THE WYOMING ARCHAEOLOGIST

VOLUME 28 (1-2)
SPRING 1985

THE WYOMING ARCHAEOLOGIST

WYOMING ARCHAEOLOGICAL SOCIETY, INC.

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ANNOUNCEMENTS

Wyoming archaeology lost one of its most ardent supporters with the passing away of Irene Morgan of Lander, Wyoming in January, 1985. Irene was a long time personal friend who developed an interest in archaeology that soon transcended the collecting stage. She was instrumental in the formation of the Fremont County Chapter of the Wyoming Archaeological Society. She donated several specimens from her collection to the University of Wyoming archaeological collections.

Irene became a strong supporter of worthwhile efforts in archaeology and an active force against looting and mistreatment of archaeological resources. She always welcomed students, state archaeological crew members, and others alike in true western style, with a warm greeting and the welcome offer of food and drink. Stopping for a visit with Irene was always a refreshing part of a trip through Lander and she was always vitally interested in learning about all things archaeological. She is sorely missed by all of us and we sincerely hope that her kind of thoughts and feelings will continue to influence Wyoming archaeology and the Wyoming Archaeological Society.

George C. Frison
Department of Anthropology
University of Wyoming
Laramie, Wyoming 82071

STATE ARCHAEOLOGIST'S REPORT

This issue inaugurates a book review section for The Wyoming Archaeologist. Book reviews should add a new dimension to the publication and provide the readership with a broader perspective of subjects relevant to Wyoming archaeology. Several publishing houses already have submitted scholarly books for review.

With the considerable amount of ongoing research in Wyoming and adjacent states, not every project can or should be published in a regional journal with limited circulation. Many research results are published and distributed through larger outlets to reach both national and international audiences. Wider circulation presents the progress and contributions made by archaeology in Wyoming and nearby regions to more scholars and other members of the public. Nevertheless, statewide interest in archaeological research is growing at a rapid pace and our readers should be kept up-to-date on some other publications.

A book review section allows archaeologists to review recent publications by invitation and critique them for the benefit of our readers. Interested subscribers then can decide whether or not they wish to purchase a book from the publisher and read further on a particular subject.

I will continue to request books for review that may interest Wyoming archaeologists who subscribe to the journal. Four reviews appear in this issue and several more are being prepared for future issues.

Mark E. Miller
Wyoming State Archaeologist
Department of Anthropology
University of Wyoming
Laramie, Wyoming 82071

FRISON NAMED 1985 RECIPIENT OF GEORGE DUKE HUMPHREY DISTINGUISHED FACULTY AWARD

George C. Frison, professor and head of the University of Wyoming Anthropology Department, is the recipient of the 1985 George Duke Humphrey Distinguished Faculty Award.

The presentation will be made Sunday, May 19, 1985 during UW's 95th commencement exercises that begin at 2 p.m. in the Arena-Auditorium.

Given annually, the Humphrey Award recognizes teaching effectiveness, distinction in scholarly work and distinguished service to the University and the state. It includes a $2,000 cash prize.

Frison was born Nov. 11, 1924, in Worland and first attended the University of Wyoming in 1942. Early in 1943 he joined the Navy, served with the amphibious forces in the South Pacific and was discharged in 1946. He operated a ranch in the Ten Sleep area until 1962 when he re-entered UW to complete a B.S. degree in 1964.

As a Woodrow Wilson Fellow, he then enrolled at the University of Michigan to earn an M.A. degree in one year and a doctorate in but two, both in anthropology. Frison was appointed head of the U.W. department the same month he received his Ph.D. degree -- May 1967 -- and became Wyoming State Archaeologist later the same year.

Frison's career exemplifies the criteria for the Humphrey Award.

His teaching performance is colored by the rich insights derived from meticulous field work conducted over more than two decades. He is considered demanding in the classroom, yet is softspoken and gentle in demeanor. Students quickly recognize and appreciate his encyclopedic knowledge. They praise his unfailing willingness to lavish time assisting them with individual academic problems.

As a researcher, a generator of new knowledge, Frison has achieved an eminence attained only by a dedicated few in any given century, a position confirmed by the acclaim of fellow professionals. His work has expanded by whole chapters the book of North American prehistory, replete with details of the primitive tool kits and the subsistence strategies that spelled survival for early man in an environment that remains harsh even by modern standards.

He has written and edited four major books, more than 40 other professional publications with several now in press, and has presented scientific papers before more than 40 regional and national meetings. He has held more than a dozen research grants from the National Science Foundation and other agencies.

Frison was elected director then president, Plains Anthropological Association (1970-1972); Fellow, American Academy for the Advancement of Science (1972); executive board, Society for American Archeology (1973); and president-elect (1981-1983) and president (1983-1985), Society for American Archeology. He received the Nebraska Historical Society's Asa Hill Award for "outstanding archeological research and interpretation on the Plains" (1975) and the first Smithsonian Institution Regents' Award for archeological research (1979). He is also counselor and member of the editorial board, American Quaternary Association.

Frison was Wyoming's first State Archaeologist and is constantly in demand as speaker, advisor and mentor to many amateur archeologists and groups interested in the field. He spares no effort to foster this interest, thereby

establishing relationships and a network that today effectively serves the cause of science.

Carl Harper
UW News Service
University of Wyoming
Laramie, Wyoming 82071

WYOMING ARCHAEOLOGICAL SOCIETY
MINUTES OF THE SPRING MEETING
APRIL 19-20, 1985

Friday Evening, April 19, 1985

A formal meeting of the Wyoming Archaeological Society was held Friday, April 19, 1985, at King's Inn; Torrington, Wyoming. The meeting was called to order at 8:00 P.M. by the president, Imogene Hanson.

Certification of Delegates

Delegates and alternates presented their credentials for certification to Carolyn Buff, vice-president. These were then given to the president. A roll call of the voting delegates and alternates was taken by the acting secretary.

Secretary's Report

In the absence of the secretary, President Hanson distributed copies of the minutes of the 1984 annual meeting for members to read. A motion was made by Mary Helen Hendry that the minutes be approved. The motion was seconded by Selma Hammond. The motion carried.

Treasurer's Report

The treasurer's reports for both the WAS and the WAF were audited by Bob Wilcox and Carlton Belz. A report was given to the membership by the treasurer, Milford Hanson. A motion to accept the treasurers's report was made by Mary Helen Hendry. This motion was seconded by George Brox. The motion carried. (A copy of the financial statement is attached.)

Editor's Report

George Brox, Editor of The Wyoming Archaeologist, reported that the publication is still in the process of being upgraded. He also stated that he continues to have difficulty obtaining items for inclusion and would welcome contributions.

Danny Walker stated that they would like to have more contributions from amateur archaeologists -- chapter members. A discussion was held regarding various topics that would be suitable.

Mr. Brox asked that Chapters make an effort to send dues and membership lists in before March 30, in order to save money now being spent for the mailing of back issues of The Wyoming Archaeologist.

Carolyn Buff made a motion that March 30 of each year be the cut-off date for paying dues; and that person paying after that date would be charged an additional $2.50 for back issues.

A discussion was held regarding this motion; and, after the discussion, Carolyn asked that her motion be withdrawn.

A new motion was made by Joe Moritz, stating that members whose continuing membership dues are not paid by March 30 will receive previous issues of The Wyoming Archaeologist only upon payment of $5.00 per issue. Ray Parman seconded this motion. The motion carried.

Chapter Reports

Reports were given by the following chapters:

Casper -- Carolyn Buff

WYOMING
ARCHAEOLOGICAL SOCIETY, INC.

FINANCIAL STATEMENT
April 1, 1985

BALANCE IN CHECKING ACCOUNT- 3/14/84		$ 1,408.84
INCOME- 3/14/84 to 3/14/85		$ 4,249.14
		$ 5,657.98
EXPENDITURES:		
Spring Meeting	$3,060.04	
Scholarships (2)	700.00	
Editor Exp.	200.00	
Printing (memb. cards)	92.39	
Safety Deposit Box	5.00	
Treas. Expenses	120.43	
Secy of State	3.00	
Refund (U.N. Colo.)	15.00	
	$4,195.86	-$ 4,195.86
BALANCE IN CHECKING ACCOUNT 3/14/85		$ 1,462.12
Cert. of Deposit (Matures 5/10/85)		$ 8,570.31
NET WORTH- 3/14/85		$10,032.43

This report respectfully submitted by,

Milford F. Hanson, Treasurer

Audit Committee:

Bob Headley

Walter Sill

4-19-85

Wyoming Archaeological Foundation

FINANCIAL STATEMENT
March 14, 1985

BALANCE IN CHECKING ACCOUNT -3/14/84		$ 180.64
INCOME- 3/14/84 to 3/14/85		1,305.32
		$ 1,485.96
EXPENDITURES:		
Perve Printing	$232.00	
G. Frison (Hawk Springs)	300.00	
S. Hughes (Besant)	500.00	
Secy of State	3.00	
	$1,035.00	-$ 1,035.00
BALANCE IN CHECKING ACCOUNT- 3/14/85		$ 450.96
Cert. of Deposit at 10.39%		$ 13,289.61
NET WORTH		$ 13,740.57

(C.D. will mature 5/10/85 app. $690.39 int.)

This report respectfully submitted by,

Milford F. Hanson, Treasurer

Audited By:

_____

_____

_____

High Plains -- Dennis Eisenbarth
North Big Horn Basin -- Ileana Miller
Platte County -- Donna Wilcox
Sheridan -- Teri L. Laya

Old Business

There was no old business.

New Business

Dues Adjustment

A discussion was held regarding the raising of state membership dues, with a portion of each to be donated to the Wyoming Archaeological Foundation. At the close of the discussion, the following motion was made by Carlton Belz:

Effective as of January 1, 1986, Wyoming Archaeological Society state dues will be raised to:

Single membership: $6.00, with $2.00 going to WAF.

Family membership: $7.50, with $2.50 going to WAF.

Motion was seconded by Alan Korell. The motion carried.

A second motion, stating that Associate membership dues will be $10.00 with $2.00 designated for WAF, was also made by Carlton Belz. The motion was seconded by Deborah Chastain. The motion carried.

1986 Spring Meeting

Susan Hughes asked for the group's feelings regarding the feasibility of holding the 1986 Spring Meeting of the Wyoming Archaeological Society in Cody as a joint meeting with the Montana Archaeological Society. Responses were favorable.

Storage of WAS Records

Carolyn Buff asked if she might microfilm WAS records to facilitate storage. She also asked if film could be purchased for such a project.

In reply, Danny Walker suggested that all records, except the most recent, might be stored in the Anthropology Department at the University of Wyoming, where the WAS library is now stored. This would make microfilming of the records unnecessary.

Slide Duplication

Joe Moritz suggested that slides belonging to the state and university personnel, and which are loaned out, might be duplicated so that the originals could be filed and the duplicates loaned, thus preventing loss or misplacement.

Danny Walker replied that the cost would be prohibitive and that it would not be feasible with the present way the slide situation is organized and developed.

1985 Summer Meeting Site

Dr. Mark Miller suggested two possibilities for the 1985 Summer Meeting Site:

1. Bugas-Holding site near Cody, with members camping at Dead Indian Campground.
2. Edness Kimble Wilkins Park site near Casper.

A motion was made by Ray Parman that the 1985 Summer Meeting be held at Edness Kimble Wilkins Park site near Casper, with a tentative date of July 27 and 28. The motion was seconded by Milford Hanson. The motion carried.

Election of Officers

George Brox of the nominating committee presented the following slate of officers:

Carolyn Buff -- President
Alan Korell -- First Vice President
Susan Hughes -- Second Vice President

Deborah Chastain moved that the nominations for president be closed

and that Carolyn Buff be unanimously elected president. The motion was seconded by Bob Wilcox. The motion carried.

Milford Hanson moved that the nominations be closed for first vice president and that Alan Korell be unanimously elected first vice president. The motion was seconded by George Brox. The motion carried.

Milford Hanson also made a motion that the nominations be closed for second vice president and that Susan Hughes be elected unanimously as second vice president. Carlton Belz seconded the motion. The motion carried.

Adjournment

A motion to adjourn the meeting was made by Milford Hanson. The motion was seconded by Carolyn Buff. The motion carried.

The president adjourned the meeting at 10:00 P.M.

Saturday, April 20, 1985

Contributive Papers

The following papers were presented:

Bill Eckerle (University of Wyoming); Faunal Analysis of the Beehive Site

Danny N. Walker (Office of the Wyoming State Archaeologist) and Lawrence C. Todd (Smithsonian Institution); The Hunter Ranch Mammoth: Analysis of a Single Carcass Death Site

Susan Hughes (Big Horn Basin Archaeological Consulting); The Mini-Moon Site: A Multi-Component Besant Campsite in Southeastern Montana

Elizabeth Cartwright (University of Wyoming) and Charles A Reher (University of Wyoming); Dating Archaeological Structures in the Big Horn Mountains of Wyoming Using Dendrochronology: A Preliminary Report

Dave R. McKee (University of Wyoming); The Utilization of Immature and Fetal Bison Bones in a Study of Seasonality at the River Bend Site (48NA202)

Karen G. Miller (University of Wyoming); Bush Shelter: A Stratified Rock Overhang Site in North-central Wyoming

David J. Rapson (University of New Mexico), Lawrence C. Todd (Smithsonian Institution) and George C. Frison (University of Wyoming); Analysis of Site Structure at a Late Prehistoric Occupation Site: 1984 Excavations at the Bugas-Holding Site, Northwestern Wyoming.

Banquet

The annual Banquet was held at King's Inn at 7:00 P.M.

Scholarship Awards

Carolyn Buff, representing the scholarship committee, announced the names of this year's recipients:

Frison Scholarship: Karen Gloria Miller

Mulloy Scholarship: Christi Ann Zimple

Golden Trowel Award

Milford Hanson presented the Golden Trowel Award to Carlton Belz in recognition of his years of dedicated service to the society.

Dr. Frison Honored

Dr. Mark Miller introduced Dr. George Frison and announced that he

had been selected by the University of Wyoming as the recipient of the George Duke Humphrey Distinguished Faculty Member Award.

Guest Speaker

Dr. Arthur Jelinek spoke, and showed slides, relative to his studies and work pertaining to hominids of the mid-paleolithic culture (particularly Neanderthal Man) in France, Western Europe, and Tabun Cave in Israel.

Respectfully submitted,

(signed)

Betty Rickman, Acting Secretary

WYOMING ARCHAEOLOGICAL FOUNDATION
MINUTES OF THE SPRING MEETING
APRIL 21, 1985

The Spring Meeting of the Wyoming Archaeological Foundation was held at King's Inn, Torrington, Wyoming, on April 21, 1985, at 8:00 A.M.

The meeting was called to order by the president, Deborah Chastain.

In the absence of the secretary, Bob Randall, President Chastain read the minutes of the previous meeting. There being no discussion of the minutes, Dr. George Frison made a motion that they be approved as read. the motion was seconded by Imogene Hanson. The motion carried.

The yearly financial statement of the Wyoming Archaeological Foundation was audited by Bob Wilcox and Carlton Belz. The treasurer's report was given by Treasurer Milford Hanson. A motion that the treasurer's report be approved was made by Dr. Mark Miller. It was seconded by Dr. George Frison. The motion carried.

Mr. Hanson reported that Dr. Frison donated the royalty payment from his book on the Agate Basin Site to the foundation.

A discussion was held regarding the amount of Foundation funds to be left in a checking account. Dr. Frison proposed that at least $500.00 be kept in checking in case of an unexpected need.

Old Business

There was no old business.

New Business

Milford Hanson asked for clarification of new chapters' representation on the board. These names should be mailed to Mr. Hanson by July 1 of each year.

Dr. Mark Miller asked for clarification regarding individual members of WAPA contributing a portion of their dues to the Wyoming Archaeological Foundation.

President Chastain stated that she will write a letter detailing what has been done with Archaeological Foundation funds in the past. These will be mailed to each chapter so that the membership will be more informed with regard to disbursement of funds.

Dr. Frison suggested that money be given only in crisis situations until funds are built up.

Deborah Chastain asked that Chapters send her names of companies in their area that might be contacted regarding donations to the Foundation.

Carlton Belz expressed his appreciation, and thanked everyone, for the Golden Trowel Award.

A motion to adjourn was made by Dr. Frison. Dr. Miller seconded the motion. The motion carried.

The meeting was adjorned by the president at 9:00 A.M.

Respectfully submitted.

(signed)

Betty A. Rickman
Acting Secretary

HIGH PLAINS ARCHAEOLOGICAL SOCIETY
1984 CHAPTER ACTIVITIES

Early in 1984, the High Plains Archaeological Society met to discuss various projects and activities to work on during the year. The potential of many sites was discussed as well as conducting field trips to discover or possibly locate others. Plans were made to record archaeological sites in the area through photography of physical features of the sites. Artifacts in private collections from these sites would also be recorded with the use of photographs. This would allow the artifacts to remain in the possession of the owner and at the same time allow the artifacts from several collections to be grouped as coming from a particular site for future study or reference.

With this approach in mind, a mini-grant was applied for through the Wyoming Council on the Humanities to record artifacts from the Five-Mile Site and also to do an archaeological survey of the site. The Five-Mile Site is the assumed location of a series of trading posts and road houses during the 1850s located five miles east of the Fort Laramie Historic Site. This particular site is in a state of deterioration and vandalism by pot hunters because of its accessibility. The grant was not awarded to us for this project. We plan to do what we can to record and document the site through volunteer efforts by club members and other interested organizations as it is crucial that something is done while portions of the site remain intact.

A mini-grant was applied for through the Humanities Council for the curation of artifacts from the Korell-Bordeaux site. These artifacts include trade blanket fragments, leather items, and other items of perishable nature which will deteriorate unless a method of stabilization is found for them. We also failed to receive a grant for this.

Preliminary investigation of an apparent bison kill site north of Lingle, Wyoming was started in October. Erosion is taking its toll on this site and plans are to do more work on this site in the future.

A field trip to the areas of the Hell Gap excavations of the 1960s revealed several archaeological features which will be lost to erosion. Plans are being made to contact owners of the property for permission to excavate or stabilize these features before they are lost entirely.

The High Plains Archaeological Society sponsored several programs for club members and other interested persons throughout the year.

On February 24, Dr. George Frison of the University of Wyoming presented a program on "High Altitude Archaeology in the Big Horns". He discussed findings of various archaeological sites in northern Wyoming in conjunction with a slide presentation.

On March 28, Donald Housh, curator of the Homesteaders Museum in Torrington, Wyoming presented a program on early surveys done between 1872 and 1882 of what later became Goshen County. Locations of early ranches, trails, and other points of interest were designated on a large reproduction of the early survey maps.

