade does adequately answer or explain the question of why this material shows up in Pratt phase sites in such high frequency, to the near exclusion of all the other lithic materials. Too high a frequency for trade and furthermore what would have been exchanged for the stone, as bison was available to both regions.
In contrast to the high frequency usage of non-local Alibates flint, the most distinguishing characteristic of the ceramic inventory is the almost exclusive use of the locally available sand for tempering. This opportunistic use of a locally available material is a logical behavior and does not require much interpretation, but when viewed in contrast to the heavy use of non-local materials for lithic tool manufacture the correlation between local and non-local usage of materials is not clear.

The two radiocarbon dates that we have fall within Waldo Wedel’s estimate of the chronology of the Pratt phase based on Stubbs’ analysis of the southwestern sherds. For now these are all that we have as far as establishing a temporal placement using Pratt phase materials. The two radiocarbon dates place the occupation of the phase between AD 1300 and AD 1500. Dates from the Odessa phase located in the Texas and Oklahoma panhandles fall between AD 1350 and 1500 (Brosowske 2005: 134), suggesting overlap with the Pratt phase. It should be noted that late Antelope Creek phase sites, with dates ranging from 1350-1500A.D. (Lintz 1986: 258), could also be viewed as contemporary with the Pratt phase. To the east, a large suite of dates suggest that the Great Bend aspect began at about A.D. 1425 (Blakeslee Hawley 2006: 167).

The Pratt phase should be viewed for now as an entity that may be partly contemporaneous with but distinct from these other units. Whether the Pratt phase occupations “are part of populations that moved northeast following A.D. 1400 and formed a substantial part of the Little River focus of the Great Bend aspect” (Brosowske 2005: 124) cannot be determined with the data currently available. There are differences present in the ceramic inventories of the Pratt phase and Little River focus: Pratt ceramics are predominately cord marked, Little River
pottery trends towards plain or simple stamped and these traits alone keep the two assemblages independent of each other.

The large amounts of bone shatter, without much in the way of axial or cranial components contrasts with the Larned site inventory where cranial components (Ranney 2004: 61) are found. This suggests that while much importance was given to bone processing activities, the Pratt phase, it was not a series of temporary hunting camps. This lack of axial and cranial components and the absence of any bone horticultural tools identified in the Level E assemblage at 14PA307 (Ranney 2004: 62), distinguishes Pratt phase sites from the inventory found at Larned. It will also be noted here that in the photographs donated by the University of Southern Maine, horn cores and some axial components are apparent, but the provenience and significance of these artifacts are not known. If the analysis of the materials held in Maine does take place, and can be combined with data gathered from formal site excavations in Pratt, the determination of whether the Pratt phase was a village based on horticultural and faunal processing economies, or a cluster of hunting camps can be made.

Maize is suspected to be an important cultigen during the Pratt phase. There are large areas conducive to and available for the cultivation of crops within the phase area. The loamy and sandy soil types adjacent to the juncture of the springs fed branches of the South Fork of the Ninnescah River have the potential for sustained horticultural activities. Even more important to the development and maintenance of the Pratt phase, is the constant supply of fresh potable water. Since the river is spring fed, the flow volume of the river is not dependent on seasonal rainfall and weather conditions. This consistently reliable source of fresh water would have made the core area an ideal location for long term occupation.
It is not only the effects of the collector’s own bias on what is collected in the field but also what he decides to donate or keep. These factors that are critical in determining what constitutes the Pratt phase assemblage and without formal excavations it is understood that these choices or biases could cloud if not change any of the presumptions made here.
CHAPTER 7

CONCLUSION

The analysis of the Pratt phase materials, even with the acknowledged drawbacks that come with basing all conclusions on surface finds and with little in the way of formal excavation data, has led to a few identifiable criteria as to what the Pratt phase was. First of these criteria would spatial. The Pratt phase is limited by several natural physiographic boundaries. The northern and northwestern boundary is formed by the Pratt Sand Hills, and the southern boundary by the Red Hills Uplands. The eastern boundary lies at the point where there is an identifiable drop in in water quality near Cairo. What remains is the physiographic area to the southwest of the Pratt phase core area. This opening follows the long established prehistoric and historic trails from south-central Kansas, through the panhandles of Oklahoma and Texas and from there into New México. The low topographic relief through this opening, with many small streams present, creates a corridor between the Texas and Oklahoma panhandles and the Pratt phase area. This presented a natural route of travel between the Pratt Phase and groups located in Panhandles.

The ceramic inventory of the Pratt phase can be used to distinguish the Pratt assemblage from Great Bend aspect ceramics due to the Pratt ceramics relative lack of decoration, tabs and handles. Pratt ceramics appear to be to be strictly utilitarian. The almost complete dependence on sand as a tempering agent should be seen as non-diagnostic and may just be a result of convenience and the opportunistic use of locally available materials.

A direct comparison between Pratt ceramics and Borger cord-marked was not conducted. The most that can be said is that the two cord-marked styles are very similar and warrant not only further but a much more intense review.
The Pratt phase was a sedentary population with mixed hunting, gathering and horticultural economies. The cluster of Pratt phase sites centered on the juncture of the two branches of the South Fork of the Ninnescah River fits well with what is called the Southern Plains Village Tradition. The faunal and lithic inventories from Pratt phase sites suggest that that the hunting practiced there was heavily dependent on bison, and that this hunting activity was conducted by ranging outside of the core area, and then returning with selected faunal elements to the habitation sites for processing. It is understood by the author that without the intensive analysis of a large well excavated faunal sample this conclusion requires further testing.

The horticultural economy of the Pratt phase is not easily interpreted. The perennial South Fork of the Ninnescah River, seeping from Pleistocene formation aquifers, continues to supply suitable water in quantity to modern occupants of Pratt. This consistent and dependable water supply, combined with the gentle terrain and soils located on low terraces along the river, would have been able to support maize cultivation on a much larger scale than has been shown through the inventory analysis.

The Pratt phase fits into the Middle Ceramic Period, with dates coinciding with later occupations of the Antelope Creek phase (Lintz 1986: 180) and the later Odessa Yates (Brosowske 2005: 134) sites to the south and west of Pratt. These sites, and the Great Bend Aspect sites with dates starting approximately A.D. 1425 (Blakeslee Hawley, 2006: 167) all show the possibility for the temporal overlapping with Pratt phase occupations.

The most glaring observation regards the high frequency of the non-local Alibates flint to the near exclusion of almost all of the relatively local materials. If Alibates flint artifacts are to be viewed as trade goods then Chris Lintz’s comments about the directional trade model that “Trade goods are most apt to occur at the more permanent homestead and hamlet sites rather
than open procurement and outlying subhomestead sites which reflect specialized and seasonally limited occupations” (Lintz 1986: 184-185) would support the suggestion that Pratt phase sites were not temporary occupations and could be the reason for the high frequency of Alibates flint found in Pratt. What the model does not disclose is what the components of the trade economy were. The most simplistic interpretation would be that bison related products from Pratt were traded for Alibates flint, but this is purely speculative and cannot be confirmed by this research. Bison were available to the people of the panhandles and what would be the reason to trade for something readily available. Also no trade practice that I am aware of justifies or explains the reason for the overwhelmingly high frequency of Alibates flint found in the Pratt phase inventory and migration cannot be substantiated with the data available here.

It is strongly suspected that without proof of any identifiable trade mechanisms in place for the Pratt phase, that the direct acquisition of material may be the most logical justification for the high frequencies of Alibates in being identified in the Pratt phase collections.

Summary

Pratt phase sites are of the Middle Ceramic age and are concentrated at the juncture of the two branches of the South Fork of the Ninnescah River. The phase is almost exclusively dependent on the use of Alibates for lithic tool manufacture, and it is this high frequency that distinguishes the Pratt phase from adjacent cultural complexes. Tool kits for the phase are similar to most Middle Ceramic tool kits, small triangular and side notched points with side and end scrapers used for faunal processing. Horticultural tools of bone are also present in the Pratt phase inventory which distinguishes from the assemblage found at site 14PA307. Maize was identified and is suspected to be of much significance. Pratt ceramics appear to be primarily
utilitarian, almost exclusively sand tempered, primarily cord marked, and with little decoration. The pots found in Pratt distinguish themselves from Great Bend aspect pots by the lack of any evidence of flattened bottoms, tabs and or handles. It was noted during the analysis that ceramics from Pratt phase sites strongly resemble the Borger cord marked pottery found in the Texas panhandle and this similarity should warrant a comparative analysis. Southwestern ties with the Pratt phase are strongly suspected but not definitively supported by the analysis of the material assemblages from the three institutional collections. Suspicions of these ties were developed and are based on the lithic frequency results, the style of pottery, and the amount southwestern ceramics, a Pecos clay pipe, and the turquoise and shell being held in private collections.

The definition of the Pratt phase is being based on the analysis of three institutional collections. These collections are primarily made up of surface finds. The lack of intensive formal excavations, the temporal positioning based on only two radiocarbon dates, and the effects of collectors’ bias on the make-up of these donated materials all detract from the strength of the analysis. What these detrimental factors do not affect is the results of the material analysis of these collections and what they logically imply. It is critical to the establishment of the Pratt phase to have formal excavations, to establish a valid chronology by the intensive dating of samples from general sites found in the Pratt phase area. Extensive floral and faunal analysis is needed to establish the relative importance and extents between agricultural and hunting activities. Without these additions this accumulation of data could prove to be an entirely different thing.

To further investigations related to the Pratt phase, Excel spreadsheets of all raw data collected in this study, along with all artifact photographs will be available as attachments and are included as part of this project.
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U.S.G.S.

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Wedel, Waldo R.
Weston, Timothy

Willey, Gordon R., and Phillip Phillips

Witty, Thomas A.
APPENDICES

Appendix A.

1. USM, 035 Ceramics.
2. USM, 002 Ceramics.
3. USM, 003 Unidentified Bone, Teeth Grinding stone (Possible Molar).
4. USM, 004 Unidentified Bone and Lithics.
5. USM, 005 Burned Corn.
6. USM, 006 Burned Corn. (Johnson Site 14PT1) (Date not verified)
7. USM, 007 Bone and Horn.
8. USM, 008 Bison Bone and Horn.
9. USM, 009 Bone and Teeth.
10. USM, 010 Bone and Teeth.
11. USM, 011 Bone, Teeth, Digging Stick, and Unidentified Lithic.
12. USM, 012 Bone, Teeth, Unidentified Lithic, and Unidentified Hair.
15. USM, 015 Small Animal Bones, Mixed Lithics, and Soil.
16. USM, 016 Large Bone Fragments.
17. USM, 017 Bison Carpal and Tarsals Bones.
18.  USM, 018 Ground stone Mano Pestle and Unidentified.
19. USM, 031 Ground stone and Flaked Tools, (Note Scratches).
20. USM, 032 Ground stone Tools.
21. USM, 033 Mixed Lithics, Alibates.
22. USM, 034 Mixed Lithics, Drilled Turquoise, Shell and Ground stone Pendant, Alibates and Antler.
Appendix B.

F.M. Seltzer and Waldo Wedel Smithsonian Correspondences to Eugene Wing

1. February 2, 1951.

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A letter has been written.

SMITHSONIAN INSTITUTION
WASHINGTON 25, D.C., U.S.A.

SHIPPING INVOICE

C & R. File No. 189480

Date February 2, 1951

To Mr. Eugene Wing
Zuka, Kansas

Recommended
F.M. Seltzer, Head Curator

Approved

Initiated by Waldo R. Wedel
Chief, Division of Archeology

The material listed below contained in one small package is transmitted as:

(1) a gift,
(2) as loan at your request,
(3) in exchange,
(4) for examination at our request,
(5) return of material loaned,
(6) return of material sent for identification.

LIST OF SPECIMENS

Name of Object
Arrowheads

Locality
Kansas

Collector

Catalog No.
13

Number of Specimens

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Received the above in good order (date)
Mr. Eugene Wing
Iuka, Kansas

Dear Mr. Wing:

This acknowledges your letter of January 22 and receipt of 13 arrowheads, presumed to be from Kansas.