On July 13, Dr. Doug Scott presented a program on the findings of the archaeological survey conducted at the Custer Battlefield in Montana through the use of metal detectors and a large scale system of grids. His associate, Melissa Connors, presented her findings on the nutrition of the soldiers killed during the battle through analysis of bones from partial skeletons found during the survey. They also discussed the findings of the archaeological survey they conducted at the Fort Laramie Historical Site due to flooding and erosion of the Laramie River near the site. Doug and Melissa were from the Midwest Archaeological Center in Lincoln, Nebraska.

The archaeological reports on the Rock Ranch and Korell-Bordeaux sites were completed in 1984 and submitted to the editor of the Wyoming Archaeologist for publication.

The burial of the plainsman excavated at the Korell-Bordeaux site was published by the Plains Anthropologist entitled "A Pioneer Burial Near the Historic Bordeaux Trading Post.

The High Plains Archaeological Society had nine family memberships and five individual memberships in 1984.

Respectfully submitted by:

(signed)

Dennis Eisenbarth
Secretary-Treasurer

ANNUAL REPORT OF THE BIGHORN BASIN CHAPTER

We, at the Big Horn Basin Chapter, have had an exciting year since April 1984. After all the hard work we did for the Archaeological Symposium held in Powell and Cody, we were given the opportunity to do some excavation work. Susan Hughes, our chapter vice president and professional archaeologist, asked members to participate in an excavation of a Besant Campsite located near Glendive, Montana. Approximately fifteen of our members journeyed to Glendive at different intervals to assist Susan in her project. We all worked hard, learned and ate a lot, and enjoyed even the rugged walk to and from the site over the "badlands". Susan has been back since then to do more excavating and is planning to return once more in May. Her efforts are proving quite fruitful in learning more about the Besant Peoples at "Mini-Moon."

This spring and summer, our chapter will be involved in an excavation a little bit closer to home. Our chapter President, Jim Platt, found a site near his home by the South Fork of the Shoshone River near Cody. He has found numerous flakes, tools, and points (including a Folsom Point), a metate, two fire pits, and a piece of what appears to be Shoshonian pottery. Hopefully, in June we can begin work on the site and find out more about these people.

We have had an excellent program schedule, with such speakers as Lawrence Todd, who spoke on "Archaeological Research in Northwestern Wyoming"; Robin Moore from the Cultural Center and Museum in Billings, who demonstrated the making and throwing of the atlatl; John Jameson, contract archaeologist for the BLM; Dr. Mark Miller presented a slide presentation on the "Early Archaic Adaptation in Southern Wyoming"; and in March, Dr. Frison presented a program on his elephant hunting expedition in Zimbabwe and the use of Stone Age Tools.

Our field trips have included a visit to the Bugas-Holding site in Sunlight Basin, where chapter members learned a great deal about excavation techniques by simply observing. This spring and summer, we hope to make a horse-back trip to the Boulder Basin area to look at a sheep trap; travel to Hot Springs county to see some pictographs; follow through on reports of rock arrows near Meeteetsee and on Polecat Bench near Powell; go to Medicine Lodge Creek; and travel to Rattlesnake Mountain to see a sheep-eaters Lodge.

Our membership so far has reached 43 and we hope to gain more members as the year progresses. Our success as a club is mostly due to the interest and expertise of our chapter vice-president and professional archaeologist, Susan Hughes. Without her and the direction of Milford and Imogene Hanson, our chapter would not have been reorganized. Our thanks go out to them for the educational experiences they have provided for us and for the work they have contributed to the field of Archaeology.

Respectfully submitted,

Debra Elwood
Secretary

ANNUAL REPORT OF THE PLATTE COUNTY CHAPTER

Clark McInray held two meetings for those interested in Indian artifacts and archaeology on March 27th and April 25th.

Election of Officers was held May 31 with the following slate:

President -- Clark McInray
Vice-President -- Art Bohl
Treasurer -- Diana Duensing
Secretary -- Julia Butler
Delegate -- Bob Yast
Alternate -- Bob Wilcox

Greg Newberry has given some informative lectures. George Zeimens spoke on excavations and interesting finds in Wyoming. Alan Korell and Dennis Eisenbarth explained slides of Rock Ranch and graves in their area. Joe Baokaut showed slides of some of his collection and teepee rings taken from an airplane. Art Bohl brought several large frames of his artifacts. Don Weldon explained his method of record keeping and mounting of his collections.

Dennis Howell designed a logo for the chapter and shirts and caps have been made up in brown and gold colors.

Field trips have been made to the Spanish Diggings, to Talking Rocks on the Laramie Plains and to the McCauley Ranch west of Wheatland.

(signed)

Julia Butler
Secretary

ANNUAL REPORT OF THE SHERIDAN CHAPTER

During the summer the society took a field trip to the Big Horns. Members visited a small medicine wheel and stone structure resembling an animal on top of a hill overlooking Shell Creek. After a picnic lunch we moved over to Porcupine Creek where we viewed stone structures believed to be associated with the Medicine Wheel atop Medicine Mountain, which was also visited.

Members have been asked about

the report on the Medicine Wheel Investigation done by the Society in 1958. Our December meeting was spent putting more copies of this report together. It's now available to anyone interested in purchasing it for $2.00 a copy.

Our chapter elected a Board of Directors consisting of three past chapter presidents, Arnold Jacobson, Carol Carbone and Mildred Denson.

We had several programs at our meetings last year. Geologist Waynard Olson gave two interesting programs on geology in conjunction with Wyoming Archaeology. Owen Williams showed a filmstrip on one man's opinion on what 'The Medicine Wheel' may have been used for. Jerry Carbone shared his pottery collection and helped us identify points. Carole Carbone reported on her visits to archaeological cave-sites in France which included an impressive slide show and photos. Glen Sweem demonstrated tree-ring dating. State Archaeologist Mark Miller gave a slide presentation on Archaeological Sites in Wyoming.

Our membership is growing. We have thirty-five members now and are still adding more. This Society depends on all of its members to support its cause and we feel our chapter members do so wholeheartedly.

Submitted by

Teri L. Laya

YOUR CONTRIBUTION WILL DETERMINE THE FUTURE OF WYOMING'S PAST

To:
WYOMING ARCHAEOLOGICAL FOUNDATION
1631 26th St.
Cody, Wyoming 82414

I (we) desire to make a contribution to the Wyoming Archaeological Foundation in the amount of $_____.

Name: _____

Address: _____

_____

(All contributions to the Foundation are tax deductible under IRS Section 170.) Identification No. 23 7122769.

COMPUTER CATALOGING OF ARTIFACTS

JOE BOZOVICH

ABSTRACT

It is strongly recommended by all serious amateur and professional archaeologists that a private collection of artifacts be cataloged in a manner that will help preserve the underlying value of the artifacts. The benefit received from having such a catalog can be increased greatly by using a modern microcomputer to maintain the data. This paper presents a simple system that any amateur can use to accomplish the objective of saving all important data in a form that also allows analysis of the collection. This inventory is accomplished by asking questions about the collection in a manner the computer can deal with.

INTRODUCTION

This article is directed toward the person who has a collection of artifacts that is well-cataloged all ready, or that can be cataloged. That is, there exists adequate information aboutwhere each artifact was found, what type of artifact it is, etc. Ideally, such information should also include data describing the site, for example the exact location of the site, the type of terrain, the date the site was visited, etc.

Most individuals can remember some of their better artifacts, but the original site/circumstances of most artifacts is soon forgotten. This is a major reason cataloging is so important. It allows the retention of the true value of the artifacts that were found through much effort and skill.

For many years, the only way to maintain a catalog required manual records and much discipline. Additionally, even dedicated catalogers have not been able to maintain all the possible details, and useful information. The computer provides a simple solution to this problem, as it has a reliable memory and will save information accurately and allow rapid retrieval.

There are several ways to build a computer catalog of an artifact collection. This article will briefly describe one such method which has been applied to a collection containing over 5000 artifacts. The method used here can be adapted to any collection, with many insights and increased knowledge of the group of artifacts being the result.

BEFORE STARTING

This system is built on the use of major information records

which fully describe each artifact and all pertinent data about the site where the artifact was found. In addition, there are supporting glossaries which help explain abbreviations used in the major information records. The two major records are called the **ARTIFACT CARD** and the **SITE CARD**, with the artifact data being supplemented by additional details on the **PIECES CARD**, and the site records being supplemented by an **IMACS CARD**. Each of these record types will be described in this article.

The **ARTIFACT CARD** contains the essential data describing each specific artifact, and in this system, it requires that information be coded into a format that the computer can easily manipulate. In other words, it is necessary to have an established set of codes which are a shorthand way to give descriptive answers to the most important questions about each artifact. It is consistent use of such codes that leads to accurate answers later. For example, a typical **ARTIFACT CARD** might appear as in Table 1.

Note that the abbreviated data answers will be impossible to understand without companion lists of definitions to be used as part of any interpretation. Appendix A contains the glossary code lists developed for the Bozovich family collection. As the collection was cataloged for the computer, using the existing catalog, new codes were added when an artifact did not fit previous descriptions. Any given collection amy not require this same list, but there is usually commonality for artifacts found in the same part of the country. The most important thing is to be consistent about applying the codes once they are chosen.

This artifact record can be applied to each artifact, whether complete or partial in form. However, if there are large numbers of fragments it might be advisable to create what is called a **PIECES CARD**. This record is like an artifact record except that it simply gives the total count of pieces found at a specific site, partitioned into major types/shapes. For example, this record might appear as in Table 2.

Any artifact that is at all significant should have an individual record made for it. This pieces data is simply meant to reduce the tediousness of data creation for sites with high artifact density. However, there is a

DATA NAME		DATA ANSWER	EXPANDED PURPOSE/MEANING
INDEX #	:	0901	this is artifact 0901
SITE #	:	A-01	found at site A-01
TYPE	:	AP	artifact is an arrow point
SHAPE	:	SN	the shape is side notch
MATERIAL	:	JA	it is made of jasper
COLOR	:	OR	it is orange color
GRINDING	:	N	it has no grinding
MISSING	:	CO	it is complete
RETOUCH	:	N	no secondary retouch
FLAKING	:	R	flaking is random
LENGTH	:	30	30 mm long
WIDTH	:	15	15 mm wide
THICKNESS	:	2	2 mm thick
TRAY #	:	07L	artifact is in tray 07L
REMARKS	:	Heavy patina	noting a detail of special interest

TABLE 1: The Artifact Card.

DATA NAME	PURPOSE/MEANING
SITE #	<----- This identifies the site where these items were found.
TIPS	
BASES	
MIDSECTIONS	
SIDE SCRAPERS	The remaining data fields simply give the number of each item found.
END SCRAPERS	
BIFACE TIPS	
BIFACE MIDS	
BIFACE BASE	
PREFORMS	
METATES	
MANOS	
FLAKES	

TABLE 2: The Pieces Card

loss of information involved in the use of the pieces card.

The second essential set of data is that describing the site, or location where the artifact was found. For this purpose, it is necessary to develop a **SITE CARD.**

The Bureau of Land Management is presently using a special form describing archaeological sites in a manner acceptable to computers. This form is called the Intermountain Antiquities Computer System, or IMACS, Site Form. This form contains data describing the site location in accurate terms. It also contains data about the site which the typical amateur will not be able to obtain. Additionally, there are certain key descriptions which can be obtained easily by observation of the site. These include such items as topographic location, presence of water, vegetation type, quantity of lithic debitage, and the on-site depositional context.

This later data can be useful to an archaeologist in evaluation of the site, but it is not as critical as an accurate description of the site location. In this computerized system, each site location is accurately described in the **SITE CARD** and, where available, the more descriptive contextual data is contained in what is called the **IMACS CARD.** The **SITE CARD** record contains at least the information found in Table 3.

The **IMACS CARD** as created for this computerized system is built on the detailed IMACS forms obtainable from BLM. In essence, the data not included in the above **SITE CARD** emphasizes the topography of the site location, the vegetation at the site, the depositional context, the lithic debitage, site dimensions, etc. Since some of this data will be difficult to obtain, each person building a computerized catalog system should obtain a copy of the complete IMACS form and determine what specific data is realistic for them. The above **site card** data is not optional, however, since it is essential to location of the site. An archaeologist can work from that data to obtain the remainder of the IMACS data if the site appears valuable.

CATALOGING

Once all the code lists of Appendix B have been designed, it is desirable to prepare an information card on each artifact. Blank or ruled 5"x8" cards work well for this purpose. It is also useful to have a rubber stamp made with the

DATA NAME		PURPOSE/MEANING
INDEX # (Optional)	:	A numerical sequence for the sites.
SITE #	:	The selected site number, unique for the site. It can be coded to give some indication of the region where the site exists.
QUAD	:	Name of USGS Quad, or Topographic map containing the site location.
RANGE	:	USGS Range containing the site.
TOWNSHIP	:	USGS Township containing the site.
SECTION	:	USGS 1/4 Section containing the site.
GRID 1	:	The next three data fields give a more precise location for the site by breaking the 1/4 section into a series of three quadrants. This technique is also part of the IMACS system.
GRID 2	:	
GRID 3	:	
DATE FOUND	:	Day/Month/Year the site was found. The date of the last visit can also be used.
REMARKS:	:	This portion of the card is used to mention anything special about the site.

TABLE 3: The Site Card

required data field names on it. This stamp can be used to prepare each card so that it is impossible to forget the data required.

Each artifact should then be inspected to obtain the required data to write on the card. It is advisable to have available any references that will assist in identification of the artifact type and shape names to apply to each artifact. A representative list of such references is provided at the end of this paper. It is possible to enter this data directly into the computer, but it is more reliable to fill out the data first in a form that can be saved for future use regardless of the availability of a computer.

While each artifact card is being completed, it will be necessary to have a site number to assign to that artifact. These site numbers must be assigned as the artifacts are being cataloged, with a new site card being started as a new site is encountered. If 10 artifacts came from the same site, then 10 artifact cards are made, but only one site card.

Once there exists an artifact card for each artifact, it is essential to complete the site cards with their information on location, date found, etc. The site cards can also be on a 5"x8" card. However, since there will be many fewer site cards than artifact cards, it probably will not be necessary to make a rubber stamp for the data fields on these cards.

The computer database management system should be programmed so that it will accept each one of these data records on artifacts and sites. It is also useful to insert the code lists as separate records in the computer. Remember that these code lists are abbreviations for more complete descriptions which are necessary to interpret the artifact records. More items can be added to these code lists if necessary, but maintaining them on-line in the computer is useful when reports on the data are to be extracted. Having the code lists allows printout of the data using full descriptions instead of the original coded records.

RETRIEVING DATA AND MAKING QUERIES

After entering data for a few days, the rewarding part of the project begins. The computer can be given a command to browse, or to look at or change any data about a given record. Any good database management computer program will display a requested record on the screen. This will allow inspection of the data and editing of any item that was entered incorrectly.

When all the data from the artifact cards and the site cards has been entered into the computer, then many different questions can be asked about the collection.

For example, using DBASE II (a database management program available from Ashton-Tate), the COUNT or DISPLAY commands can be given.

COUNT -- The computer will count the number of artifacts in the collection according to requested values of TYPE, SHAPE, MATERIAL, COLOR, GRINDING, MISSING, RETOUCH, FLAKING, FLUTE, LENGTH, WIDTH, THICKNESS or any combination fo these data fields. The request to the computer to

```
COUNT FOR TYPE='PA' .AND. SHAPE='FO'
```

would produce a total count of all Folsom Paleoindian points.

DISPLAY -- The computer will display on the screen all artifacts according to sorting criteria which can include any of the data fields in the artifact or site records. The request for the computer to

```
DISPLAY FOR TYPE='SC' .AND. MATERIAL='OB'
```

would produce a listing of all obsidian scrapers.

One of the valuable functions of these questions or queries is to develop combinations that otherwise would be impossible to achieve with a manually maintained catalog.

Data requests can also apply to the **SITE** data records. This allows listing of all artifacts from any specific site, or listing of all sites located in a given QUAD sheet.

These data queries provide the real power obtained from the computer system. The variety of data queries is almost infinite. By structuring requests properly, one can get a view of a collection which is intriguing. Patterns in site locations, artifact types and materials can all be developed. Before going out on a field trip, a query to the database can indicate which sites are in that region and what they previously produced. Clues about site terrain patterns can also be developed from the data base.

In a later paper, it is planned to profile the Bozovich family collection to show how much information can be obtained from this type of cataloging. For example, for that collection it is possible to detail the relative proportions of various artifact shapes, materials, etc. The numbers of artifacts of key shapes in the Bozovich collection are as follows:

Clovis	6
Folsom	5
Agate Basin	34
Eden	50
Scottsbluff	11
Humboldt	15
McKean	29
Duncan	161
Side-Notch	793
Corner-Notch	1351
Tri-Notch	108
"	
"	
" (and so on)	

SUMMARY

The use of a microcomputer can greatly expand the value and pleasure that can be derived from an artifact collection. There is also a strong possibility that such a system can make a good contribution to professional archaeologists as they attempt to use the results of the skill and energy of amateurs.

ACKNOWLEDGEMENTS

My special thanks and appreciation go to my son, Joe Bozovich. He had the patience to help me in the programming and the many consultations necessary on the project. Special appreciation must also go to my granddaughters Carey and Shelley Bozovich. My son and his two daughters were the ones who talked me into doing this project of computer cataloging. Without their inspiration and help in editing and typing, this project would have been difficult for me to complete. Even though my artifacts and sites were well cataloged previously, the project was large with many notes to check and recheck. However it was a interesting project.

I would also extend my special appreciation to Steven D. Creasman, Director of Archaeological Services at Western Wyoming College. He showed me the W.W.C. cataloging system, and his class in Archaeological Methods was helpful. Thanks must also be extended to Dudley A. Gardner, Staff Archaeologist and Historian at W.W.C. He provided assistance in identification of different types of artifacts. I would also like to extend my thanks to Charles M. Love, Professor of Anthropology at Western Wyoming College, for his help in identification of different types of material. There were many others who were helpful, I say thanks again. Last but not forgotten is my wife Isa. Many thanks to her, as I know that she spent many hours by herself while I was working with the computer. Some day in the future, I hope archaeologists can use a project like this to gain some valuable information about the ancient peoples who lived here before we came.

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APPENDIX A

HINTS ABOUT SELECTING AND USING YOUR COMPUTER

Almost any of the currently popular microcomputers can be used to maintain a computer catalog as described in this article. First, you will need a computer with two floppy disks, a printer and a software package that is a database management system. The computer used to catalog the Bozovich family collection is an IBM PC with an OKIDATA printer, using the software program DBASE-II.

It is critical to follow careful procedures in data entry and backup to save yourself from machine and human errors in operation of the computer.

The following is a good backup sequence I have found and use.

1: Enter data for a couple of hours. This data will be saved by the computer on the active floppy disk.
2: Create a backup copy of the data residing on the active floppy disk. Identify this copy as "Backup #1" and label this backup by the identification number of the last artifact entered into the computer.
3: Continue to enter data for a couple more hours on the original active floppy disk. This will add new data to all previously entered data.
4: Create a new backup, call it "Backup #2", and put on the label the identification of the last artifact entered.
5: Enter more data. Create backup #3 as above.
6: Enter more data.
7: Erase all data from backup #1.
8: Create a new "Backup #1" by copying all data now stored on the active floppy to this backup floppy and label with last artifact entered.
9: Continue in a cycle where you always have 3 backups.

A printer is an essential accessory to have attached to the computer. Using the printer, the following method of checking the data entry will be possible. When the artifact and site data have all been entered into the computer, then print the complete database onto computer paper. This makes it easy to check the print-out sheets for mistakes, and also to see how to refine the information that was entered.

APPENDIX B

TYPICAL CODE LISTS FOR CATALOGING

Each artifact must be typed as belonging to a specific category, as follows:

CHRONOLOGICAL/FUNCTIONAL CODES

PA: PALEO
GR: GRAVER
SP: SPEAR
DR: DRILL
SL: SLITTER
BL: BLANK
WO: WOOD
MA: MANO
GS: GRIND STONE
AP: ARROW POINT
CH: CHOPPER
AB: ABRADER
PO: POTTERY
UF: UTILITY FLAKE
AN: ANCHOR
CH: CHIPS
MB: MICROBLADE
SC: SCRAPER
KN: KNIFE
BD: BEAD
AT: ATLATL
CF: CHANNEL FLAKE
SS: SEA SHELL
MT: METATE
PN: PENDANT

Each artifact must be described as to shape:

TYPE/SHAPE NAME CODES

ST: STRAIGHT STEM
SQ: SQUARE BASE
TN: TRI-NOTCH
FT: FISHTAIL
TH: THUMB SCRAPER
OV: OVATE
CL: CLOVIS
SB: SCOTTSBLUFF
JA: JIMMY ALLEN
PR: PRYOR STEMMED
PF: PREFORM
OB: OVAL BASE
NB: NOTCHED BASE
TB: TAPERED BASE
BI: BIPOINT
MB: MICROBLADE
CN: CORNER NOTCH
CX: CONVEX BASE
SX: SHOULDERED CX
EN: END SCRAPER
BF: BIFACE
MK: MCKEAN
FO: FOLSOM
ED: EDEN
HB: HUMBOLDT CV BASE
BL: BLANK
RS: ROUND SHOULDERED
TR: TRIANGULAR
LO: LOAF MAND
SM: SHAFT SMOOTHER
BM: BASE MISSING
CF: CHANNEL FLAKE
SN: SIDE NOTCH
CV: CONCAVE BASE
SV: SHOULDERED CV
SD: SIDE SCRAPER
UN: UNIFACE
DU: DUNCAN
HG: HELL GAP
AB: AGATE BASIN
AA: ALBERTA
BV: BEVELED
AC: ACCUMINATE
EX: EXPAND BASE
RB: ROUND BOTTOM
HS: HAFTED
CT: CORNER TANG
FD: FIRE DRILL
SNEX: SIDE-NOTCH EXPANDING BASE
SNCX: SIDE-NOTCH CONVEX BASE
CNEX: CORNER-NOTCH EXPANDING BASE
CNCX: CORNER-NOTCH CONVEX BASE
SNCV: SIDE-NOTCH CONCAVE BASE
CNST: CORNER-NOTCH STRAIGHT STEM

material in each artifact must be coded.

MATERIAL NAME CODES

CQ: COARSE QUARTZITE	FG: FINE QUARTZITE
C: CHERT	PW: PETRIFIED WOOD
OO: OOLITE	CH: CHALCEDONY
MA: MOSS AGATE	BO: BONE
ME: METAL	JA: JASPER
PO: POTTERY	OB: OBSIDIAN
BR: BARK	SS: SANDSTONE
SC: SPECKLED CHERT	TC: TIGER CHERT
BC: BANDED CHERT	HS: HARD STONE
CL: CLAY	ST: STEATITE

Other required codes are for the type of flaking and what parts of the artifact are missing, in order to distinguish partial artifacts.

CODES FOR TYPE OF FLAKING	CODES FOR WHAT IS MISSING
OB: OBLIQUE	CB: CORNER BASE
TR: TRANSVERSE	CS: CORNER STEM
CO: COLLATERAL	T: TIP
BB: BIBEVEL	B: BASE
R: RANDOM	E: EAR OR BARB

Certain combinations of artifacts may be in reality features of sites which should be noted as belonging to the site itself. A set of codes for features might be as follows:

CODES FOR FEATURES

STC: STONE CIRCLES
PET: PETROGLYPHS
RS: ROCK SHELTER
BS: BRUSH SHELTER
QU: QUARRY

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PRYOR CREEK PETROGLYPHS AND PICTOGRAPHS: 24YL405 AND 24YL406

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The petroglyphs and pictographs of Pryor Creek, Yellowstone County, Montana, are deteriorating rapidly. Some, described as intact in recent decades, have now disappeared. A survey of the surviving glyphs appears timely. Besides providing a gauge of obliteration time, the Pryor glyphs have an intrinsic and comparative value. Site 24YL406 has incised and painted shield-bearers and V-neck personages with details of clothing and weaponry. These have potential usefulness as the shield-bearer complex is further analyzed. Site 24YL405 demonstrates a variant of the pecked-figure technique. The distributional boundaries of this style in south-central Montana cannot yet be sketched, but will include such widely scattered sites as Ryegate (24GV406) on the Musselshell River, Five Mile Creek (24CB417) on a tributary of the Clark's Fork of the Yellowstone, Rossell (24YL70) on Hibbard Creek, Weatherman Overlook on the western flank of the Pryor Mountain Uplift, and Petroglyph Canyon 24YL601 on the Montana-Wyoming border.

The glyphs are on the middle reaches of what the Crow called They-Shot-the-Rock Creek, between the origin in the Pryor Mountains and its mouth on the south bank of the Yellowstone River. The site may be seen on the Cottonwood Creek USGS Quadrangle map in the NW1/4 of Section 32, T1N, R28E. On this map the valley of Pryor Creek runs north-south and two other fault creeks flow into it, Cottonwood Creek from the west, Indian Creek from the east. The glyphs may be approached by crossing a broad terrace littered with fire-broken rock and lithic fragments and devising a method of descending a six meter vertical cliff. Approached from the creek channel, one must find a path through deep marshes and dense thickets of rose thorn.

SITE 24YL406

The figures at this site are in a shallow overhang only a meter or two above water level. The stone surface used for the glyphs is variable in texture, in places being soft, friable and exfoliating in curtains, sheets and blocks. In other places, it is granulating off into loose sand. In some sections of the wall, the cementing substance maintains a firm vertical rock face.

In 1962 S.W. Connor (personal site file, photographs) described five figures on the lower-most panel. On the left, a V-neck figure (Connor's number 1) in red paint had a single leg and foot, and a corona-like group of six

dots. To the right was a red pictograph of a square-bodied V-neck (Connor's number 2) with neck, head, uplifted arms, fringed lower body, legs and feet. Still farther left was a headless, V-crotch, V-neck figure (Connor's number 3), also in red paint. A fourth figure, V-neck, rectangular body, upraised arms, legs and feet, the entire figure about 12 inches tall, was executed in fine incised lines with red paint in the lines. Connor's fifth figure was a red shield-bearing warrior about nine inches tall with a horned headdress, fringed lower shield border, and a weapon projecting to the left. In 1974, Ralph Dodge (SWC files) photographed and traced these figures and reported that most of number 1 was missing, as was the bottom half of number 2 and 3. Number 4 was intact but number 5 was totally missing. By 1981, this entire group had disappeared.

Remaining figures at this locality are all found higher on the wall and thus protected from high water, weathering and vandalism. These include a small, badly eroded, incised figure with ten prominent toes (not figured here), a larger figure, about 30 cm in height also badly eroded (Figure 1). Feet, legs and a corona-like headdress remain visible. Figure 2 is a deeply-incised shield-bearer 45 cm tall. The rim is decorated with ray-like lines. The thighs are deeply carved, as are the knees and legs. The feet are disproportionately large and each has five toes. The lower portions of the shield, and the thighs, legs and feet, are colored with red pigment. Figure 3 depicts a bear, crudely outlined by incising. Its head is uptilted, with a heart-line. Traces of red paint remain within the outline.

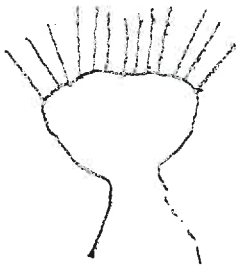


FIGURE 1: Rock art from 24YL406.

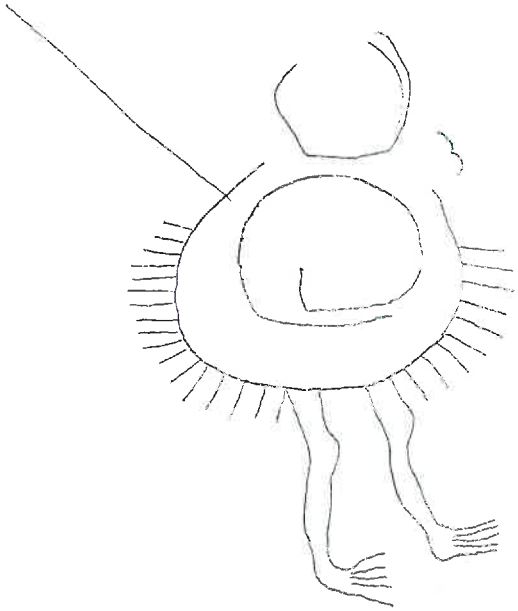


FIGURE 2: Rock art from 24YL406.

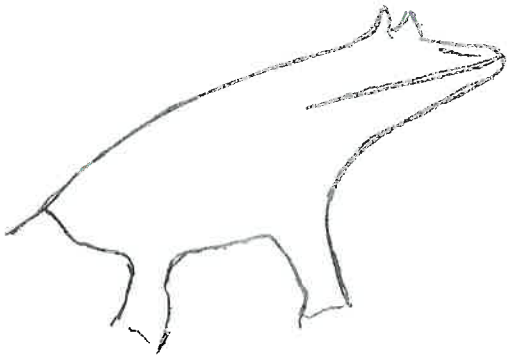


FIGURE 3: Rock art from 24YL406.

FIGURE 4: Detail showing technique of glyph production. 24YL405.

24YL405

The petroglyphs at this site are on a vertical seven meter cliff of intractable yellow sandstone. The bottom of the panel is at creek-flood level, and a dense growth of thorn and chokecherry obscures the lower figures. The glyphs are laboriously constructed in a process which might have begun with percussion of an outline, followed by impact or pecking in a similar heavy-percussion style until deeply but roughly outlined figures result (Figure 4). There are seven large figures done with some detail of feet, weapons, etc., despite the imprecise technique (Figure 5). In places, only the rough outline of a figure or part of a figure has been completed. Tracings of these figures lose much of the impact technique, which is better depicted in photographs.

Figure 6 at the left of the panel is an elk-like animal facing to the right. A spear pierces its thorax from below. The head is small, pointed, and antlers(?) are indicated by a preliminary line of pecked dots above the head and

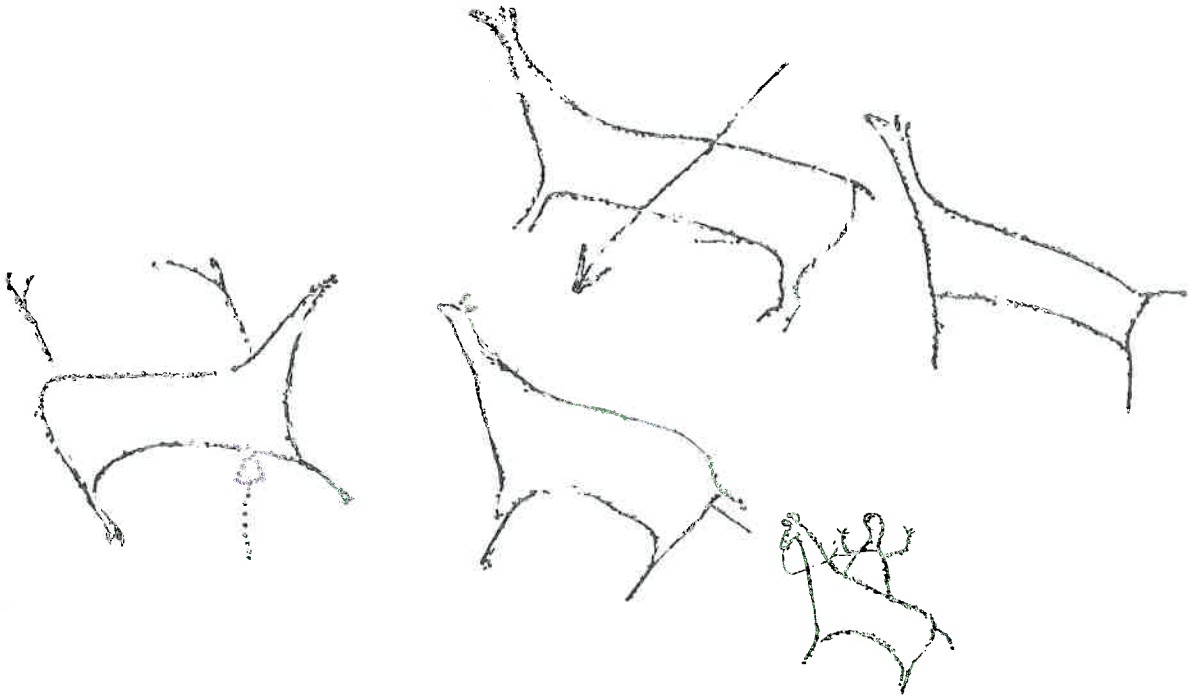


FIGURE 5: Panel detail from 24YL405.

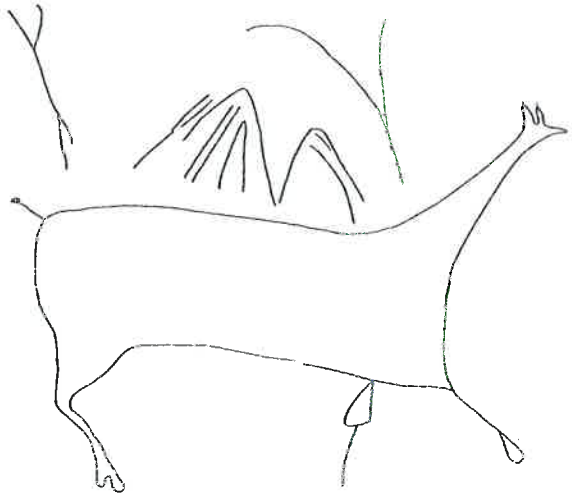


FIGURE 6: Closeup of single figure from panel seen in Figure 5.

nape. Structures of unknown import over the mid back, look like pyramids. Another set of "antlers" arise above the rump. The hind foot is bifurcate, the front foot is globular. Total length is 63.5 cm. There are two short, slanted lines high above this animal.

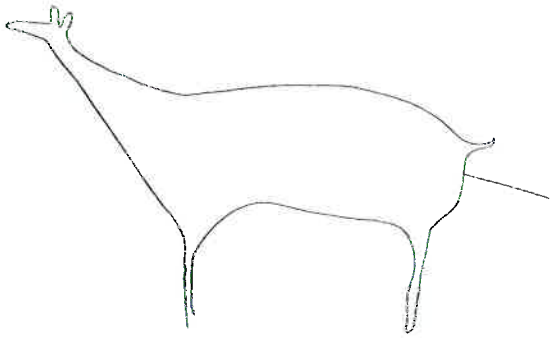


FIGURE 7: Closeup of single figure from panel seen in Figure 5.

Figure 7 is another elk-like animal facing to the left. It has a small head and an arrow in its rump. The figure is 78.5 cm. A line of two-part hoof-prints extends from the hind foot toward Figure 6.

Figure 8 is a rendition of a mounted human with pyramidal body and upraised arms. The horse has a hooked front hoof, mane, bridle and reins.

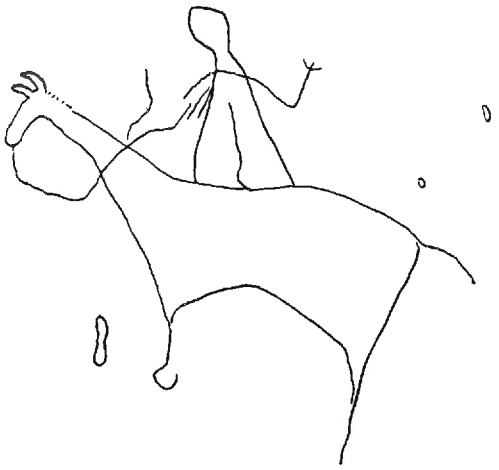
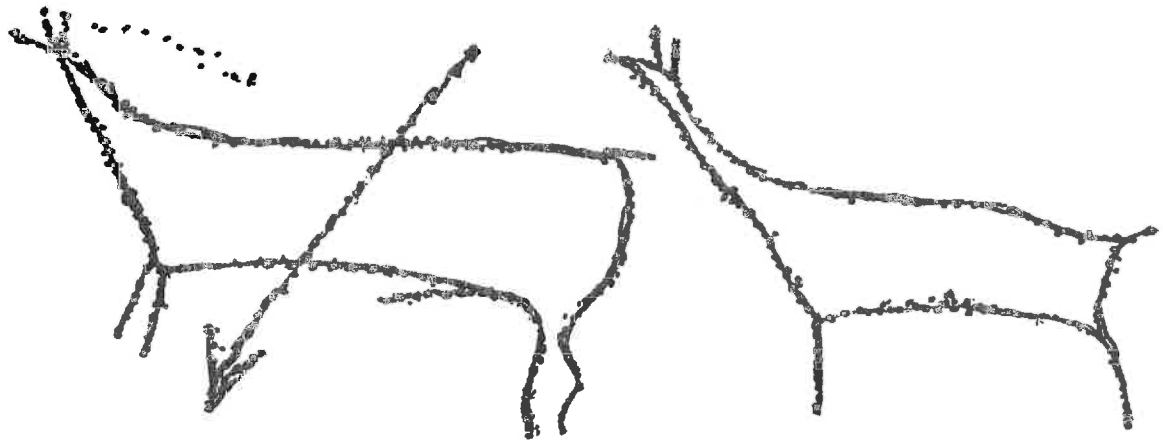


FIGURE 8: Closeup of single figure from panel seen in Figure 5.

Figure 9, higher on the panel above Figure 8, is another right facing elk. It has a spear through the body, and a penis. Antlers are indicated by a row of percussion marks.

Figure 10 is another elk, closely following Figure 9, with a similar head-up posture.