The specimens have been examined by our Curator of Archeology, Dr. W. H. Wedel, who notes their general similarity to the points found in considerable quantities in the drier portions of Kansas and adjoining states. In course of his own work in central-western Kansas in 1939 and 1940, Dr. Wedel states that collectors frequently brought in quantities of such points as you forwarded. Since most of them were surface finds, in fields which had been badly blown during the drought years, and were without cultural associations, it is quite impossible to say by what tribe any particular point or point type was used. Most of your specimens rather closely parallel the triangular side-notched points characteristic of late prehistoric and early historic times in central and western Kansas. It seems doubtful that any of them have an antiquity exceeding 8 or 10 centuries.

Under separate cover your specimens are being returned. Upon their receipt, please date and sign the white copy of the enclosed shipping invoice and return to us for our records.

Very truly yours,

[Signature]

F. M. Setzler
Head Curator
Department of Anthropology
Mr. Eugene Wing  
217 Larimer  
Pratt, Kansas

Dear Mr. Wing:

This acknowledges your letter of October 17, covering a shipment of 10 bone objects which you wish to have identified. For your information, the package containing the bone specimens was damaged when received here, and small fragments were apparently broken off one or more of the specimens. Our laboratory will try to restore these to their original places. So far as we are able to determine, no major breakage resulted.

The eight objects made of large bone are, as you suspect, fashioned from the same part of the animal—the tibia or lower rear leg bone of the buffalo. The perforation at the articular end of each suggests that they were intended for mounting on a handle. Their purpose is uncertain; the shorter ones suggest fleshing or hide scraping tools, the longer ones digging implements or picks.

The two smaller pieces include a split rib awl and an unidentified tool probably fashioned from the wide part of a buffalo shoulder blade. This may have been used as a scraping tool also, though we cannot be sure.

Our curator of archeology, Dr. Walde R. Wedel, has examined these specimens with much interest. Dr. Wedel conducted archeological investigations for the National Museum in Kansas in 1937-40, and is currently at work on a detailed report of that work. He states that he has seen no specimens such as the present ones, but adds that he at no time carried his investigations south of the Arkansas River. He is curious to know whether you found any pottery fragments, projectile points, or other materials on the campsite from which these objects were taken.

In view of the rather unusual nature of these specimens, we would appreciate any further information you care to give regarding the site from which they came and the circumstances under which they were found. Is the site in Pratt County, as your letter might imply? I am wondering, too, whether you would be willing to give us permission to photograph the objects for our records before we return them to you.

Very truly yours,

F. M. Selkirk  
Head Curator  
Department of Anthropology
SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON, D. C.

October 28, 1953

Mr. Eugene Wing
917 Larimer
Pratt, Kansas

Dear Mr. Wing:

A day or two ago I had the pleasure of examining and identifying a series of ten bone objects sent by you to Mr. F. M. Setalcr. As Mr. Setalcr's reply to you indicates, these specimens are of especial interest to me in view of the fact that I have seen none like them from the Kansas area. For this reason, I am curious to know whether they were found in Kansas, as your letter might imply, and the circumstances under which you obtained them.

In course of my archeological survey for the National Museum in Kansas during 1937-40, I spent one summer testing sites in Rice and Cowley Counties. The material found represents, without much doubt, a semi-agricultural people whom I believe to be identical with the Quivira peoples met by Coronado and other early Spanish explorers in central and south central Kansas. None of the bone implements we found are like the larger specimens you sent in; but several bison scapula digging tools from sites near Arkansas City were perforated at the articular, or joint, end in the same manner as are your pieces. I believe that scapula digging tools found by the University of Oklahoma in one of the cultural levels at Spiro had similarly perforated holes. Otherwise, I know of none so far reported from the Plains area.

The flat split-rib awl included in your shipment is a type that occurs rather widely throughout the plains, usually in relatively late horizons. This, plus the hafting method implied in your legbone tools, leads me to suspect that your material may be from a site inhabited within the past two or three centuries, in other words, since white men came into contact with the Indians. Closer identification may be possible if you have pottery fragments, arrowheads, and/or other tools found in association with the bone objects. It would also be helpful to know whether these specimens came out of storage pits or from other possibly native structures, or were exposed in a cut bank along some creek or river. I know of no direct evidence that the "Quiviran" materials found east and north of the Arkansas River in Kansas occur also to the south and west of that stream; but you may be on the track of such evidence.
I have asked our Publications Office to send you a copy of my preliminary paper on the Quiviran materials recovered in Kansas in 19h3, and you should have that paper by the time this letter reaches you. It may give you a better notion of the sort of material I found. I would be very much interested in knowing whether materials like those illustrated in my paper occur on the site from which your bone specimens came, or on any other site you know of in or near Pratt County.

Very truly yours,

Waldo R. Wadel, Curator
Division of Archeology
November 10, 1953.

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON 25, D.C.

AIR MAIL

Mr. Eugene Wing
917 Larimer
Pratt, Kansas

Dear Mr. Wing:

Your letter of October 30, and the accompanying package of archeological objects from Pratt County, reached me yesterday morning. I unpacked the material immediately and found it of very great interest indeed. As you note, there is a good deal of similarity between this material and that I collected for the National Museum in Rice and Cowley Counties. Actually, among the numerous specimens I did not figure in my preliminary paper, there are pieces that will match practically everything you sent me. The similarity is very close, indeed, and I think there is no doubt that the people who lived on your Minnesau River site were closely related to those whom the Spanish called Quivira Indians. Only the curious socketed bone "digging stick heads" or "picks" which you sent in first seem different from anything I found.

The banded flint objects you sent are undoubtedly the same sort of stone as the Florence Flint, since one or two of your pieces clearly show the small "wheat-grain" Fusuline fossils that identify the material. Some of your other chipped stone looks like the so-called Albates dolomite from the Texas panhandle, which was widely traded among the late prehistoric and early historic Indians.