Figure 11 is a large elk-like animal, 79.5 cm facing left. One hind foot is split. Following closely behind is another horse and rider, 42 cm in length (Figure 12). The horse has a small head, long tail and reins. The rider's body is not developed, but there are legs, feet, head and headdress.



FIGURES 9 & 10: Closeup of two figures from panel seen in Figure 5.

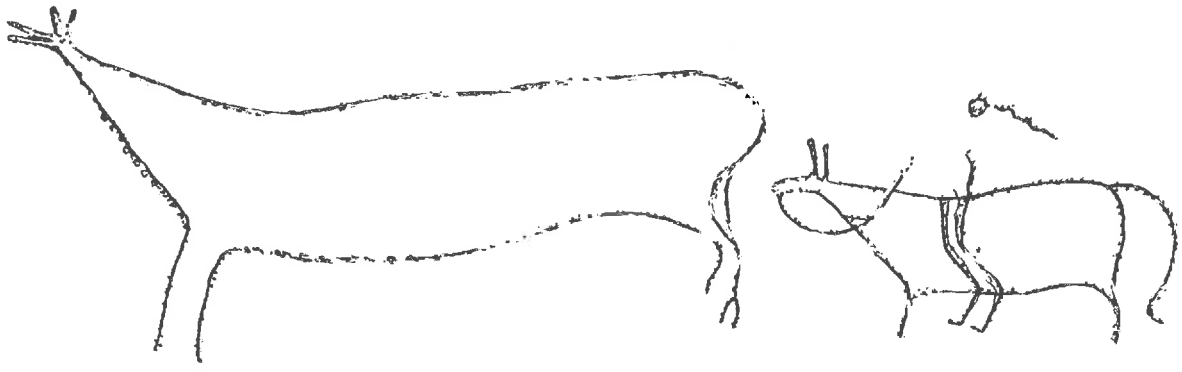


FIGURE 11: Panel detail from 24YL405.

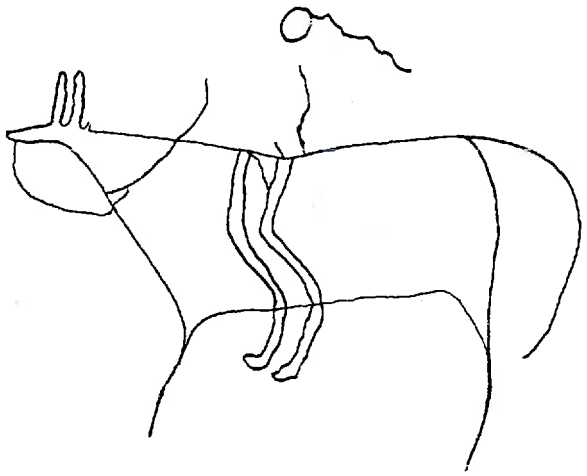


FIGURE 12: Closeup of figure from panel seen in Figure 11.

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THE UTILIZATION OF BISON FETAL BONES AND MANDIBLES IN A STUDY OF SEASONALITY AT THE RIVER BEND SITE (48NA202)

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ABSTRACT

The River Bend site (48NO202) was a Protohistoric period campsite located on the North Platte River near Casper Wyoming. Several bison calf mandibles and bison fetal bones were recovered from the site. Several different aging techniques were applied to this material to determine the season(s) of bison procurement activity at the site. Tooth eruption and cusp wear schedules were used to age the calf mandibles. Metric measurements and periosteal bone layer counts were utilized to determine the relative ages of the fetal material. This analysis of the juvenile and fetal bison bones suggest bison procurement activity occurred from September to April, covering the fall, winter, and early spring seasons, at the River Bend site.

INTRODUCTION

The purpose of this paper is to discuss seasonality of bison procurement activity at the River Bend site (48NA202), on the basis of bison mandibles and fetal bison long bones. Tooth eruption schedules and cusp wear schedules were used to age mandibles. Measurements and periosteal bone stratum counts for fetal long bones were compared with those of a control group of fetal bison bones from the University of Wyoming, Department of Anthropology Comparative Osteology Collection. The analysis indicates that bison procurement activity was conducted during the fall, winter, and possibly early spring seasons at the site.

THE RIVER BEND SITE

The River Bend site was a single component Proto-Historic campsite located near the city of Casper in central Wyoming (Figure 1). the site was situated on the floodplain of the south bank of the North Platte River. Excavations were conducted over several years through the combined efforts of the Wyoming Archaeological Society, The Wyoming Recreation Commission (Office of the Wyoming State Archaeologist), the Department of Anthropology, Casper College, and the Department of Anthropology of the University of Wyoming. Buff (1983) presented an initial report on the site.

The identification of the site as proto-historic is based on the presence of side-notched and tri-notched projectile points, pieces of metal and remains of a horse skull (Buff 1983). The artifact assemblage included a wide variety

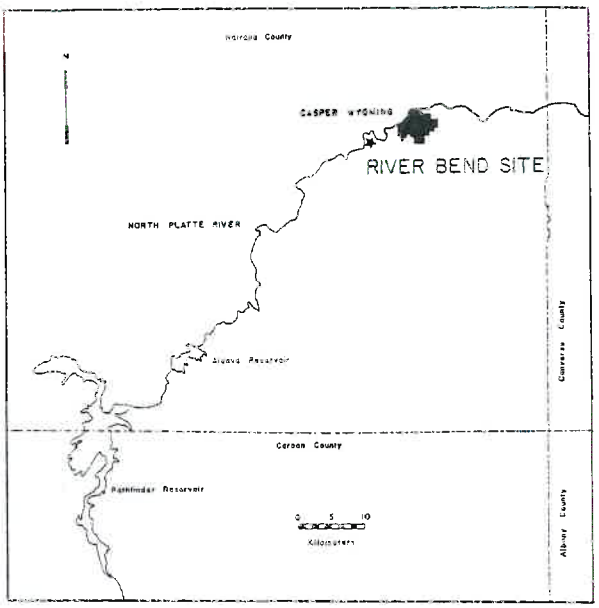

FIGURE 1: Location of the River Bend site, Wyoming.

of stone and bone tools utilized for food and hide processing, tool production, and ornament manufacture. The faunal collection is extensive and varied, indicating the use of numerous local animal species. Bones were extensively processed with few complete elements of bison or other large game animals being recovered. General characteristics of the artifact assemblage and evidence of a generalized subsistence economy similar to that of the Great Basin suggest a possible Shoshoni cultural affiliation for the site (C.A. Reher, personal communication, 1984).

BISON MANDIBLE ANALYSIS

The first stage of this study was to age the bison mandibles using tooth eruption and attrition schedules. Use of these techniques to age bison mandibles was first discussed by Frison (1970) for the Kobold Buffalo Jump, Montana. These techinques have been utilized and refined at several Wyoming archaeological sites, and other localities as well, including the Glenrock Buffalo Jump (Frison and Reher 1970), the Hawken site (Frison et al. 1976), the Vore site (Reher and Frison 1980), the Agate Basin site (Frison and Stanford 1982) and the Garnsey site (Wilson 1980; Speth 1983).

Utility of these dental aging techniques is based on several basic premises. First, bison dentitions erupt in a systematic manner. Second, breeding periods and birthing periods are seasonally limited (Reher and Frison 1980:62). A study of modern bison from the plains showed that two-thirds of all calves are born in the first two weeks of May (Haugen 1974).

These dental aging techniques are most successful when applied to juvenile mandibles because individual tooth eruption as well as wear can be observed. The technique was applied to the small sample of juvenile mandibles from the River Bend site. Nineteen almost complete bison mandibles were recovered from the site. Comparisons of size, cusp wear, tooth eruption, and element side indicate a minimum of 13 individuals were present in the sample.

One mandible is from a full-term fetus or neonate; its deciduous teeth have erupted but show no sign of wear (Figure 2). The bone of the corpus still has the porous quality of fetal or neonate material. This bison mandible represents the only evidence for a late spring or early summer occupation at the River Bend site. Therefore this mandible could represent either a late spring/early summer kill, or it could be simply an out-of-season calf.

Four adult mandibles exhibited full permanent dentition and attrition. No attempt was made to age

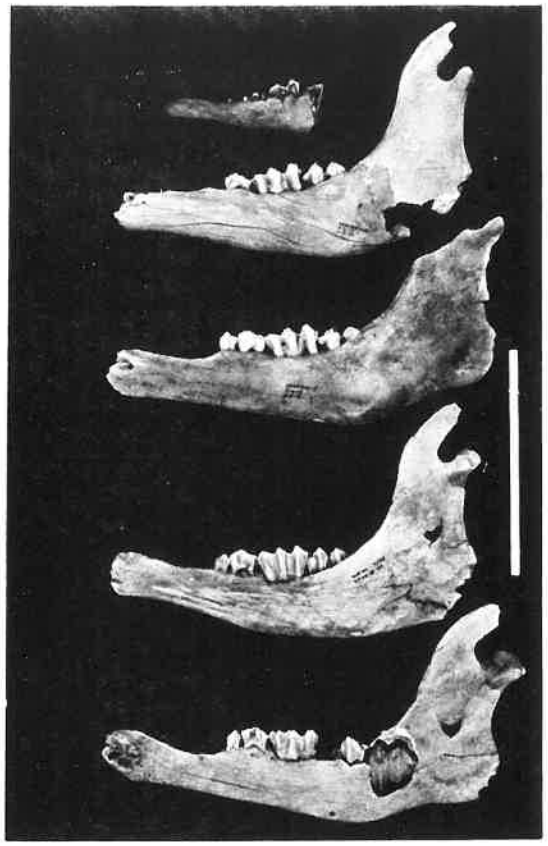

FIGURE 2: River Bend site juvenile Bison mandibles. Scale 10 cm.

these mandibles to a specific year but based on general appearance and tooth wear they appear to be five years of age or older.

The anterior portion of a mandible from a possible two or three year old individual was also present in the sample. On this specimen, permanent premolars two and three were just beginning to erupt while the first permanent molar exhibited extensive wear.

The primary focus of this analysis is on the young calf mandibles from the site (Figure 2). Eleven almost complete mandibles were used for this aging analysis, all in a range of four to seven months of age, indicating fall occupation of the site. Bison calf mandibles in this cohort have all deciduous teeth in use and the first permanent molar in some stage of eruption. Attrition of the first lower molar ranges from no wear to wear on all eight facets, depending on specific age. The second permanent molar is visible in bud behind the first molar, but has not begun to erupt.

While all River Bend calf mandibles exhibited dental characteristics of the four to seven month age group, variation in eruption stage and wear was seen. Tooth eruption and wear classes defined by Reher and Frison (1980) and a cusp numbering system designed by Frison et al. (1976) were used in the following description. Three mandibles contained first molars just erupting above the aveolus. The four facets of the anterior loph and the first two facets of the posterior loph of the first molar were above the aveolus while the posterior most two facets were just beginning to erupt. None of these facets had as yet come into wear. Four calf mandibles exhibited first molars fully erupted with wear on facets I-II. The last four calf mandibles exhibited fully erupted first molars with wear on facets I-IV.

Despite the considerable variation in stages of eruption and cusp wear, these calf mandibles all fall into an age range of four to seven months, suggesting a September to December occupation of the River Bend site.

BISON FETAL BONES

The River Bend site contained several hundred bison fetal bones and bone fragments. Metric analyses and periosteal bone counts were conducted on these fetal bones to age the material and gain further insight into site seasonality. I adopted the fetal bison aging tech-

nique of periosteal stratum counts developed and utilized by Michael Wilson at the Casper site (Frison 1974) and the Big Goose Creek site (Frison et al. 1978).

In using this aging technique, Wilson noted that:

> While periosteal layers are being added to the outer surface of the bone, they are being eaten away on the inner surface as the marrow cavity increases in diameter. Despite endosteal resorption, there is a net increase in the number of fetal periosteal layers until parturation (Wilson 1975:217).

In his analyses of the Casper and Big Goose Creek sites fetal bison, Wilson cut oblique and perpendicular sections near the distal end of the humerus diaphyses and counted periosteal strata. In the Casper site study, he concluded that "Counts of the periosteal layers revealed a consistent trend for older individuals to show more strata" (Wilson 1974:147).

Wilson also noted that at birth, the structure of the bone begins to change rapidly as kinetic and static loads are applied to the limb bones. At this time, the interspaces between the periosteal layers begin to fill with additional osteons. The bone surface becomes glossy and fetal periosteal layers are being systematically destroyed by endosteal resorption (Wilson 1975:217). Through his analyses, Wilson has developed a set of criteria for aging fetal and neonatal bison bones.

To test Wilson's aging techniques and age the River Bend fetal bison material, I performed a series of metric analyses and periosteal counts on the River Bend fetal bones and on known age and sex fetal and neonatal bison bones from the University of Wyoming Anthropology Department Osteology Collection. The comparative material included one seven-month fetus, five eight-month fetuses, one nine-month fetus, one premature calf, seven newborn calves, one three-day-old calf, one five-week-old calf and an eight to twelve-week-old calf.

The first step in the analysis was to take metric measurements of the scapulae, humeri, radii, femora, and tibiae of the study group. The measurement of maximum length of the neck as defined by von den Driesch (1976) was taken on the scapulae. The maximum length of diaphysis, minimum antero-posterior diameter and minimum transverse diameter of the diaphysis were taken on the long bones.

The results of the measurements of minimum length of the scapula neck and the minimum antero-posterior diameter of the femoral diaphysis are presented in Figure 3. In each case, the entire River Bend collection was used, while only the right scapula or femur of each comparative specimen was used. Eighteen scapula from the River Bend site and 18 comparative right scapulae were examined (Figure 4). The results showed three distinct size groups. River Bend scapulae fell into groups of five to nine mm and 11 to 17 mm in neck length. The comparative scapulae fell into a larger grouping of 17 to 28 mm in length. This grouping of comparative scapulae shows overlap in size between individuals of different known ages. The newborn male calves, the five-week calf and the eight- to twelve-week calf dominated the upper end of the scale. The seven-month fetus and the premature neonate calf fall into the size range of the larger River Bend scapula (Figure 3).

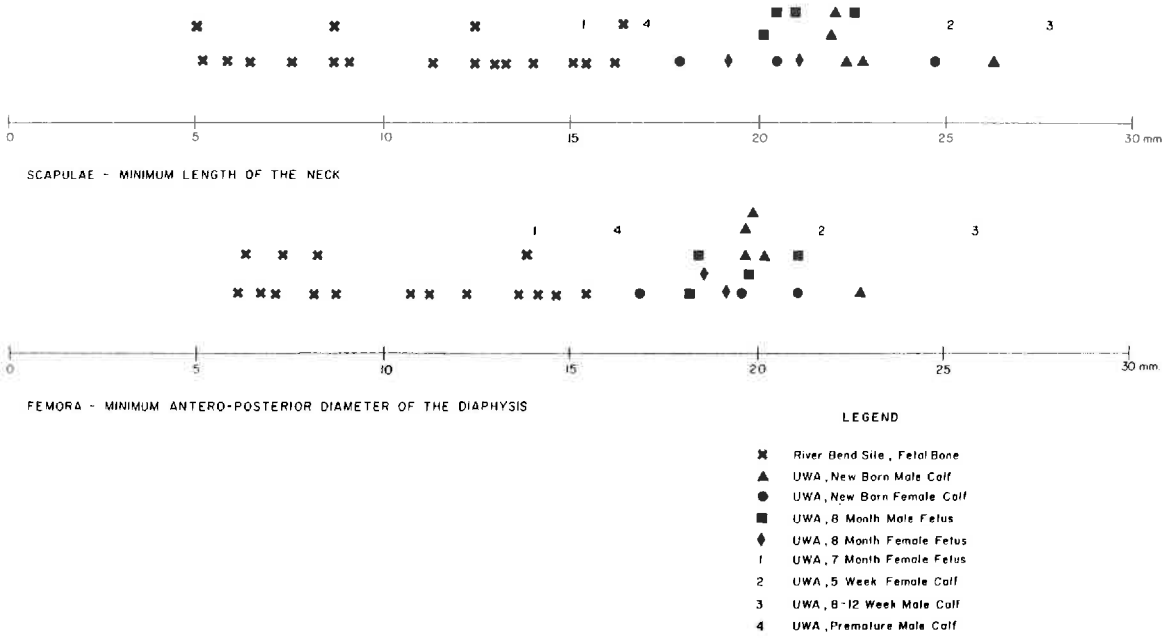

FIGURE 3: Metric comparison of calf and fetal bison scapulae and femora.

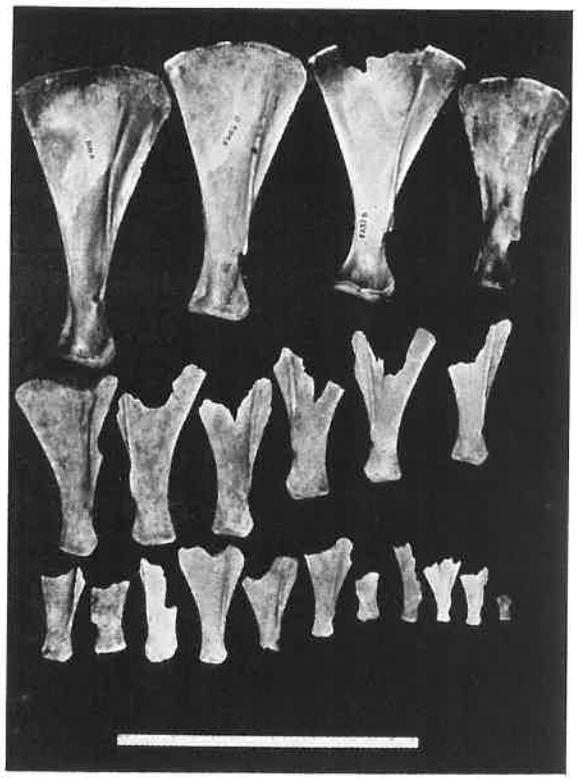

FIGURE 4: Fetal Bison scapulae. Top row: UWA comparative scapulae; Second and third rows: River Bend site scapulae. Scale 10 cm.

Measurements of 16 River Bend and 18 comparative right femora show the same distinct size groupings (Figures 3 and 5). River Bend femora fell into groups of six to nine mm and 12 to 16 mm in minimum diameter. The comparative femora fell into a larger group 15 to 26 mm in diameter. Newborn males and older calves were clustered at the upper end of the scale while the seven-month fetus and premature calf fell into the River Bend sample size range. Measurements of humeri, radii, and tibiae also exhibit the same general pattern seen in the scapulae and femora.