What interests me especially in the shipment you sent are the painted pottery fragments, without any question representing wares made on the Rio Grande River in New Mexico. I also found sherds of Rio Grande pottery, evidently traded or carried into the Arkansas valley; but your specimens seem a little different from those I collected. As you are perhaps aware, the glaze-paint decorated sherds of the Rio Grande have been pretty intensively studied, and many of them have been dated by tree-rings or other means. I am most curious to know whether your painted pottery is earlier, later, or the same age as the pieces I collected; but unfortunately there is no one here in Washington who is intimately familiar with Rio Grande pottery. On the chance that the pottery is datable, and so would give us a better idea as to the age of your site, I wonder whether you would give me permission to send the painted sherds to experts in Santa Fe for examination and comment. There would be no need for them to break, cut, or otherwise damage the specimens, and the pottery would be returned when the examination was completed. I believe such an examination would give us a pretty good date on your site, and would enable us to judge better just where it fits into the
picture of central Kansas prehistory. I do not want to send these pottery fragments away without your express permission, which I sincerely hope you will grant.

The objects you say were taken from a grave some distance from the campsite are very likely of considerably later date. The two long shell objects are known as hairpipes; they were used in various ways, one being by attachment to the ears or to rather elaborate ear pendants. Under separate cover I am sending copy of a paper on the Kansas Indians, in which you will see, plates 1 and 2, such objects as worn by Kansas men in about 1832. Hair pipes of this style were made in New Jersey, apparently not before about 1775; and they got into the Missouri River Indian trade about 1800. Your grave therefore is very likely after that date. The white clay pipe, with the letters T D, is also a late type, and the blue and white glass beads were also common among the Indians of this period. Since the area south of the Arkansas River was hunting range for several tribes after 1800 - Pawnee, Kansas, Csage, etc., it is impossible to say to what tribe the Indian there buried belonged. I am curious incidentally to know whether you dug these objects up yourself; if so, what was the relation of the two hair-pipes to the skull? In other words, were they found in such position as to suggest that they had been attached to the ears? And what became of the bones in the grave?

I shall probably have more to write about when I have had opportunity to look more closely at the material you sent in, and therefore would like to hold it for a time longer. If you consent to my sending the painted sherds to Santa Fe, I will hold all the material until those sherds come back and then will return it to you with such information as I have been able to get. An envelope, which requires no postage, is enclosed for your reply.

Sincerely yours,

[Signature]

Waldo E. Wedel, Curator
Division of Archeology

Enclosures
Mr. Eugene Wing  
217 Larimer  
Pratt, Kansas  

Dear Mr. Wing:

Your letter of November 12 should have been answered earlier, but I chose to wait until I had received a report from Santa Fe concerning your five painted pottery fragments. That report arrived a few days ago, and I am sure you will find it of much interest, as I did. It is as follows:

"The Kansas sherds arrived in good shape, and have been examined. Three of the sherds are Rio Grande Glaze, probably from the same bowl; one is Biscuit B (Bandelier Black-on-Gray), and is marked 'Pratt'; one is Woodland.

"The glaze sherds are the type called by Mora 'Group C', or by Kidder 'Glaze III'. Under either name I would place the approximate date as about 1450 to 1475. The tempering material in these specimens is not too distinctive, but it does match quite closely similar period sherds from San Cristobal ruin in the Galisteo Basin about 25 miles south of Santa Fe.

"The Biscuit ware sherd is representative of a rather long lived style from the Tewa area north of Santa Fe, with a time span from about 1425-50 to 1525-50.

"The Woodland sherd is unknown to me as to type and age. It shows definite anvil marks and almost obliterated cord marks."

These observations are of very much interest to me, since they evidently indicate an earlier time period for the site from which your sherds came than for the Quiviran sites I investigated in Rice and Cowley Counties in 1940. The Rice County sites from which we obtained southwestern type pottery fragments were roughly of the Coronado period, that is, after 1525; your sherds, as the above quotation shows, generally precede that span. This also suggests that your site was probably abandoned before white men reached the Kansas region. The specimens you sent me show no white man's goods, nor do any of your letters mention
gun parts, glass beads, or similar trade items. Of course, it is always possible that later Indians camping in the same place would lose occasional glass beads or metal points, etc., but I get an impression that you haven't much, if any, early white trade material from this site. Am I correct in drawing this inference?

You will note that one sherd in your five could not be classified at Santa Fe. I don't know whether it would be possible to get this identified elsewhere or not. It is almost certainly painted, and painting was not customarily done on Plains or other Woodland pottery. Would you consent to my sending this one sherd to some other expert, perhaps in Oklahoma or Texas, for further examination? All five of your sherds were returned to me unharmed from Santa Fe, and are now in my possession. I shall await your wish in this matter.

Now as to your specific questions. The four-bladed knife to which you invite my attention is a not uncommon form in the Plains area. I have seen them from various sites in Kansas, Nebraska, and adjacent states. Among many early day collectors they were known as the Harahay knife perhaps because they were thought to be especially characteristic of the lower Kansas River valley where Brower thought the "Province of Harahay" was located. They were made in prehistoric times as well as in early historic days. Actually, they are merely one variant form of the multi-bladed knife, which has a varying number of beveled cutting edges and presents much variation in shape and size.

As to the obsidian hide scraper: A few small pieces of obsidian have been found in some of the Rice County "Quiviran" sites, but I believe usually as arrowheads or as unfinished flake tools. I do not recall ever seeing a scraper of this material, despite its obvious suitability for such a tool. Since the obsidian would have to be brought in from New Mexico or from Yellowstone, I suppose it might have been too scarce to have been freely used for something as commonplace as a scraper. Obsidian is generally very rare in prehistoric archaeological horizons in the central plains, so far as my information goes.

Your remarks about the exposure of many new campfire locations by deep plowing this last spring are most interesting; and in suggesting this matter as a possible explanation for the occurrence together of specimens not ordinarily found directly associated with one another, I must credit you with much more insight than the average collector shows. As a matter of fact, I was somewhat bothered when your specimens first reached me by the presence of several sherds which had been treated with a cord-wrapped implement. These at once suggested the possibility of just such admixture of originally separate cultures as you hint at. In light of the dating suggested by Santa Fe, however, I suspect that there is another explanation. Cord-roughened pottery is generally older in the Plains than is the plain smoothed and shell-tempered pottery of the Rice-Cowley Counties section. This leads me to think that you may have a location
where the Indians still made some cord-roughened pottery, similar to that made for many years previously by their ancestors; and at the same time, they were making the smoothed pottery that a little later, as in Rice and Cowley Counties, became almost their exclusive product. This is one of the more intriguing things that your collection brings up, and makes it just the sort of collection that makes us professionals happy.

I am afraid that I can’t give you much help in the matter of evaluating your collection. The bone digging stick tips you sent us for examination are rather unusual so far in Kansas archeology; but they do occur rather commonly in certain Oklahoma sites, and probably have no great intrinsic value. Since we do not buy or sell archeological objects, we are unable to suggest their possible market worth to a collector or dealer. To us, your site and the specimens you sent in are of considerable potential scientific importance because they promise to show us the way back into the earlier beginnings of the Quivira culture, and thus will help us to reconstruct the difficult and interesting problem of native man in the Great Plains. If your collection is mostly from the one site, and if all the specimens are marked in some way so that you can tell just where they are from, your material, properly studied, would certainly be of much usefulness to future archeological research. Too many collections are without records and contain material from so many sites of different times and peoples that they are of little usefulness or interest to scientists.

Since the mails are overburdened at this season, I would prefer not to send your specimens back until after the holidays, if that is satisfactory to you. Should you prefer, however, to have them back sooner, please let me know and we will send them on. Meanwhile, please let me know also whether you wish further efforts made to get expert opinion on the one sherd unidentified in Santa Fe.

Incidentally, I have been wondering whether you have any additional pottery sherds from the Pratt site? I inquire because the sherds you sent previously are of such variety and interest that it would be worth knowing whether you have additional plain, cord-roughened, or other pottery from the site. As you can see from the results so far, consideration of the sherds from any given site, no matter how dull or uninteresting they may look, is the best single way of determining the nature, time, and possible significance of the site. The larger the series of sherds available for examination, the more likely it is that our interpretations will be on the right track.

I have been meaning to ask you whether there has been any digging in the site from which this material was collected. Your letters indicate that there has been a great deal of collecting by many people, but says nothing about actual excavation. Have you done any digging in or around these fireplaces, or do you know of anyone who has? Perhaps the owner
does not look favorably upon such activity. In view of your unusually sharp insights into such things, I should like to venture the opinion that some of the many campfire places recently uncovered by deep plowing may actually be the upper portions of Indian storage or trash pits. If this proved to be true, I suppose there would immediately be an outbreak of careless digging in search of better loot, and the site would soon be so badly wrecked that any future scientific exploration would be impossible. Key sites, such as this one promises to be, are altogether too rare and difficult to find to risk at the hands of a lot of relic-hunters whose interest in the scientific problems is secondary or non-existent. I am sure you will see my point here.

With all good wishes and the greetings of the season, I am

Sincerely yours,

Waldo R. Wedel

Waldo R. Wedel, Curator
Division of Archeology
January 22, 1954

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON 25, D. C.

January 22, 1954

Mr. Eugene Wing
917 Larimer
Pratt, Kansas

Dear Mr. Wing:

Your letter of December 23 reached me in due time, and I was delighted for the sherd sample that accompanied it. I am sorry that my reply has had to be so long delayed; but the weeks since Christmas have been unusually busy ones and I am behind in my correspondence.

There is no need to apologize for the quantity of pottery you sent me. It is a most interesting lot of material, and I have not yet been able to complete all the observations I wish to make. One thing is clear, however, from my studies so far: the pottery as a whole is not like that commonly found on the "Quiviran" sites in Rice and Cowley Counties. I must therefore revise the opinion I gave you in the opening paragraph of my letter of November 10, 1953, in which I indicated that "the people who lived on your Minnesocah River site were closely related to those whom the Spanish called Quivira Indians". On the contrary, I now suspect that the situation is as I suggested in my letter of December 16, in the paragraph beginning near the bottom of page 2 and continuing onto page 3. In other words, while the stone and bone artifacts you sent me (excepting the digging stick heads) are very much like those from Quiviran sites, the second and larger pottery sample now available indicates that you have a site that may be a century or more older than the Rice and Cowley County sites I worked. It illustrates once again that pottery styles changed faster than those in other categories of tools - stone, bone, etc. - and thus will help you understand why we like to work with pottery; and the more sherds we have to work with, the more likely we are to stay on the right track. The painted sherds in your collection, of course, also confirm such an earlier dating for the site.

You ask about the excellent preservation of the bone tools, and your curiosity is understandable. As I see it, their excellent condition is good indication that they have not lain on or near the ground surface for very long, since they would crack, weather, and otherwise deteriorate rather rapidly under your local climatic conditions. My feeling, therefore, is that they come mainly from old storage pits or refuse deposits, where they have probably lain in ashy soil which gave them protection; and that they were periodically brought to the surface as deeper plowing turned up more artifacts from lower levels in the pits. I have collected
bone tools in equally good condition at sites probably several hundred years older than the one from which your material comes, but only where such tools came from well beneath the surface where temperature changes and variations in the amount of moisture were not so abrupt and marked as they are on the surface. Such excavated specimens must generally be dried out slowly to prevent their cracking and chipping. In the case of your site, I therefore believe that search for the old pits and their excavation would probably turn up much other material in equally good condition. I note that many of your sherds are also of some size, and this suggests to me that they, too, have been brought up by the plow in recent times from pits or other old Indian workings, perhaps pit houses. In other words, it would surprise me if there were not a good many more artifacts, including well preserved bone tools and large potsherds, still lying underground on your site. I hope this answers your question; if I have not made myself clear, please do not hesitate to ask further questions. I'll be glad to answer them if I can.

The unidentified painted sherd is going to Texas for possible identification, and I shall let you know so soon as I hear anything. I suspect it may take more than one opinion to trace it down, but we shall see.

Unfortunately, I have written no papers dealing specifically with dating and classification of pottery. There is still a great deal we do not know about Plains pottery types, and in many cases close dating is not yet possible. Your own experience shows that at any time some one may turn up with material which will help us out very greatly; the association of datable puebloan sherds with locally made pottery, as in your site, is of very great importance to us in working out such problems. I shall gather up a few of my separates and send them to you for such information as they contain on this point. I hope, too, to get a reference or two to papers on Rio Grande pottery which may help you, although up to the present I have not been able to find any very good leads.

Please feel free to write me at any time if I can be of any help to you in suggesting reading or in other ways.