Based on these few measurements, it would seem the River Bend material is younger than eight months prenatal age and that the sample possibly breaks down into age groups of roughly seven months and four to five months. However, overlap in size between comparative eight-month fetuses and newborn calves suggests it is probably simplistic to use size criteria

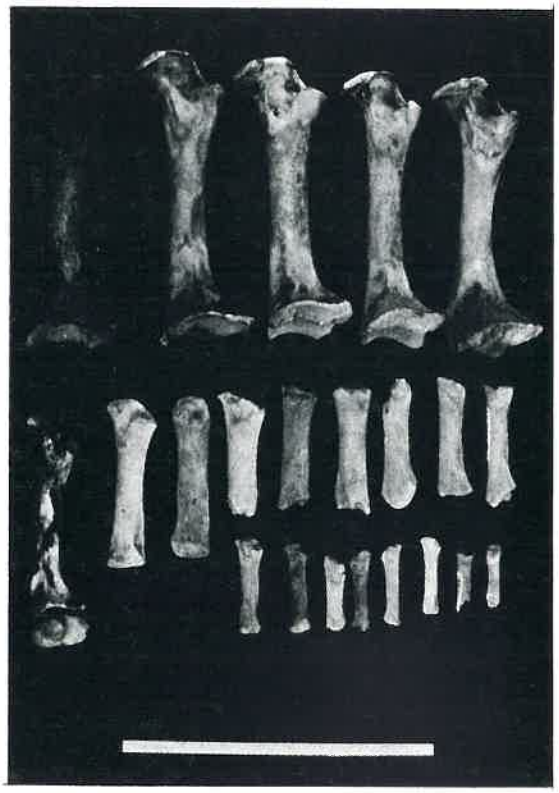

FIGURE 5: Fetal Bison femora. Top row and left second row: UWA comparative femora; Remainder from River Bend site. Scale 10 cm.

alone to establish age estimates.

Obviously several factors besides age could determine size of a fetus or calf. Age and relative physical condition of the cow would be a factor. Environmental factors such as temperature or availability of food and water would affect condition of the cow and her calf. Differences in the particular genetic constitution of each bison herd would also contribute to variation in size. Sexual dimorphism must certainly be a factor and could for example, cause overlap in size between younger male and older female fetuses.

Finally, developmental schedules of bison fetuses and particularly fetal long bones should be considered. It is known that the growth rates of particular body parts of the fetus go through periods of acceleration and deceleration during gestation. This could also cause overlap in size between fetuses of different ages. More knowledge of fetal development must be obtained to refine any aging technique used with fetal bison.

The next step in this study was to examine the technique of periosteal stratum counts to age the femora from the study group. It was my hope that counts of periosteal strata would separate comparative fetuses and newborns into known age groups and further delineate the age range or groupings of the River Bend site materials.

To examine the periosteal layers, I made perpendicular and oblique cuts in the anterior surface near the distal end of the femoral diaphysis to create a V-shaped section in the bone (Figure 6). Periosteal strata of 16 River Bend and 18 comparative femora were counted with the aid of a dissecting microscope. The partial stratum forming on the exterior surface of each bone was included in the count.

The results of this count showed River Bend femora falling into two groups, one having seven or eight periosteal strata and a second having 10, 11, or 13 strata (Table 1). Femora with seven or eight strata were also in the smallest size group defined above, while those with the greater number of strata fall into the larger size group. Therefore, both metric and non-metric analyses suggest the presence of at least two distinct fetal age groups in the River Bend material.

Periosteal counts for the comparative femora also produced encouraging results (Table 2). Counts for the seven-month fetus, eight month fetuses, and premature calf ranged from 10 to 11 strata.

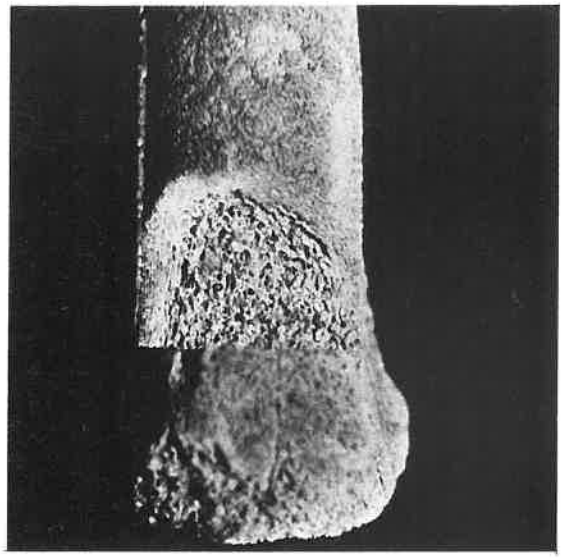

FIGURE 6: River Bend site fetal Bison femur: prepared for Periosteal strata count.

Cat. No.	Age	Sex	Strata
RB-1189	—	—	7
RB-3861	—	—	7
RB-3799	—	—	8
RB-3800	—	—	8
RB-423	—	—	8
RB-3494	—	—	8
RB-3899	—	—	8
RB-3860	—	—	8
RB-3713	—	—	10
RB-3638	—	—	10
RB-1084	—	—	10
RB-3742	—	—	10
RB-3738	—	—	11
RB-4185	—	—	11
RB-583	—	—	11
RB-3741	—	—	13

TABLE 1: Periosteal strata count of River Bend femora.

Newborn calves had counts of 11 to 13 strata. The three-day old calf had 15 strata. The five-week-old calf had 17 strata. Strata of the eight-to-twelve-week-old calf had

Cat. No.	Age	Sex	Strata
UWA-80380	7 month fetus	female	10
UWA-82868	8 month fetus	female	10
UWA-82858	8 month fetus	female	11
UWA-82878	8 month fetus	male	11
UWA-82888	8 month fetus	male	11
UWA-82898	8 month fetus	male	11
UWA-82128	9 month fetus	male	11
UWA-82328	premature	male	10
UWA-82068	new born	male	11
UWA-82388	new born	female	12
UWA-82848	new born	female	12
UWA-82138	new born	male	13
UWA-82348	new born	male	13
UWA-82358	new born	male	13
UWA-82368	new born	female	13
UWA-80333	3 days old	male	15
UWA-82379	5 weeks old	female	17
UWA-80360	8-12 weeks old	male	—

TABLE 2: Periosteal strata count of UWA comparative femora.

almost completely disappeared due to post-natal resorption.

In general, the use of periosteal stratum counts was successful in defining age estimates for fetal and newborn material. This technique was able to sort out two possible age groups in the River Bend collection. Secondly, the method was able to sort known age groups of comparative material. Periosteal counts showed a general progression in number of strata from the smaller River Bend femora to the newborn comparative specimens. This progression in number of strata suggests that the River Bend femora represent an age range of four or five to eight prenatal months. This suggests that bison procurement activity was taking place between the months of December and April at the River Bend site.

One possible negative result was obtained from the periosteal stratum counts. The stratum counts and hence tentative age of the largest River Bend femora and the eight-month fetal comparative femora are virtually the same. Met-

ric analyses and visual inspection indicated that the comparative femora are significantly larger and hence older than the River Bend femora. This apparent discrepancy in the aging technique may reflect the inability of strata counts to age material precisely because of the small sample on which it is based. This discrepancy may also reflect modern management and feeding programs producing larger commercial bison fetuses (Michael Wilson, personal communication, 1984).

To find some additional form of evidence for age of this material, I examined fetal metapodials from the River Bend site. It has been noted that "in the last two months of gestation, the metapodials, which are separate in earlier months, begin to co-ossify along a mid-line over their full length" (Wilson and Davis 1978:324).

The majority of the River Bend metapodials had not yet begun to co-ossify. However, at least two metatarsals and one metacarpal had begun to do so. Therefore at least some of the River Bend material is eight months in fetal age by this measure. This supports the findings of the periosteal counts to some degree, despite the apparent differences in ages based on visual and metric inspections.

A few concluding remarks concerning the use of periosteal counts are in order. First, I feel that my small test of this aging technique was successful. I feel that this technique can be made more precise as the sample of comparative specimens of known age is increased. A better knowledge of fetal bone development is also needed to increase the utility of the method. In the future, I plan to perform stratum counts on a larger portion of the River Bend fetal bison collection to compare rates of stratum deposition between different skeletal elements. I would also like to prepare stained thin sections from each element to facilitate stratum counts, particularly in neonatal specimens, in which the periosteal strata are more difficult to see.

CONCLUSIONS

In summary, an attempt was made to determine seasons of bison procurement activity at the River Bend campsite. To accomplish this objective, tooth eruption and tooth wear schedules were used to age bison calf mandibles. Periosteal counts and metric measurements were used to age the fetal bison bones. The results indicate the occurrence of bison procurement activity between the months of September and April of a particular year, with calves being taken in the fall and fetuses obtained during the winter and early spring. The bison remains may represent several distinct hunting episodes or a more continuous style of bison procurement practiced over a protracted period of time. The variation in age exhibited by the mandibles and fetal bones suggests to the author that bison may have been hunted in a more continuous fashion during the occupation of the site, instead of being collected in one or two large hunts.

ACKNOWLEDGMENTS

I would like to thank Dr. Charles Reher for his continuous support of this project and my study of the River Bend site. I would also like to thank Dr. Michael Wilson for his correspondence and suggestions concerning this paper. Dr. Mark Miller provided instruction and assistance in the photographic documentation of

the fetal bison material. Danny N. Walker provided continuous support of this project. Finally, I would like to thank the Wyoming Archaeological Society for its financial support of my research at the River Bend site. The Society must be commended for its commitment to education and Wyoming archaeology.

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WYOMING RADIOCARBON DATES

TERRI L. CRAIGIE

INTRODUCTION

This project was initiated in 1980 as a method by which the ever increasing number of archaeological radiocarbon dates submitted by the Department of Anthropology and the Office of the Wyoming State Archaeologist could be organized into a useful document. The document has gone through several stages and revision since that time in response to the continual incorporation of additional dates into the file.

After the original file was organized, based wholly on University of Wyoming (UW) and Office of the Wyoming State Archaeologist (OWSA) dates, several private archaeological contracting firms became aware of the file and submitted dates for incorporation. Dr. George Frison, then Wyoming State Archaeologist, suggested I contact all private archaeological contractors with Wyoming Antiquities Permits, and the various Bureau of Land Management (BLM) offices and solicit radiocarbon dates from all archaeologists working in Wyoming. Responses were obtained from additional contractors, with comprehensive listing of all their dates obtained to that period. Since then, many of the contractors have continued to submit new dates as they are received.

To the best of my ability, I have attempted to prevent the inclusion of errors into this listing. However, I know there has to be some. I hope that anyone examining this list, and who finds a mistake of any nature with one of his/her own dates, is not disturbed. The information presented here has been checked against the form of original communication by which it was received. I have made no attempt to go to each individual Cultural Resource Management Report and check for accuracy. In many instances, it can be noted that there is no report listed with the dates. On these dates, I was not informed by the submitter of a bibliographic citation for the date. It would be greatly appreciated if anyone having such information please forward it to me so that it can be included in future additions to the list. These are planned as the volume of additional dates are warranted, and at such time, I will be more than glad to add material, or make corrections, if I am notified of them. This project is a working file and will only become a more valuable resource with the help of all interested archaeologists. Please help keep the file current and correct.

If information on the dates for a particular site without a bibliographic citation is needed, please contact the archaeological contractor whose company is listed in the reference column.

It should also be noted that many radiocarbon dates on the

Pleistocene and Holocene geology, paleontology and pedology of Wyoming are not included in the data base. I have not deliberately excluded these dates nor those researchers involved in the study of those topics. It is just the fact that I have never been notified of many of these dates, including several submitted by other University of Wyoming researchers. I would be more than happy to add these types of dates to the file, again, if I am notified of their existence.

ACKNOWLEDGEMENTS

First, I would like to thank all individual archaeological contractors or firms who submitted dates to me for inclusion in this listing. Their help has provided part of a data base that will be of value to all concerned with the archaeology of Wyoming.

In addition, I would like to say that if it were not for the extensive research efforts of Dr. George Frison, there may never have been a need for the beginning of this data base. His research on Wyoming archaeology over the last 20 years was the starting point for the data base, but by no means, the ending point.

I also would like to extend a very special thanks to Danny Walker, Associate Editor of The Wyoming Archaeologist for his surprising amount of patience, expertise in the subject and other special contributions to this list which made this compilation of radiocarbon dates possible.

WYOMING RADIOCARBON DATES
Department of Anthropology
University of Wyoming
Laramie, WY 82071
Compiled by T. L. Craigie

Site Name	Lab No.	Date	Comments	Reference
ALBANY COUNTY (48AB)				
48AB4 James Allen	M-304	7900 ± 400 BP (5950 BC)	burned bison bone	Frison 1978
48AB18 Medicine Bow Mtns.	UGa-3782	1555 ± 75 BP	camp site	WWC
48AB105 3 Duck Site	RL-1124	340 ± 110 BP (AD 1530 ± 110)	charcoal, feature 1	UW/OWSA
48AB301 Shirley Basin lodges	RL-1108	570 ± 110 BP (AD 1340 ± 80)	charcoal, Lodge #7	UW
48AB304 Bell Cave	RL-1331	12,204 ± 330 BP	bone sample	UW/OWSA
48AB321	RL-1318	3480 ± 140 BP (1910 BC) ± 220)	charcoal	OWSA WY-217-77
48AB337	RL-1857	2070 ± 120 BP (170 BC) ± 220)	charcoal	UW/OWSA
48AB341 Bosler Canyon Hwy.	RL-705	1360 ± 100 BP (AD 590)	charcoal	UW/OWSA
48AB386	RL-1832	1830 ± 120 BP (AD 150 ± 110)	charcoal	UW/OWSA
48AB386	RL-1833	1810 ± 120 BP (AD 170 ± 110)	charcoal	UW/OWSA
48AB393	RL-1718	1190 ± 100 BP (AD 780 ± 130)	charcoal	OWSA WY-48-82
48AB396	RL-1837	3930 ± 130 BP (2490 BC) ± 300)	charcoal	OWSA WY-48-82
48AB395	RL-1836	2660 ± 120 BP (900 BC) ± 110)	charcoal	OWSA WY-48-82
48AB396	RL-1838	3370 ± 130 BP (1810 BC) ± 240)	charcoal	OWSA WY-48-82
BIG HORN COUNTY (48BH)				
48BH85 Spanish Point Quarry	RL-677	6200 ± 170 BP (4250 BC)	charcoal	Frison 1978
48BH91 Sow Belly Site	RL-967	1530 ± 120 BP (AD 440 ± 150)	charcoal, firepit	UW/OWSA
48BH206 Bottleneck Cave	SI-237	8270 ± 180 BP (6320 BC)	charcoal, F.#30	Husted 1969
48BH206 Bottleneck Cave	SI-238	1510 ± 200 BP (AD 440)	charcoal, F.#20	Husted 1969
48BH206 Bottleneck Cave	SI-239	3820 ± 200 BP (1870 BC)	charcoal	Husted 1969
48BH206 Bottleneck Cave	SI-240	8160 ± 180 BP (6210 BC)	charcoal, L.L. #1	Husted 1969
48BH206 Bottleneck Cave	SI-241	8040 ± 220 BP (6090 BC)	charcoal, F.#26	Husted 1969
48BH206 Bottleneck Cave	SI-236	8210 ± 200 BP (6260 BC)	charcoal, F#32	Husted 1969
48BH329 Hanson Site	RL-374	10,700 ± 670 BP (8750 BC)	Folsom level	Frison & Bradley 1980
48BH329 Hanson Site	RL-992	3610 ± 130 BP (2070 BC ± 110)	charcoal, Area II	Frison & Bradley 1980
48BH329 Hanson Site	RL-540	1480 ± 110 BP (AD 470)	charcoal	Frison & Bradley 1980
48BH329 Hanson Site	RL-558	10,080 ± 330 BP (8130 BC)	Area II, Folsom	Frison & Bradley 1980
48BH330 Granite Creek Rockshelter	RL-387	1230 ± 90 BP (AD 720)	charcoal 3" b.s.	Frison 1978
48BH330 Granite Creek Rockshelter	RL-390	5390 ± 120 BP (3440 BC)	charcoal, 21" deep	Frison 1978
48BH330 Granite Creek Rockshelter	RL-389	4700 ± 130 BP (2750 BC)	charcoal	Frison 1978
48BH332	RL-441	1640 ± 120 BP (AD 310)	charcoal	Frison 1978
48BH332	RL-377	1760 ± 100 BP (AD 190)	charcoal, 21" B.D.	Frison 1978
48BH334 Medicine Lodge Creek R.S. III	RL-383	1440 ± 100 BP (AD 510)	charcoal	Frison 1978
48BH345 Laddie Creek	RL-556	700 ± 100 BP (AD 1250)	Level V, No.Trench	UW
48BH345 Laddie Creek	RL-690	1070 ± 180 BP (AD 880)	charcoal, 14" B.S.	UW
48BH345 Laddie Creek	RL-693	7460 ± 380 BP (5510 BC)	charcoal, 1st level	UW
48BH345 Laddie Creek	RL-445	6830 ± 260 BP (4880 BC)		Frison 1978
48BH345 Laddie Creek	RL-692	6650 ± 480 BP (4700 BC)	5th Altithermal lev.	Frison 1978
48BH345 Laddie Creek	RL-691	5700 ± 160 BP (3750 BC)		Frison 1978
48BH345 Laddie Creek	RL-1314	1180 ± 140 BP (AD 790 ± 150)	below 1975 Agate Basin-like level	UW
48WA323 Laddie Creek	RL-690	1070 ± 180 BP (AD 880)	charcoal, 6.0 gms	UW/OWSA
48WA323 Laddie Creek	RL-691	5700 ± 160 BP (3750 BC)	charcoal, 11.0 gms	UW/OWSA
48WA323 Laddie Creek	RL-693	7460 ± 380 BP (5510 BC)	charcoal, 12 gms	UW/OWSA
48BH346 Beehive Site	RL-538	1400 ± 100 BP (AD 550)	charcoal, 15 gms.	UW/OWSA
48BH346 Beehive Site	RL-1081	1400 ± 110 BP (AD 570 ± 110)	charcoal	UW/OWSA
48BH346 Beehive Site	RL-1080	3570 ± 140 BP (1980 BC ± 190)	Archaic level	UW/OWSA
48BH347 Shiprock II	RL-443	1230 ± 130 BP (AD 720)	charcoal	UW/OWSA
48BH349 Paint Rock V	RL-482	4310 ± 140 BP (2360 BC)	charcoal	Frison 1978
48BH349 Paint Rock V	RL-391	8140 ± 150 BP (6190 BC)	Level III, 15.5" B.S.	Frison 1978
48BH349 Paint Rock V	RL-381	8340 ± 160 BP (6390 BC)	charcoal, 15.5" B.C.	Frison 1978
48BH349 Paint Rock V	RL-483	4730 ± 140 BP (2780 BC)	charcoal	Frison 1978
48BH364 Southsider Cave	RL-665	9360 ± 230 BP (7410 BC)	charcoal	Frison 1978
48BH364 Southsider Cave	RL-674	1680 ± 110 BP (AD 270)	charcoal	Frison 1978
48BH364 Southsider Cave	RL-673	1570 ± 110 BP (AD 380)	charcoal, cave floor	Frison 1978
48BH364 Southsider Cave	RL-672	4170 ± 150 BP (2200 BC)	charcoal	Frison 1978
48BH364 Southsider Cave	RL-670	5420 ± 160 BP (3470 BC)	charcoal	Frison 1978
48BH364 Southsider Cave	RL-671	5570 ± 160 BP (3620 BC)	charcoal	Frison 1978
48BH364 Southsider Cave	RL-669	7650 ± 200 BP (5700 BC)	charcoal	Frison 1978
48BH364 Southsider Cave	RL-668	3900 ± 140 BP (1950 BC)	charcoal, 12'15" BS	Frison 1978
48BH364 Southsider Cave	RL-667	5700 ± 160 BP (3750 BC)	charcoal	Frison 1978
48BH364 Southsider Cave	RL-666	8500 ± 210 BP (6550 BC)	charcoal	Frison 1978
48BH418	UGa-3432	1465 ± 115 BP (AD 485)		WWC
48BH460 Bandit Site	UGa-223	2130 ± 60 BP (180 BC)	charcoal	UW/OWSA
48BH473	Beta-2506	1350 ± 110 BP (AD 600)		Arch. Services
48BH473	Beta-2057	1360 ± 90 BP (AD 610)		Arch. Services
48BH499 Medicine Lodge Creek	RL-95	1560 ± 130 BP (AD 390)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-96	3020 ± 140 BP (1070 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-97	3740 ± 150 BP (1790 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-98	3980 ± 160 BP (2030 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-150	9360 ± 380 BP (7410 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-151	8340 ± 220 BP (6390 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-152	8320 ± 220 BP (6370 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-153	9620 ± 260 BP (7670 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-154	9700 ± 620 BP (7750 BC)	carbonaceous material	Frison 1978
48BH499 Medicine Lodge Creek	RL-375	960 ± 90 BP (AD 990)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-378	230 ± 80 BP (AD 1720)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-379	8760 ± 400 BP (6810 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-380	8160 ± 220 BP (6210 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-382	9940 ± 350 BP (7990 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-382a	9030 ± 260 BP (7080 BC)	charcoal 16' BD	Frison 1978
48BH499 Medicine Lodge Creek	RL-384	8010 ± 340 BP (6060 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-384a	8570 ± 230 BP (6620 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-386	8520 ± 230 BP (6570 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-393	9590 ± 180 BP (7640 BC)	bone, rodent	Frison 1978
48BH499 Medicine Lodge Creek	RL-395	8050 ± 240 BP (6100 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-438	4050 ± 150 BP (2100 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-439	9030 ± 460 BP (7080 BC)	composite charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-440	1790 ± 160 BP (AD 160)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-442	3750 ± 260 BP (1800 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-444	7600 ± 500 BP (5650 BC)	fish bone level	Frison 1978
48BH499 Medicine Lodge Creek	RL-446	8830 ± 470 BP (6880 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-450	9510 ± 260 BP (7560 BC)	bison bone tibia	Frison 1978

Site Name	Lab No.	Date	Comments	Reference
48BH499 Medicine Lodge Creek	RL-559	3110 ± 170 BP (1160 BC)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-376	1360 ± 100 BP (AD 590)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-553	1360 ± 100 BP (AD 590)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-1065	1280 ± 110 BP (AD 710 ± 110)	charcoal	Frison 1978
48BH499 Medicine Lodge Creek	RL-1107	8600 ± 250 BP	bone, 255.5 grams	Frison 1978
48BH499 Medicine Lodge Creek	RL-449	9080 ± 220 BP (7130 BC)	bison radius	Frison 1978
48BH521 Alkali Road Buttes	RL-1404	1160 ± 100 BP (AD 810 ± 120)		Frison 1978
48BH609	Beta-2838	1420 ± 60 BP (AD 530)		Arch. Services
48BH614	Beta-2839	1540 ± 60 BP (AD 410)		Arch. Services
48BH719 Little Mountain Project	RL-555	1010 ± 100 BP (AD 940)	charcoal	UW/OWSA
48BH730 Wortham Cave	RL-542	2180 ± 110 BP (230 BC)	charcoal	UW/OWSA
48BH730 Wortham Cave	RL-1074	1460 ± 110 BP (AD 520 ± 120)	wood, 14.9 grams	UW/OWSA
48BH730 Wortham Cave	TX-2716	1230 ± 70 BP (AD 720)		Arch. Services
48BH730 Wortham Cave	TX-2715	1230 ± 90 BP (AD 720)		Arch. Services
48BH758	Beta 5430	1180 ± 100 BP	charcoal	Arch. Consultants
48BH768	Beta-7985	1030 ± 60 BP		Welch and Rom 1983
48BH770	Beta-7986	3420 ± 90 BP		Welch and Rom 1983
48BH770	Beta-7987	1280 ± 50 BP		Welch and Rom 1983
48BH977	Beta-10058	1160 ± 60 BP (665 to 1010 AD)	charcoal	Austin 1984
48BH977	Beta-10059	2110 ± 150 BP (415 BC to 210 AD)	charcoal	Austin 1984
48BH3341 Crystal Creek	RL-417	1450 ± 120 BP (AD 500)	charcoal, 6-9" deep	UW/OWSA
CAMPBELL COUNTY (48CA)				
48CA7 Thunder Creek D#1	RL-541	1320 ± 100 BP (AD 630)	charcoal	UW/OWSA
48CA12 Carter/Kerr-McGee	RL-737	6950 ± 190 BP (5000 BC)	bone, 2016 grms.	Frison 1984
48CA12 Carter/Kerr-McGee	RL-1760	7140 ± 170 BP	burned bone	Frison 1984
48CA12 Carter/Kerr-McGee	RL-917	10,400 ± 600 BP	charcoal, 2.1 grams.	Frison 1984
48CA12 Carter/Kerr-McGee	RL-454	9050 ± 220 BP (7100 BC)	bison bone	Frison 1984
48CA33 Arco Coal Lease	RL-1002	500 ± 110 B.P (AD 1390 ± 60)	charcoal	OWSA
48CA56 Little Thunder Creek	RL-599	1590 ± 110 BP (AD 360)	charcoal	OWSA
48CA61 Cache Hill	RL-1928	260 ± 100 BP (AD 1610 ± 150)	bison humerus	OWSA
48CA69 Belle Fourche Ceramic	RL-718	1500 ± 150 BP (AD 450)	fire hearth #2	OWSA
48CA69 Belle Fourche Ceramic	RL-720	1770 ± 110 BP (AD 180)	fire pit #1	OWSA
48CA75 Mine Bone Bed	RL-805	3520 ± 160 BP (1570 BC)	charcoal	UW/OWSA
48CA85 Rawhide Site	RL-1105	1870 ± 150 BP (AD 80 ± 180)	charcoal	UW/OWSA
48CA89 Wagensen Site	RL-957	290 ± 110 BP (AD 1600 ± 160)	charcoal	UW/OWSA
48CA89 Wagensen Site	UGa-4070	580 ± 155 BP (AD 1370	charcoal, 8 gm	UW/OWSA
48CA89 Wagensen Site	UGa-4071	2595 ± 440 BP (645 BC)	charcoal, 7 gm	UW/OWSA
48CA89 Wagensen Site	UGa-4072	720 ± 90 BP (AD 1230)	combined charcoal	UW/OWSA
48CA89 Wagensen Site	UGa-4073	625 ± 85 BP (AD 1325	combined charcoal	UW/OWSA
48CA89 Wagensen Site	UGa-4074	705 ± 115 BP (AD 1245	combined charcoal	UW/OWSA
48CA104 Mooney Site	RL-585	2040 ± 90 BP (90 BC)	bison bone	Frison 1978
48CA130 Rourke Site	RL-977	1870 ± 120 BP (AD 80 ± 130	charcoal	UW/OWSA
48CA202	RL-1316	1150 ± 110 BP (AD 800 ± 130)		OWSA
48CA214 Peabody Coal	RL-1072	1630 ± 120 BP (AD 340 ± 140	charcoal	UW/OWSA
48CA214 Peabody Coal	RL-1317	1250 ± 150 BP (AD 740 ± 170)	charcoal	OWSA
48CA302 Ruby Site	M-2248	1800 ± 140 BP (AD 150)	charcoal	UW/OWSA
48CA302 Ruby Site	GX-1157	1670 ± 135 BP (AD 280)		Frison 1971b, 1978,
48CA384 Rock Bottom Site	RL-735	1420 ± 100 BP (AD 530)	charcoal	UW/OWSA
48CA563	Beta-3605	990 ± 70 BP (AD 960)	charcoal, feature 1	Pioneer Arch. Cons.
48CA570	Beta-3606	1150 ± 150 BP (AD 800)	charcoal, feature 9	Pioneer Arch. Cons.
48CA1049	GX-9212	980 ± 155 BP (AD 970)	charcoal	Fredlund et al. 1983
48CA1042/46	GX-9199	860 ± 180 BP (AD 1090)	charcoal	Fredlund et al. 1983
48CA1042/46	GX-9198	1320 ± 150 BP (AD 630)	charcoal	Fredlund et al. 1983
48CA1490/CO726	Beta #	820 ± 70 BP (AD 1130)		WCRM
CARBON COUNTY (48CR)				
48CR40 Trailblazer Project	RL-1495	1390 ± 110 BP		WWC
48CR40 Trailblazer Project	UGa-3783	1060 ± 75 BP		WWC
48CR111 Seminoe #1 Survey	RL-680	1190 ± 100 BP (AD 760)	charcoal	OWSA
48CR112 Seminoe #1 Survey	RL-682	290 ± 100 BP (AD 1660)	charcoal	OWSA
48CR112 Seminoe #1 Survey	RL-683	430 ± 100 BP (AD 1520)	charcoal	OWSA
48CR113 Seminoe #1 Survey	RL-679	860 ± 100 BP (AD 1090)	charcoal	OWSA
48CR113 Seminoe #1 Survey	RL-678	970 ± 100 BP (AD 980)	charcoal	OWSA
48CR115 Seminoe #1 Survey	RL-681	1860 ± 110 BP (AD 90)	charcoal	OWSA
48CR121 Seminoe #1 Burial	RL-736	910 ± 100 BP (AD 1040)	bone, 302 grams	OWSA
48CR122 Shoreline Site	RL-687	1370 ± 100 BP (AD 580)	charcoal	OWSA
48CR123 C-123-1, F-63 T-1 '80	Beta-3414	modern		Mariah Assoc.
48CR122 Shoreline Site	RL-689	3220 ± 150 BP (1270 BC)	charcoal	Frison 1978
48CR123 Seminoe #1 Survey	RL-688	1060 ± 100 BP (AD 890)	charcoal	UW/OWSA
48CR123 Seminoe #1 Survey	RL-961	950 ± 110 BP (AD 1040 ± 130)	charcoal	UW/OWSA
48CR123 Seminoe #1 Survey	RL-996	1040 ± 110 BP (AD 930 ± 110)	charcoal	UW/OWSA
48CR125 Seminoe #1 Survey	RL-997	1570 ± 110 BP (AD 400 ± 130)	charcoal, feature 1	UW/OWSA
48CR127 Seminoe #1 Project	RL-998	1080 ± 110 BP (AD 890 ± 120)	charcoal, fire pit 1	UW/OWSA
48CR129 Seminoe #1 Project	RL-999	1610 ± 120 BP (AD 460 ± 140)	charcoal, feature 1	UW/OWSA
48CR130 Arch Mineral, Seminoe 1	RL-963	Modern (AD 1630)	charcoal, circle 1	UW/OWSA
48CR135 Hanna Difficulty	RL-1761	1180 ± 100 BP (AD 790 ± 120)	charcoal #20	OWSA WY-83-82
48CR135 Hanna Difficulty	RL-1764	870 ± 110 BP (AD 1100 ± 120)	charcoal #30	OWSA WY-83-82
48CR135 Hanna Difficulty	RL-1766	1220 ± 110 BP (AD 750 ± 130)	charcoal #26	OWSA WY-83-82
48CR135 Hanna Difficulty	RL-1765	1550 ± 180 BP (AD 420 ± 200)	charcoal #34	OWSA WY-83-82
48CR135 Hanna Difficulty	RL-1763	1680 ± 120 BP (AD 290 ± 130)	charcoal #22	OWSA WY-83-82
48CR135 Hanna Difficulty	RL-1762	1040 ± 120 BP (AD 920 ± 120)	charcoal #21	OWSA WY-83-82
48CR141 PP&L Cherokee Project	RL-1113	1580 ± 120 BP (AD 400 ± 140)	charcoal, fire pit 1	OWSA
48CR141 PP&L Cherokee Project	RL-1114	1540 ± 120 BP (AD 440 ± 150)	charcoal, fire pit 3	OWSA
48CR156 Swine Belly Site	RL-730	1090 ± 110 BP (AD 860)	charcoal, fire pit 2	OWSA
48CR156 Swine Belly Site	RL-731	1570 ± 110 BP (AD 380)	fire pit #1	OWSA
48CR158 Dead Dog Site	RL-970	2350 ± 120 BP (570 BC ± 170)	charcoal, fire pit 3	OWSA
48CR173 PP&L Cherokee Project	RL-1069	1560 ± 120 BP (AD 420 ± 140)	charcoal, fire pit 5	OWSA
48CR173 PP&L Cherokee Project	RL-1115	1610 ± 120 BP (AD 370 ± 160)	charcoal, fire pit 3	OWSA
48CR173 PP&L Cherokee Project	RL-1116	850 ± 110 BP (AD 1120 ± 110)	charcoal, fire pit 4	OWSA
48CR173 PP&L Cherokee Project	RL-1106	4400 ± 150 BP (3170 BC ± 200)	charcoal, 11 gms	OWSA
48CR182 UP Mammoth Site	I-449	11,280 ± 350 BP (9330 BC)	mammoth tusk sample	Haynes 1970
48CR182 UP Mammoth Site	I-474	4975 ± 180 BP (3025 BC)	wood	Haynes 1970
48CR256	Beta-5293	1350 ± 120 BP		Black 1982
48CR301 Garrett Allen	RL-1227	630 ± 100 BP (AD 1310 ± 80)	charcoal, 2nd level	UW/OWSA
48CR301 Garrett Allen	RL-1228	920 ± 110 BP (AD 1070 ± 120)	charcoal, Level III	UW/OWSA
48CR301 Garrett Allen	RL-1414	1670 ± 120 BP (AD 300 ± 140)		UW/OWSA
48CR301 Garrett Allen	RL-1406	510 ± 110 BP (AD 1380 ± 70)		UW/OWSA
48CR301 Garrett Allen	RL-1420	3120 ± 250 BP (1430 BC ± 320)		UW/OWSA
48CR301 Garrett Allen	RL-1418	770 ± 110 BP (AD 1190 ± 110)		UW/OWSA
48CR304 Scoggin Site	RL-174	4540 ± 110 BP (2590 BC)	charcoal	Labdell 1973
48CR305 Medicine Bow Coal	RL-684	1580 ± 110 BP (AD 370)	charcoal #4	OWSA