Sincerely yours,

Waldo R. Wedel
Waldo R. Wedel, Curator
Division of Archeology
SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON 25, D. C.

March 30, 1954

Mr. Eugene Wing
917 Larimer
Pratt, Kansas

Dear Mr. Wing:

Your letter of March 27 reached my desk a few days ago during my absence from the city. I have been intending to write you, but unfortunately cannot give much further information concerning the one decorated pot-sherd in your collection. This piece I sent first to Texas and then to Oklahoma; but at neither university was it recognized by the archeologists. The Oklahoma people sent me a few sherds from some of their sites on the Washita River, from which place I thought your sherd might have come; but the Washita River materials are different and there seems to be no reason at the moment to regard your specimen as a trade piece from that locality. I'm afraid that for the present, then, we are stymied, since there appears to be no one else to whom we might send it.

I have completed my examination of the materials you sent, and have been holding them until such time as our photo laboratory could make photos of some of the specimens. I shall make further efforts this week to get these photos made and then will return the material to you. If I can't get the laboratory to undertake the job, I will return the specimens anyway.

As I have indicated, the assemblage of artifact types in your collection is somewhat suggestive of the Rice and Cowley County materials, but is almost certainly from an earlier period. I presume you have other specimens from the site; if so, I should like to look them over this summer, when I intend to be in Kansas on my vacation. Just when that will be is uncertain; but I plan tentatively to take my vacation during August. For a part of that time I will be visiting in Newton. If you are in Pratt during that period, I will plan to make definite arrangements to look in on you at Pratt so soon as my plans take final shape. I would like then to look over whatever other specimens you may have from the campsite, and if possible visit the site briefly for a general look at the setup. Meanwhile, if anything of especial interest shows up in your visits to the spot, I would be happy to learn of it.

I am glad to know that you found something of interest in the pamphlets I sent you. My full report on the archeological work I did in Kansas from 1937-40 is still in the making; if and when it reaches completion, I hope it will answer more precisely some of the questions that occur to you.
I regret the delay in getting your collection back to you; but be assured that I shall get it off within the next week or so. Meanwhile, I sincerely appreciate your patience in letting me have the material long enough to make an analysis and prepare photos.

With all good wishes, I am

Sincerely yours,

Waldo R. Wedel

Waldo R. Wedel, Curator
Division of Archeology
April 7, 1954

Mr. Eugene Wing
917 Larimer
Pratt, Kansas

Dear Mr. Wing:

Under separate cover I am returning the various archeological specimens you sent us from your personal collection last October and November. The specimens are going forward via express prepaid in two cartons, carefully packed in our own laboratory. I trust that they reach you in satisfactory condition.

With reference to the specimens you so generously sent us for examination, there is little I can add to what I have previously written you. I should point out, perhaps, that the trade sherds from the Rio Grande are separately wrapped and labeled, so that you should have no difficulty identifying them. They, like all your objects, should be well cared for, since they constitute interesting and potentially very significant information.

Under separate cover, we are sending six prints of photographs made for our records, showing some of your specimens. I trust you will consent to my use of such of these photographs as may be needed in illustrating the report on Kansas archeology on which I am currently working.

Please be assured of our sincere appreciation for your kindness in sending these archeological materials to us for examination and study. I look forward to a visit with you in Pratt, perhaps this summer, when we can discuss further some of the very interesting problems that arise from your finds.

Upon receipt of this shipment, please date and sign the white copy of the enclosed shipping invoice, and return it to us for our records.

Sincerely yours,

Waldo R. Wedel

Waldo R. Wedel, Curator
Division of Archeology

Enclosure
SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON 25, D.C.

April 7, 1954

Mr. Eugene Wing
217 Larimer
Pratt, Kansas

Dear Mr. Wing:

As indicated in my letter to you dated March 30, I have completed the examination and analysis of the archeological materials you sent us last October and November from the site near Pratt. Moreover, our Photo Lab also found time to make photos of a selected series of the objects. Accordingly, I am having the material carefully packed today in our own laboratory, and hope to get it off to you within the next day or two. Needless to say, I sincerely hope it reaches you in thoroughly satisfactory condition.

Herewith I enclose six prints of the photographs I had made; they may be of interest to you. Until such time as the National Museum is able to obtain, somehow, a collection of materials from the cultural level and time period represented by the site in question, I shall have to refresh my memory from a similar set of photos, plus notes. I should like your permission to use such of the photographs as may be needed in illustrating my Kansas paper—with full credit, of course, to you as owner of the materials.

There is little I can add to the various comments and opinions already given you in previous letters. I am sorry that I was unable to get an identification for the one painted sherd. This, along with the four Rio Grande Glass sherds, constitutes very important information, and I hope you will take especial care of these specimens. They have been placed in labeled packages for your convenience. As a matter of fact, all of the objects are of unusual interest and merit the best care you can give them.

I am most grateful to you for the opportunity of studying these materials, and I appreciate also your forbearance in letting us hold them so long. It is still my hope that I will be able to look in on you at Pratt this summer, to discuss further some of the problems arising from your collections and, if possible, to visit the site from which your collection comes. Also, of course, should your visits to the locality, or to others in the Pratt area, turn up further specimens this spring and summer, I would be very glad to hear of them.

With all good wishes, I am

Sincerely yours,

Waldo R. Wedel
Curator
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Received above in good order (date) April 7, 1954.

To: Mr. Eugene King

972 Larimer

Prairie, Kansas

SMITHSONIAN INSTITUTION
WASHINGTON D.C., U.S.A.

Shipping Invoice

C & R File No.

Recommended by:

Chief, Division of Archeology

Approved by:

P. C. Bixler

April 7, 1954
July 14, 1954.

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON 25, D. C.

July 14, 1954.

Mr. Eugene Wing
917 Larimer
Pratt, Kansas

Dear Mr. Wing:

As matters stand today, I hope to leave Washington this weekend and will have a couple of weeks for brief survey work in Kansas before the end of the month. I plan to call at the Kansas Historical Society in Topeka, probably at the university in Lawrence, and will also look at some sites in southeastern Kansas. I have not worked out a detailed itinerary; but tentatively I plan to look in on you at Pratt either the latter part of next week or the early part of the week following.