Site Name	Lab No.	Date	Comments	Reference
48CR305 Medicine Bow Coal	RL-685	1140 ± 100 BP (AD 810)	charcoal, fire pit 4	OWSA
48CR306 Medicine Bow Coal	RL-686	1640 ± 110 BP (AD 310)	charcoal	OWSA
48CR310 Pasco Survey	RL-471	780 ± 110 BP (AD 1170)	Masca Cor (AD 1180 ± 110)	Frison 1978
48CR324 Upper Muddy Creek	RL-394	1720 ± 110 BP (AD 230)	Bison kill area	Frison 1978
48CR325 Shirley Basin Stone Cairn	RL-1338	1720 ± 120 BP (AD 250 ± 140)	wood	UW/OWSA
48CR341	UGa-3536	650 ± 480 BP		Metcalf 1981
48CR341	UGa-3534	415 ± 85 BP		Metcalf 1981
48CR341	UGa-3537	390 ± 85 BP		Metcalf 1981
48CR445 Edge Ground Cobble	RL-763	1040 ± 100 BP (AD 910)	charcoal, area 1, P1	OWSA
48CR445 Edge Ground Cobble	RL-764	1910 ± 110 BP (AD 40)	charcoal, area 3, P2	OWSA
48CR500 Hurry Home	RL-1121	1160 ± 100 BP (AD 820 ± 130)	charcoal, fire pit 1	OWSA
48CR502 Energy Develop Co.	RL-1089	1690 ± 120 BP (AD 280 ± 130)	charcoal, 10 grams	OWSA
48CR502 Energy Develop Co.	RL-1071	1050 ± 100 BP (AD 920 ± 110)	charcoal	OWSA
48CR505 Energy Develop. Co.	RL-1090	1620 ± 120 BP (AD 360 ± 150)	charcoal, 5 grams	OWSA
48CR505 Energy Develop. Co.	RL-1123	1330 ± 120 BP (AD 660 ± 120)	charcoal, unit A	OWSA
48CR513 CS #1	Beta-5772	1320 ± 60 BP		McGuire & Joiner 1981
48CR513 CS #2	Beta-5773	1240 ± 70 BP		McGuire & Joiner 1981
48CR513	UGa-3719	3785 ± 90 BP		McGuire & Joyner 1981
48CR513	UGa-3631	1300 ± 70 BP		McGuire & Joyner 1981
48CR514 Arch Mineral, AM-10	RL-1119	1160 ± 110 BP (AD 810 ± 130)	charcoal, unit 4	OWSA
48CR514 Arch Mineral, AM-10	RL-1118	2520 ± 120 BP (680 BC ± 190)	charcoal, unit 1	OWSA
48CR528 Energy Develop. Co.	RL-1091	2090 ± 120 BP (180 BC ± 220)	charcoal, feature 1	OWSA
48CR529 Energy Develop. Co	RL-1122	1420 ± 120 BP (AD 550 ± 110	charcoal	OWSA
48CR601 Rubber Ball Site	RL-993	1860 ± 120 BP (AD 110 ± 110)	charcoal	OWSA
48CR621 Rawlins West Road	RL-1380	1190 ± 100 BP (AD 780 ± 130)		OWSA
48CR625 Crooked Cow Site	RL-971	3740 ± 140 BP (2290 BC ± 190)	charcoal, fire pit 1	OWSA
48CR660 Rawlins UPlift	UGa-2045	1115 ± 55 BP (AD 835)		Hilman n.d.
48CR665 Rawlins Uplift	UGa-2044	1390 ± 50 BP (560 AD)		Hilman n.d.
48CR698 Great Divide Basin	RL-1494	2190 ± 240 BP		Hilman n.d.
48CR767 Arch Mineral AM-9	RL-1117	1180 ± 110 BP (AD 790 ± 140)	charcoal, unit 1	OWSA
48CR773 Arch Mineral AM-13	RL-1120	410 ± 110 BP (AD 1500 ± 110)	charcoal, unit 1	OWSA
48CR907 Wolcott-Saratoga Hwy.	RL-990	1520 ± 120 BP (AD 460 ± 140)	charcoal, south fire	OWSA
48CR933 Stone Fence Burial	RL-1005	460 ± 110 BP (AD 1430 ± 80)	bone	UW/OWSA
48CR936 Red Desert	UGa-2641	5640 ± 110 BP (3690 BC)		WWC
48CR997 Shirley Basin	RL-1624	1060 ± 100 BP (AD 910 ± 110)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1625	1410 ± 190 BP (AD 570 ± 180)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1626	1660 ± 120 BP (AD 310 ± 130)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1733	1050 ± 110 BP (AD 920 ± 110)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1726	1140 ± 100 BP (AD 830 ± 130)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1754	1910 ± 110 BP (AD 30 ± 130)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1756	1710 ± 110 BP (AD 270 ± 120)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1755	1070 ± 110 BP (AD 900 ± 120)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1757	1470 ± 110 BP (AD 520 ± 120)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1722	1070 ± 100 BP (AD 910 ± 110)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1723	1370 ± 110 BP (AD 610 ± 110)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1724	1710 ± 120 BP (AD 270 ± 130)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1727	1450 ± 110 BP (AD 530 ± 120)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1725	1940 ± 120 BP (AD 10 ± 140)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1728	1600 ± 120 BP (AD 380 ± 150)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1734	1410 ± 110 BP (AD 560 ± 120)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1730	3550 ± 140 BP (1940 BC ± 220)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1729	1060 ± 100 BP (AD 910 ± 110)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1731	4460 ± 140 BP (3200 BC ± 190)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1732	1470 ± 230 BP (AD 500 ± 240)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1782	990 ± 110 BP (AD 980 ± 110)	charcoal	OWSA/UW WY-37-81
48CR997 Shirley Basin	RL-1735	1700 ± 200 BP (AD 290 ± 220)	charcoal	OWSA/UW WY-37-81
48CR1111	RL-1607	3740 ± 600 BP (2300 BC ± 800)	charcoal	OWSA WY-27-79
48CR1125	Beta-2039	5590 ± 120 BP	Feature #2	Arch. Services 79-WY-512b
48CR1166 Seminoe Beach Site	RL-1881	5360 ± 170 BP (4220 BC ± 210)	charcoal	UW/OWSA
48CR1229 Medicine Bow Mountains	UGa-3780	1230 ± 90 BP		WWC
48CR1286	Beta-2041	1415 ± 110 BP		Arch. Services
48CR1286	Beta-2065	1415 ± 80 BP		Arch. Services 79-WY-575
48CR1286	Beta-2066	990 ± 80 BP		Arch. Services 79-WY-575
48CR1286	Beta-2042	2090 ± 90 BP		Arch. Services 79-WY-575
48CR1286	Beta-2043	1110 ± 80 BP		Arch. Services 79-WY-575
48CR1286	Beta-2044	1690 ± 90 BP		Arch. Services 79-WY-575
48CR1286	Beta-2045	1240 ± 90 BP		Arch. Services 79-WY-575
48CR1286	Beta-2046	1000 ± 90 BP		Arch. Services 79-WY-575
48CR1286	Beta-2067	1910 ± 140 BP		Arch. Services 79-WY-575
48CR1420 Mark Miller Fire Pit	RL-1381	840 ± 110 BP (AD 1130 ± 110)	charcoal	UW/OWSA
48CR1583	Beta-2074	4450 ± 400 BP	charcoal	Arch. Services 81-WY-1370b
48CR1583	Beta-2073	2620 ± 120 BP		Arch. Services 81-WY-1370a
48CR1625	Beta-1711	1365 ± 65 BP		Arch. Services 80-WY-1442b
48CR1625	Beta-1712	7500 ± 300 BP	4 gm statistical error	Arch. Services 80-WY-1442b
48CR1625	Beta-1713	1460 ± 60 BP	charcoal	Arch. Services 80-WY-1442b
48CR1681	Beta-2072	940 ± 140 BP	charcoal	Arch. Services 80-WY-1315
48CR1849 Cities Services	RL-1798	5250 ± 170 BP (4110 BC ± 250)	charcoal	OWSA WY-87-82
48CR1849 Cities Services	RL-1799	5810 ± 180 BP (4710 BC ± 220)	charcoal	OWSA WY -87-82
48CR1880 Universal State #1	Beta-3252	1070 ± 60 BP (AD 880)	charcoal	Greer
48CR1880 Universal State #1	Beta-3253	1380 ± 60 BP (AD 570)	charcoal	Greer
48CR1880 Universal State #1	Beta-3254	1770 ± 90 BP (AD 180)	charcoal	Greer
48CR1929 Great Divide Basin	Beta-5441	3720 ± 60 BP (1320 BC)		Creasman 1983
48CR1929 Great Divide Basin	Beta-5442	3600 ± 70 BP (1650 BC)		Creasman 1983
48CR1946	Beta-3738	6600 ± 110 BP	burned wood	Sender et al. 1982
48CR1946	Beta-3706	5810 ± 130 BP	burned wood	Sender et al. 1982
48CR1946	Beta-3705	6150 ± 120 BP	burned wood	Sender et al. 1982
48CR1946	Beta-3708	6270 ± 150 BP	burned wood	Sender et al. 1982
48CR1946	Beta-3704	6260 ± 280 BP	burned wood	Sender et al. 1982
48CR1946	Beta-3706	5810 ± 130 BP		Sender et al. 1982
48CR1946	Beta-3855	5130 ± 120 BP		Sender et al. 1982

Site Name	Lab No.	Date	Comments	Reference
48CR2200 Great Divide Basin	Beta-5395	4380 ± 170 BP (2430 BC)		Creasman 1982
48CR2200 Great Divide Basin	Beta-5395	1650 ± 90 BP (AD 300)		Creasman 1983
48CR2213 Great Divide Basin	Beta-5397	720 ± 70 BP (AD 1230)		Creasman 1983
48CR2215 Great Divide Basin	Beta-5401	1330 ± 130 BP (AD 620)		Creasman 1983
48CR2292	Beta-5283	1440 ± 70 BP	CS #1	Mariah Assoc.
48CR2300	Beta-5506	1420 ± 60 BP	CS8	Mariah Assoc.
48CR2300	Beta-5184	170 ± 50 BP	CS 7	Mariah Assoc.
48CR2312	Beta-5206	270 ± 70 BP	CS 1	Mariah Assoc.
48CR2313	Beta-5207	1210 ± 50 BP	CS 2	Mariah Assoc.
48CR2341	Beta-5208	1560 ± 110 BP	CS1	Mariah Assoc.
48CR2349	Beta-5209	1020 ± 50 BP	CS2	Mariah Assoc.
48CR2353	Beta 5210	1130 ± 50 BP	CS 2	Mariah Assoc.
48CR2365	Beta-5284	1120 ± 60 BP	CS#2	Mariah Assoc.
48CR2371	Beta-5285	1530 ± 70 BP	CS#2	Mariah Assoc.
48CR2379	Beta-5286	980 ± 50 BP	CS#2	Mariah Assoc.
48CR2389	Beta-3255	1320 ± 60 BP	CS #17	Mariah Assoc.
48CR2392	Beta-5287	1250 ± 50 BP	CS#2	Mariah Assoc.
48CR2393	Beta-5185	1720 ± 60 BP	CS 1	Mariah Assoc.
48CR2401	Beta-3257	1560 ± 50 BP	CS #23	Mariah Assoc.
48CR2409	Beta-5186	1670 ± 70 BP	CS 2	Mariah Assoc.
48CR2410	Beta-5187	1620 ± 60 BP	CS 2	Mariah Assoc.
48CR2411	Beta-5507	1110 ± 60 BP	CS1	Mariah Assoc.
48CR2411	Beta-5188	5140 ± 70 BP	CS 2	Mariah Assoc.
48CR2412	Beta-3256	1130 ± 50 BP	CS #21	Mariah Assoc.
48CR2434	Beta-5189	1120 ± 60 BP	CS 1	Mariah Assoc.
48CR2440	Beta-5508	1420 ± 50 BP	CS3	Mariah Assoc.
48CR2442	Beta-5509	1660 ± 60 BP	CS4	Mariah Assoc.
48CR2457	Beta-5510	1110 ± 50 BP	CS1	Mariah Assoc.
48CR2464	Beta 5211	1180 ± 50 BP	CS 1	Mariah Assoc.
48CR2487	Beta-5511	1240 ± 50 BP	CS1	Mariah Assoc.
48CR2492	Beta-5288	820 ± 50 BP	CS#3	Mariah Assoc.
48CR2511	Beta-5512	1650 ± 60 BP	CS1	Mariah Assoc.
48CR2521	Beta 5190	1110 ± 50 BP	CS 3	Mariah Assoc.
48CR2529	Beta-5513	1570 ± 60 BP	CS1	Mariah Assoc.
48CR2531	Beta-5191	1630 ± 60 BP	CS 3	Mariah Assoc.
48CR2535	Beta-3054	1760 ± 70 BP	C14 #14	Mariah Assoc.
48CR2537	Beta-3055	1100 ± 50 BP	C14 #15	Mariah Assoc.
48CR2538	Beta-3053	1090 ± 50 BP	C14 #11	Mariah Assoc.
48CR2539	Beta-3052	1150 ± 60 BP	C14 #6	Mariah Assoc.
48CR2540	Beta-3051	1050 ± 60 BP	C14 #2	Mariah Assoc.
48CR2552	Beta-5289	340 ± 60 BP	CS#4	Mariah Assoc.
48CR2571	Beta-5192	1400 ± 60 BP	CS2	Mariah Assoc.
48CR2582	Beta-5193	1100 ± 50 BP	CS1	Mariah Assoc.
48CR2583	Beta-5194	1140 ± 60 BP	CS2	Mariah Assoc.
48CR2588	Beta-5514	1100 ± 60 BP	CS1	Mariah Assoc.
48CR2588	Beta-5195	1080 ± 50 BP	CS3	Mariah Assoc.
48CR2597	Beta-5196	1050 ± 60 BP	CS1	Mariah Assoc.
48CR2604	Beta-5197	1110 ± 50 BP		Mariah Assoc.
48CR2618	Beta-5198	1080 ± 60 BP	CS8	Mariah Assoc.
48CR2621	Beta-5698	730 ± 50 BP	CS 1	Mariah Assoc.
48CR2624	Beta-5199	1150 ± 60 BP	CS2	Mariah Assoc.
48CR2626	Beta-5699	1470 ± 110 BP	CS 1	Mariah Assoc.
48CR2633	Beta-5201	1470 ± 90 BP	CS 2	Mariah Assoc.
48CR2654	Beta-5200	1480 ± 60 BP	CS 2	Mariah Assoc.
48CR2675	Beta-5205	1350 ± 60 BP	CS 4	Mariah Assoc.
48CR2684	Beta-5203	2350 ± 70 BP	CS 3	Mariah Assoc.
48CR2685	Beta-5515	1270 ± 50 BP	CS 6	Mariah Assoc.
48CR2699	Beta-5516	870 ± 50 BP	CS 2	Mariah Assoc.
48CR2704	Beta-5290	1380 ± 60 BP	CS #1	Mariah Assoc.
48CR2722	Beta-2086	1550 ± 100 BP		Arch. Services 80-WY-1784b
48CR2722	Beta-2087	4620 ± 130 BP		Arch. Services 80-WY-1784b
48CR2722	Beta-2134	2990 ± 260 BP		Arch. Services 80-WY-1784b
48CR2722	Beta-2083	1570 ± 160 BP	charcoal	Arch. Services 80-WY-1784b
48CR2785	Beta-3057	1680 ± 80 BP		Bradley n.d.
48CR3405	Beta-2692	5750 ± 190 BP		Sender et al. 1982
48CR3432	Beta-	1370 ± 90 BP	charcoal	BLM, Worland
48CR3473	Beta-3707	1010 ± 90 BP	burned wood	High Plains Cons.
48CR3482	Beta-3725	5130 ± 160 BP		Van Ness 1981
48CR3482	Beta-3726	1810 ± 70 BP		Van Ness 1981
48CR3493	Beta-3772	4310 ± 120 BP		Van Ness 1981
48CR3498	Beta-5291	1120 ± 60 BP	CS #1	Mariah Assoc.
48CR3503	Beta-3879	3590 ± 90 BP	charcoal, feature K	High Plains Cons.
48CR3503	Beta-3845	2690 ± 70 BP	charcoal, feature D	High Plains Cons.
48CR3503	Beta-3880	2690 ± 70 BP	charcoal, feature D	High Plains Cons.
48CR3503	Beta-3878	1310 ± 60 BP	charcoal, feature C	High Plains Cons.
48CR3504	Beta-3908	1490 ± 60 BP	charcoal, hearth	High Plains Cons.
48CR3505	Beta-3843	1160 ± 60 BP	charcoal, feature C-1	High Plains Cons.
48CR3505	Beta-3844	1300 ± 50 BP	charcoal, feature C-2	High Plains Cons.
48CR3505	Beta-3842	1050 ± 50 BP	charcoal, feature B	High Plains Cons.
48CR3722	Beta-3087	4820 ± 120 BP		Wicek & Merryman 1990
48CR3768	Beta-5294	2070 ± 80 BP		Black 1982
48CR3768	Beta-5293	880 ± 80 BP		Black 1982
48CR3779	Beta-5295	2060 ± 110 BP		Black 1982
48CR3812 WHD Sage Creek	RL-1801	1220 ± 110 BP (AD 750 ± 130)	charcoal	OWSA WY-67-82
48CR3812 WHD Sage Creek	RL-1804	4430 ± 230 BP (3200 BC ± 270)	charcoal	OWSA WY-67-82
48CR3814 Sage Creek 3	RL-1817	4210 ± 260 BP (2860 BC ± 510)	charcoal #1	OWSA WY-67-82
48CR3814 Sage Creek 3	RL-1818	4200 ± 130 BP (2910 BC ± 220)	charcoal #2	OWSA WY-67-82
48CR3815 WHD Sage Creek	RL-1749	6230 ± 540	charcoal #2	OWSA WY-67-82
48CR3815 WHD Sage Creek	RL-1748	1750 ± 120 BP (AD 240 ± 140)	charcoal #1	OWSA WY-67-82
48CR3815 WHD Sage Creek	RL-1750	8210 ± 260 BP	charcoal #3	OWSA WY-67-82
48CR3815 WHD Sage Creek	RL-1751	1170 ± 100 BP (AD 800 ± 120)	charcoal #4	OWSA WY-67-82
48CR3815 WHD Sage Creek	RL-1824	9150 ± 810 BP	Feature 2	OWSA WY-67-82
48CR3815 WHD Sage Creek	RL-1825	5780 ± 260 BP	Test Unit 2	OWSA WY-67-82
48CR3873 Great Divide Basin	Beta-5400	4140 ± 390 BP (2190 BC)		Creasman 1983
48CR3961 Great Divide Basin	Beta-5438	5630 ± 120 BP (3680 BC)		Creasman 1983
48CR3961 Great Divide Basin	Beta-5439	1570 ± 110 BP (AD 380)		Creasman 1983
48CR3961 Great Divide Basin	Beta-5440	1320 ± 90 BP (AD 630)		Creasman 1983
48CR3962 Great Divide Basin	Beta-5441	4290 ± 70 BP (2340 BC)		Creasman 1983
48CR3962 Great Divide Basin	Beta-6097	3850 ± 90 BP (1900 BC)		Creasman 1983