I want very much to see the rest of your collection from the Pratt locality; and if it can be arranged, I would like also to visit the site from which you collected the material sent us some months ago. I plan no digging, of course, but would certainly like to see what the prospects might be.

I shall be on the move much of the time while in Kansas; but I intend to check in several times at my sister's home in Newton. Should you wish to write me, please address me Care Miss Margaret B. Wedel, Bethel College, North Newton, Kansas.

I sincerely hope that you will be in Pratt during the time I can call on you.

Sincerely yours,

Waldo R. Wedel
Waldo R. Wedel, Curator
Division of Archeology
October 8, 1954.

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON 25, D.C.

October 8, 1954

Mr. Eugene Wing
917 Larimer
Pratt, Kansas

Dear Mr. Wing:

This letter is in belated acknowledgment of your many courtesies when I called on you in Pratt last July 25. It was a great pleasure to meet you and your family, and to have a personality to associate with a name in my correspondence files. Needless to say, I also enjoyed thoroughly the opportunity to look over your archeological collection, and to visit the site from which most of the material came.

When we left your place, you were kind enough to agree to loan me all the potsherds you have which I have not yet studied from the site west of Pratt. Herewith I enclose a self-addressed frank which you may use in forwarding a package not exceeding four pounds in weight. If this is not sufficient to carry all of the box of unstudied sherds you still have, please send what you can and let me know—I will be glad to supply another frank for transmittal of the remaining specimens. All of the sherds will be returned, of course, on completion of my examination here.

I wonder, too, whether you would be good enough to send me the name and address of the man who owns the site west of Pratt. You will recall that we were told by a neighbor that this man had just departed on a vacation trip, so that we were not able to meet him. I would like to write him concerning our visit and his site.

Thank you again for your very good cooperation.

Sincerely yours,

Waldo R. Wedel
Waldo R. Wedel, Curator
Division of Archeology

Enclosure
February 25, 1955.

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON 25, D.C.

February 25, 1955

Mr. Eugene Wing
917 Larimer
Pratt, Kansas

Dear Mr. Wing:

Your letter of February 13 reached me a few days ago, and reminded me that I have been inexcusably remiss in thanking you for sending on the additional potsherds I requested. About the time I wrote you I found it necessary to get back onto another job that has long been hanging fire, and so I haven't yet gotten to an analysis of the material you sent in. I am still swamped and so can't say definitely just how soon I'll be able to finish off the Pratt pottery. Be assured, though, that I've not forgotten or given up completely, and that the material will be returned so soon as I can finish with it.

From newspaper accounts, I get the impression that Kansas and neighboring states are still short on rainfall. I certainly hope you aren't headed for another hot dry summer like last year.

Thank you for writing and for the patience you show. I hope to do a little better with my correspondence in future.

Very truly yours,

Waldo R. Wedel

Waldo R. Wedel, Curator
Division of Archeology
April 6, 1956

Mr. Eugene Wing
917 Larimer
Pratt, Kansas

Dear Mr. Wing:

Your letter of March 4, together with 4 potsherds and 2 chipped stone artifacts reached me some weeks ago. Had I known that it would take so long to get expert opinions on your materials, I would have acknowledged them long before this.

I took the liberty of sending the 4 potsherds to Mr. Stanley Stubbs in Santa Fe. He reports as follows:

"The Kansas sherds just received fit very well with the lot sent in a couple of years ago. I have put a pencil number on each for identification.

1 Biscuit A (Abiquiu Black-on-gray). See Kidder, Pottery of Pecos, Vol. 1. This type I would date ca. 1350-1100. The center is the Pajarito Plateau, the Chama Valley below Abiquiu, and the Rio Grande Valley north of White Rock Canion to Velarde.

2 Biscuit B (Bandelier Black-on-gray), 2 sherds. See Kidder as above. Date ca. 1100-1550. Same distribution as #1. (Includes your PR sherd. W.R.W.)

3 Sankawi Black-on-cream. This could be called "Biscuit C", as it is a direct development from #2 and in part is contemporary. Date ca. 1500-1600. Distribution more limited than above, principally Pajarito Plateau. See Kidder, Pottery of Pecos, Vol. II."

If you still have my letter of December 16, 1953, the third paragraph of my quotation therein relates to another Biscuit B sherd which you sent in previously. It is interesting to note that the present piece fits so well with the earlier materials you submitted. This I think is
additional evidence that the Pratt site is older than the Quiviran sites in Rice and Cowley Counties Kansas.

With reference to the chipped stone objects, I should prefer to withhold comment until these have been examined by Dr. Roberts. The smaller of the two pieces, gray in color, seems rather close in all particulars to one of the Sandia types described by Hibben from Sandia Cave. The other is doubtful in my opinion. Dr. Roberts has seen much more Sandia material than I, and I hope to have a statement from him sometime next week. So soon as I have that, I will return all six specimens to you.

Thank you very much for sending in this material. It adds worthwhile information to that I already have on file from the Pratt site; and since it is confirmatory I am especially pleased to have it.

With all good wishes, I remain

Sincerely yours,

Waldo R. Wedel, Curator
Division of Archeology
April 10, 1956

Mr. Eugene Wing
917 Larimer
Pratt, Kansas

Dear Mr. Wing:

The 2 chipped stone objects you sent in for examination have been returned to me by Dr. Roberts; he comments as follows: "I would not consider these Sandia. I think they belong in the general broad category of Gary Stemmed which is common in Oklahoma and East Texas Archaic."

If these specimens are correctly assigned to an Archaic horizon they may well have an antiquity of perhaps three or four thousand years. This of course will still make them much later than Sandia.

Under separate cover I am returning the 2 chipped flints, as well as the 4 potsherds reported in my letter to you under date of April 6, 1956. Upon receipt of this material, please sign and date the white copy of the invoice attached hereto and return it in the enclosed addressed envelope which requires no postage.

Sincerely yours,

Waldo R. Wedel
Waldo R. Wedel, Curator
Division of Archeology
October 28, 1966

Mr. Eugene Wing
226 Deuel
Ft. Morgan, Colorado

Dear Mr. Wing:

Your letter of October 23, with enclosures, arrived a couple of days ago. It was a pleasure hearing from you again and to learn a little about your current whereabouts. I judge that hunting Indian relics is still a part of your activities; and the recent discovery of the fluted point on Bijou Creek suggests that it is a rewarding one.

The metal point that accompanied your letter is not one of the common forms of historic weapon points from the Plains as far as those I have seen are representative. There was, however, very wide variation in the details of form among the historic points of the region, and I see no reason to suppose that your specimen was not an Indian arrowpoint of the historic period. It is asymmetrical — that is, if you draw a line from the basal notch to the tip and fold an outline drawing along this line, you will find that the edges do not coincide exactly. To me, this suggests a home-made product; but whether it was made by an Indian or by a white man for the Indians, I can't say. In any case, I see nothing that indicates clearly that it is of Spanish origin.

The fluted point of which you enclose a cast is also an interesting piece. I have been told by the Colorado archaeologists that heavy floods of the past few years in the South Platte drainage have exposed increasing numbers of buried camps and other sites, and that several stratified deposits running far back into the past have already been reported. A Glorie, Poleson, or later bison kill or campsite in the Fort Morgan locality would be a good find indeed, and I wish you and your wife all luck in your hunting.

As you requested, the metal point is being returned herewith. The cast of the fluted point was broken in transit, but is still usable, and I appreciate your sending it.

Sincerely yours,

Velden R. Wead
Senior Scientist
Office of Anthropology

Enc: Iron point

129
Appendix C.

Kansas County Designator

Highlight= Change in Designator

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Feature 6. 14PT420K.S.H.S. Dimensions: 80 cm opening, 40cm constriction

90cm at bottom of trench (excavation did not continue) 105cm deep as drawn
14PT301 Feature 1 K.S.H.S. Site Report p.10/49 Discrete basin shaped pit,

Dimensions: 72cm x 46cm Excavated by Thies 6/22/93
Appendix F.


CONCLUSIONS

The artifacts and features that were found during the excavation of site 14PA307 represent a series of human habitations, and hint at a way of life established by these people. Below listed in a relative chronological sequence from oldest, deepest, to most recent, or uppermost level.

The Group 4 sample was small but the amount of food evidenced by recovered bone materials showed the group to be well supplied. The inventory of tools indicate that they were using the area as a hunting base and probably for a short time. If this material fits into the Smoky Hill Aspect as expected, this group then would represent a small wandering hunting party.

Group 3 artifacts compare very well with artifacts found in Pratt county and designated as the Pratt Focus by Wedel. However the tool inventory shows some difference. Drilled digging stick heads, scapula shovels, corn kernels, grinding stones and millers were very common at the Pratt sites, indicating agriculture. At 14PA307 were found tools used in hunting and hide processing. Therefore the writer interprets the existence here of Group 3 as being a hunting village. Perhaps this points out a pattern of seasonal hunting trips as practiced in historic times. Turquoise and ollivella shell beads indicate the people had in their possession some trade goods that would have its origin with the Pueblo people of the Southwest however no Puebloan pottery was recovered. At present we can note the similarity of material and artifacts with a portion of those of the Pratt site but cannot show that they existed at the same time. We saved charcoal samples that probably could be dated. However the stratification of this material between the Smoky Hill Aspect below and the Great Bend Aspect above points this way, also there is a good hint by soil strata that Group 3 blends into Group 2 above. This indicates to the writer that Group 3 may well be ancestral to Group 2.

As I have mentioned Group 2 represents the Great Bend Aspect or the Historic Wichitas of Central Kansas. In salvage of area 661, one hundred feet south of the principal excavation, Area 652, we found Puebloan pottery which was identified and given a date of A.D. 1500 to 1550. This was found at a level which corresponds with level B of the excavation and gives a good central date for the group. It is very possible then that the Great Bend Aspect peoples were in the Arkansas Valley area at the time of the expedition of Coronado in 1541.

Group 1 could represent a small group of people who wandered to this area probably from as far away as the Dakotas. Dr. Waldo Wedel mentioned a probable date of 1600 for pottery samples he has examined which seems to fit well considering the position in which this material was found and certainly gives a terminal date to the village. I cannot say whether there was direct contact between this group and Group 2 because the people could have temporarily used the village while the Wichitas were absent from the area. Until further discovery in the Central Plains will place this pottery group in its proper aspect I will name it Larned Fine Line for reference.
### Appendix G.


**Table 1. Elemental concentrations and source assignments for the archaeological specimens. All measurements in parts per million (ppm).**

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1 Barium was only acquired for the potential Pachuca samples to increase confidence in the assignment.

**Table 2. Frequency distribution of sources from all sites.**

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Appendix H

University of Washington Quaternary Isotope Lab Report 14PT304 and 14PT420

## TX-9147 14PT304

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Cal AD/BC age ranges obtained from intercepts (Method A):

- One Sigma: cal AD 1288 - 1404
- Two Sigma: cal AD 1222 - 1459

Summary of above:

- Minimum of cal age range (cal ages) maximum of cal age range:
  - cal AD 1288 (1304, 1370) 1404
  - cal AD 1222 (1304, 1370) 1459

## TX-9147 14PT426

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Cal AD/BC age ranges obtained from intercepts (Method A):

- One Sigma: cal AD 1404 - 1464
- Two Sigma: cal AD 1354 - 1497

Summary of above:

- Minimum of cal age range (cal ages) maximum of cal age range:
  - cal AD 1404 (1464) 1464
  - cal AD 1354 (1464) 1497

References for datasets used:

Comments:
6This standard deviation (error) includes a lab error multiplier.
** 1 sigma = square root of (sample std. dev.)* curve std. dev.**
2 sigma = 2 x square root of (sample std. dev.)* curve std. dev.**
[] calibrated with linear extension to calibration curve
0* represents a "negative" age BP
1955* denotes influence of bomb C-14
For cal yrs between 5500-5100 BC an offset of 25 years is possible.
NOTE: Cal ages and ranges are rounded to the nearest year which may be too precise in many instances. Users are advised to round results to the nearest 10 yr for samples with standard deviation in the radiocarbon age greater than 50 yr.
Plate 35. Gene and Marci Wing of Mobile, Alabama 2011