Site Name	Lab No.	Date	Comments	Reference
CONVERSE COUNTY (48CO)				
48CO4 Burlington Northern RR	RL-714	1270 ± 110 BP (AD 680)	fire pit, north end	OWSA
48CO37 Cottonwood Hearth Site	RL-713	1160 ± 110 BP (AD 790)		OWSA
48CO287 Little Box Elder Cave	RL-1877	2720 ± 120 BP (950 BC ± 150)		UW/OWSA
48CO287 Little Box Elder Cave	RL-1878	9250 ± 230 BP		UW/OWSA
48CO304 Glenrock Site	M-2349	280 ± 100 BP (AD 1670)	charcoal, bison kill	Frison 1970, 1978
48CO304 Glenrock Site	M-2350	210 ± 100 BP (AD 1740)	charocal, bison kill	Frison 1970, 1978
48CO302 Irvine Site	RL-1413	1300 ± 100 BP (AD 680 ± 110)		UW
48CO401 Dilts Fire Pit	RL-1421	1630 ± 170 BP (AD 350 ± 190)		OWSA
48CO418	RL-1676	1490 ± 270 BP (AD 460)	charcoal	Greiser et al. 1982
48CO423	UGa-4379	1105 ± 75 BP (AD 845)	charcoal	Greiser et al. 1982
48CO426	UGa-4378	1440 ± 75 BP (AD 510)	charcoal	Greiser et al. 1982
48CO428	UGa-4377	1955 ± 70 BP (5 BC)	charcoal	Greiser et al. 1982
48CO441-B	UGa-4381	2125 ± 140 BP (175 BC)		Greiser et al. 1982
48CO441	UGa-4363	1795 ± 65 BP (AD 155)	charcoal	Greiser et al. 1982
48CO441-B	UGa-4365	1885 ± 70 BP (AD 65)	charcoal	Greiser et al. 1982
48CO450-A	UGa-4374	1450 ± 60 BP (AD 500)	charcoal	Greiser et al. 1982
48CO450-B	UGa-4373	1380 ± 100 BP (AD 570)	charcoal	Greiser et al. 1982
48CO450-B	Beta-3173	1500 ± 60 BP (AD 450)	charcoal	Greiser et al. 1982
48CO450-B	UGa-4383	730 ± 105 BP (AD 1220)	charcoal	Greiser et al. 1982
48CO450-B	UGa-4371	505 ± 250 BP (AD 1445)	charcoal	Greiser et al. 1982
48CO452-A	UGa-4364	2562 ± 160 BP (615 BC)		Greiser et al. 1982
48CO452-A	UGa-4362	1780 ± 85 BP (AD 170)	charcoal	Greiser et al. 1982
48CO452-A	UGa-4358	1670 ± 110 BP (AD 280)	charcoal	Greiser et al. 1982
48CO452-A	UGa-4352	1620 ± 95 BP (AD 330)	charcoal	Greiser et al. 1982
48CO452-A	Beta-3174	1140 ± 80 BP (AD 810)	charcoal	Greiser et al. 1982
48CO452-A	RL-1678	1580 ± 120 BP (AD 370)	charcoal	Greiser et al. 1982
48CO480	UGa-4353	1145 ± 100 BP (AD 805)	charcoal	Greiser et al. 1982
48CO481-A	UGa-4350	1135 ± 180 BP (AD 815)	charcoal	Greiser et al. 1982
48CO481-A	UGa-4375	765 ± 115 BP (AD 1185)	charcoal	Greiser et al. 1982
48CO481-B	UGa-4354	1575 ± 75 BP (AD 375)	charcoal	Greiser et al. 1982
48CO481-B	RL-1701	1320 ± 340 BP (AD 630)	charcoal	Greiser et al. 1982
48CO481-B	RL-1705	1160 ± 130 BP (AD 790)	charcoal	Greiser et al. 1982
48CO481-B	UGa-4372	1100 ± 80 BP (AD 850)	charcoal	Greiser et al. 1982
48CO481-B	RL-1679	1040 ± 120 BP (AD 910)	charcoal	Greiser et al. 1982
48CO481-B	UGa-4351	2020 ± 80 BP (70 BC)		Greiser et al. 1982
48CO481-B	UGa-4368	1820 ± 120 BP (AD 130)	charcoal	Greiser et al. 1982
48CO483	UGa-4356	865 ± 70 BP (AD 1085)	charcoal	Greiser et al. 1982
48CO484	UGa-4359	1475 ± 140 BP (AD 475)	charcoal	Greiser et al. 1982
48CO484	RL-1680	1390 ± 260 BP (AD 560)	charcoal	Greiser et al. 1982
48CO500-B	UGa-4335	2015 ± 180 BP (65 BC)		Greiser et al. 1982
48CO501-B	UGa-4334	2015 ± 70 BP (65 BC)	charcoal	Greiser et al. 1982
48CO501-B	UGa-4336	995 ± 70 BP (AD 955)	charcoal	Greiser et al. 1982
48CO502-A	UGa-4347	2060 ± 80 BP (110 BC)		Greiser et al. 1982
48CO502-A	UGa-4344	1635 ± 80 BP (AD 315)	charcoal	Greiser et al. 1982
48CO502-B	UGa-4332	1625 ± 145 BP (AD 325)	charcoal	Greiser et al. 1982
48CO506	UGa-4341	1625 ± 95 BP (AD 325)	charcoal	Greiser et al. 1982
48CO516	Beta-3176	690 ± 60 BP (AD 1260)	charcoal	Greiser et al. 1982
48CO517	UGa-4330	1640 ± 65 BP (AD 310)	charcoal	Greiser et al. 1982
48CO518	UGa-4345	1425 ± 70 BP (AD 525)	charcoal	Greiser et al. 1982
48CO518	UGa-4340	890 ± 90 BP (AD 1060)	charcoal	Greiser et al. 1982
48CO518	UGa-4331	1225 ± 115 BP (AD 725)	charcoal	Greiser et al. 1982
48CO637	GX-9197	1445 ± 165 BP (AD 505)	charcoal	Fredlund et al. 1983
48CO637	GX-9196	1595 ± 165 BP (AD 335)	charcoal	Fredlund et al. 1983
48CO637	GX-9202	1960 ± 160 BP (10 BC)	charcoal	Fredlund et al. 1983
48CO637	GX-9203	1855 ± 160 (AD 95)	charcoal	Fredlund et al. 1983
48CO637	GX-9205	1645 ± 130 BP (AD 305)	charcoal	Fredlund et al. 1983
48CO637	GX-9206	1775 ± 170 BP (AD 175)	charcoal	Fredlund et al. 1983
49CO637	GX-9204	2115 ± 155 BP (165 BC)	charcoal	Fredlund et al. 1983
48CO637	GX-9207	1835 ± 170 BP (115 AD)	charcoal	Fredlund et al. 1983
48CO637	GX-9206	1930 ± 175 BP (AD 20) (rerun)	charcoal	Fredlund et al. 1983
48CO637	GX-9208	920 ± 155 BP (AD 1030)	charcoal	Fredlund et al. 1983
48CO637	GX-9209	1165 ± 160 BP (AD 785)	charcoal	Fredlund et al. 1983
48CO637	GX-9209	1660 ± 165 BP (AD 290) (rerun)	charcoal	Fredlund et al. 1983
48CO637	GX-9210	1990 ± 230 BP (40 BC)	charcoal	Fredlund et al. 1983
48CO637	GX-9211	1580 ± 165 BP (AD 370)	charcoal	Fredlund et al. 1983
48CO892	RL-1872	530 ± 100 BP (AD 1370 ± 60)	soil-carbon	OWSA WY-65-82
48CO1059	GX-9201	1065 ± 125 BP (AD 885)	charcoal	Fredlund et al. 1983
48CO1059	GX-9200	1445 ± 125 BP (AD 505)	charcoal	Fredlund et al. 1983
CROOK COUNTY (48CK)				
48CK4 Belle Rockshelter	C-667	1646 ± 200 BP (AD 304)	*date rejected	Mulloy 1954b
48CK7 McKean Site	C-715	3287 ± 600 BP (1337 BC)		Mulloy 1954b
48CK7 McKean Site	RL-1860	3790 ± 140 BP (2340 BC ± 220)	charcoal	UW/OWSA
48CK7 McKean Site	RL-1861	4590 ± 160 BP (3390 BC ± 210)	charcoal	UW/OWSA
48CK7 McKean Site	RL-1859	1920 ± 120 BP (AD 20 ± 140)	charcoal	UW/OWSA
48CK141 Federal Bentonite	RL-1539	900 ± 110 BP (AD 1080 ± 110)	charcoal, feature 1	OWSA WY-57-80
48CK143 Federal Bentonite	RL-1540	3030 ± 130 BP (1350 BC ± 190)	charcoal, test unit 1	OWSA WY-57-80
48CK148 Federal Bentonite	RL-1541	3620 ± 150 BP (2060 BC ± 140)	possible burned root	OWSA WY-57-80
48CK204 Mule Creek Rockshelter	C-668	2790 ± 350 BP (840 BC)	*date too recent	Mulloy 1954b
48CK302 Vore Site	RL-349	370 ± 140 BP (AD 1580)	charcoal	Reher & Frison 1980
48CK302 Vore Site	RL-172	230 years	charcoal	Reher & Frison 1980
48CK302 Vore Site	RL-173	200 ± 90 BP (AD 1750)	charcoal	Reher & Frison 1980
48CK303 Hawken Site	RL-185	6470 ± 140 BP (4520 BC)	charcoal, bison bed	Frison et al. 1976
48CK303 Hawken Site	RL-437	6270 ± 170 BP (4320 BC)	charcoal, bison bed	Frison et al. 1976
48CK303 Hawken Site 2	RL-470	4250 ± 140 BP (2300 BC)	bone, 920 grams	UW/OWSA
48CK303 Hawken Site 3	RL-484	6010 ± 170 BP (4060 BC)	bone, area 3, sample	Frison 1978
FREMONT COUNTY (48FR)				
48FR5 Shoshone Basin	C-712	3506 ± 220 BP (1556 BC)		Mulloy 1954a
48FR33 Shoshone Basin	C-711	3350 ± 250 BP (1400 BC)		Mulloy 1954a
48FR34 Shoshone Basin	C-702	3540 ± 220 BP (1590 BC)		Mulloy 1954a
48FR79 Boysen Survey	RL-569	1510 ± 110 BP (AD 440)	charcoal	OWSA
48FR115 Rissler-McMurry	RL-600	1370 ± 110 BP (AD 580)	charcoal	OWSA
48FR115 Rissler-McMurry	RL-601	1560 ± 110 BP (AD 390)	charcoal	OWSA
48FR117 Muskrat Crossing	RL-616	1090 ± 110 BP (AD 860)	charcoal	OWSA
48FR131 Willow Creek	RL-611	1100 ± 110 BP (AD 850)	charcoal	OWSA
48FR132 Mud Springs	RL-612	1760 ± 110 BP (AD 190)	charcoal	OWSA
48FR134 Chip Hill Site	RL-610	710 ± 100 BP (AD 1240)	charcoal	OWSA
48FR137 Happy Hunting Grounds #2	RL-1006	860 ± 100 BP (AD 1110 ± 110)	charcoal	OWSA

Site Name	Lab No.	Date	Comments	Reference
48FR149 Gilpatrick Site	RL-615	1420 ± 110 BP (AD 530)	charcoal, pit 2	OWSA
48FR152 Down-the-Drain Site	RL-715	1280 ± 100 BP (AD 670)	charcoal, pit 2	OWSA
48FR152 Down-the-Drain Site	RL-716	1060 ± 110 BP (AD 890)	charcoal, pit 4	OWSA
48FR162 Car Hood Site	RL-717	1090± 150 BP (AD 860)	charcoal	OWSA
48FR184 Fanny Ridge Site	RL-706	890 ± 100 BP (AD 1060)	charcoal, pit 3	OWSA
48FR184 Fanny Ridge Site	RL-707	1070 ± 100 BP (AD 880)	charcoal, pit 2	OWSA
48FR192 Airport Section, #1	RL-719	1280 ± 100 BP (AD 670)	charcoal	OWSA
48FR261 Long Butte #2	RL-974	1210 ± 110 BP (AD 740 ± 120)	charcoal, pit 208	OWSA
48FR261 Long Butte #2	RL-975	1200 ± 110 BP (AD 780 ± 130)	charcoal, pit 332	OWSA
48FR261 Long Butte #2	RL-976	2690 ± 130 BP (800 BC ± 130)	charcoal, pit 303	OWSA
48FR287 Sand Draw RD	RL-1102	1170 ± 110 BP (AD 809 ± 130)	charcoal, area 8 #1	OWSA WY-268-78
48FR287 Sand Draw RD	RL-1103	1400 ± 110 BP (AD 570 ± 110)	charcoal, area 8 #2	OWSA WY-268-78
48FR308 Helen Lookingbill	RL-452	360	bone, 590 grams	UW
48FR308 Helen Lookingbill	RL-1758	6240 ± 160 BP (5160 BC ± 140)	charcoal	Frison 1983
48FR308 Helen Lookingbill	RL-1759	330 ± 100 BP (AD 1530 ± 110)	charcoal	OWSA
48FR308 Helen Lookingbill	RL-554	7140 ± 150 BP (5190 BC)	bone 700, grams	Frison 1983
48FR308 Helen Lookingbill	RL-1670a	7360 ± 640 BP		OWSA
48FR308 Helen Lookingbill	RL-1556	6120 ± 190 BP (5030 BC ± 230)	charcoal	Frison 1983
48FR662 Wind River Basin	UGa-3211	955 ± 125 BP (955 AD)		WWC
48FR768 Wind River Basin	UGa-2574	1195 ± 55 BP (755 AD)		WWC
48FR320 Boysen Reservoir Project	RL-732	3560 ± 140 BP (1610 BC)	charcoal	OWSA
48FR323 Boysen Reservoir Project	RL-734	1920 ± 170 BP (AD 30)	charcoal	OWSA
48FR354 Boysen Reservoir Project	RL-722	1370 ± 100 BP (AD 580)	charcoal, pit 2	OWSA
48FR354 Boysen Reservoir Project	RL-721	1540 ± 110 BP (AD 410)	charcoal, pit 1	OWSA
48FR356 Metate Crematorium	RL-733	1520 ± 110 BP (AD 430)	charcoal, pit 1	OWSA
48FR357 Boysen Reservoir Project	RL-729	1070 ± 100 BP (AD 880)	charcoal	OWSA
48FR380 Boysen Reservoir Project	RL-725	1220 ± 100 BP (AD 730)	feature 4	OWSA WY-284-78
48FR380 Boysen Reservoir Project	RL-724	1450 ± 120 BP (AD 500)	charcoal, pit 12	OWSA WY-284-78
48FR380 Boysen Reservoir Project	RL-726	1190 ± 100 BP (AD 760)	charcoal, pit 9	OWSA WY-284-78
48FR380 Boysen Reservoir Project	RL-727	1090 ± 100 BP (AD 860)	charcoal, pit 6	OWSA WY-284-78
48FR380 Boysen Reservoir Project	RL-728	1390 ± 100 BP (AD 560)	charcoal, pit 13	OWSA WY-284-78
48FR380 Boysen Reservoir Project	RL-730	1220 ± 100 BP (AD 730)	charcoal, pit 4	OWSA WY-284-78
48FR380 Boysen Reservoir Project	RL-1098	980 ± 120 BP (AD 990 ± 130)	charcoal, pit 6A	OWSA WY-284-78
48FR380 Boysen Reservoir Project	RL-1099	1350 ± 100 BP (AD 640 ± 100)	charcoal, pit #13C	OWSA WY-284-78
48FR380 Boysen Reservoir Project	RL-1100	1300 ± 110 BP (AD 700 ± 120)	charcoal, 10 gms	OWSA WY-284-78
48FR380 Boysen Reservoir Project	RL-1101	1290 ± 100 BP (AD 710 ± 110)	charcoal, pit #47	OWSA WY-284-78
48FR389 Boysen Reservoir Project	RL-723	1450 ± 100 BP (AD 500)	charcoal, pit 1	OWSA
48FR422 Windy Ridge Site	RL-1067	290 ± 100 BP (AD 1660 ± 110)	charcoal	OWSA
48FR484 Sand Draw	RL-1104	1850 ± 120 BP (AD 140 ± 120)	10 grams charcoal	OWSA
48FR528 Woodard Site	RL-1070	1180 ± 110 BP (AD 820 ± 120)	charcoal, 24-78	UW/OWSA
48FR768 Wind River Basin	UGa-2574	1195 ± 55 BP (AD 755)		WWC
48FR848	Beta-2078	1970 ± 250 BP	charcoal	Arch. Services 80-WY-986b
48FR848	Beta-2079	1160 ± 90 BP	charcoal	Arch. Services 80-WY-986b
48FR848	Beta-2080	2400 ± 125 BP	charcoal	Arch. Services 80-WY-986b
48FR848	Beta-2081	1190 ± 100 BP	charcoal	Arch. Services 80-WY-986b
48FR848	Beta-2082	2230 ± 170 BP	charcoal	Arch. Services 80-WY-986b
48FR1183 Ogle #3	RL-1565	1120 ± 120 BP (AD 850 ± 150)	charcoal, pit 1	OWSA WY-69-81
48FR1186 Ogle #6	RL-1566	4550 ± 140 BP (3140 BC ± 210)	charcoal	OWSA WY-69-81
48FR1216 Union Carbide	RL-1582	1210 ± 110 BP (AD 770 ± 130)	charcoal	OWSA WY-78-79
48FR1398 Castle Gardens	RL-1719	780 ± 110 BP (AD 1170 ± 110)	charcoal #1	Walker & Todd 1984
48FR1398 Castle Gardens	RL-1720	750 ± 100 BP (AD 1200 ± 110)	charcoal #2	Walker & Todd 1984
48FR1395 Castle Gardens	RL-1721	660 ± 100 BP (AD 1290 ± 90)	wood (sample #3)	Walker & Todd 1984
48FR1361 Basque	RL-1710	180 ± 90 BP (AD 1670 ± 40)	charcoal	Albanese
48FR1417	Beta-4473	1400 ± 60 BP		Indep. Arch. Cons.
48FR1483 Muddy Gap	RL-1930	1290 ± 130 BP (AD 710 ± 140)	charcoal	OWSA WY-62-83
48FR1483 Muddy Gap	RL-1932	1380 ± 110 BP (AD 590 ± 100)	charcoal	OWSA WY-62-83
48FR1484 Muddy Gap	RL-1894	5730 ± 370BP (4550 BC ± 380)	charcoal	OWSA WY-62-82
48FR1484 Muddy Gap	RL-1895	5800 ± 160 BP (4700 BC ± 210)	charcoal	OWSA WY-62-82
48FR1484 Muddy Gap	RL-1897	5540 ± 170 BP (4290 BC ± 190)	charcoal, hearth fill #17	OWSA WY-62-82
48FR1484 Muddy Gap	RL-1898	6180 ± 170 BP (5110 BC ± 170)	charcoal #19	OWSA WY-62-82
48FR1484 Muddy Gap	RL-1900	5760 ± 160 BP (4670 BC ± 200)	charcoal	OWSA WY-62-82
48FR1484 Muddy Gap	RL-1901	5630 ± 160 BP (4510 BC ± 130)	charcoal	OWSA WY-62-82
48FR1484 Muddy Gap	RL-1902	5730 ± 190 BP (4660 BC ± 230)	charcoal	OWSA WY-62-82
48FR1484 Muddy Gap	RL-1903	5730 ± 180 BP (4660 BC ± 220)	charcoal #24	OWSA WY-62-82
48FR1484 Muddy Gap			#25	OWSA WY-62-82
48FR1484 Muddy Gap			#26	OWSA WY-62-82
48FR1484 Muddy Gap	RL-1907	5470 ± 160 BP (4340 BC ± 150)		OWSA WY-62-82
48FR1484 Muddy Gap	RL-1908	5080 ± 160 BP (3920 BC ± 200)	charcoal #29	OWSA WY-62-82
48FR1484 Muddy Gap			#30	OWSA WY-62-82
48FR1484 Muddy Gap			#31	OWSA WY-62-82
48FR1484 Muddy Gap	RL-1829	4460 ± 150 BP (3210 BC ± 220)	Dark H'zon	OWSA WY-62-83
48FR1484 Muddy Gap	Beta-12079	5870 ± 180 BP	charcoal	OWSA WY-62-83
48FR1484 Muddy Gap	Beta-12080	5340 ± 80 BP	charcoal	OWSA WY-62-83
48FR1484 Muddy Gap	Beta-12081	5130 ± 100 BP	charcoal	OWSA WY-62-83
48FR1484 Muddy Gap	Beta-12082	3400 ± 90 BP	charcoal	OWSA WY-62-83
48FR1484 Muddy Gap	Beta-12083	5350 ± 100 BP	charcoal	OWSA WY-62-83
48FR1484 Muddy Gap	Beta-12084	4670 ± 100 BP	charcoal	OWSA WY-62-83
48FR1484 Muddy Gap	Beta-12085	5030 ± 70 BP	charcoal	OWSA WY-62-83
48FR1561	RL-1843	1140 ± 110 BP (AD 830 ± 130)	charcoal, f. 3	OWSA WY-12-83
48FR1561	RL-1844	950 ± 110 (AD 1000 ± 110)	charcoal, f. 4	OWSA WY-12-83
48FR1561	RL-1845	1320 ± 90 (AD 670 ± 100)	charcoal, f. 25	OWSA WY-12-83
48FR1561	RL-1846	1310 ± 120 (AD 680 ± 120)	charcoal, f. 13	OWSA WY-12-83
48FR1561	RL-1847	1220 ± 110 (AD 750 ± 130)	charcoal, f. 11	OWSA WY-12-83
48FR1561	RL-1848	1280 ± 140 (AD 710 ± 140)	charcoal, f. 1	OWSA WY-12-83
48FR1561	RL-1849	1200 ± 100 (AD 780 ± 120)	charcoal, f.27	OWSA WY-12-83
48FR1561	RL-1850	1160 ± 160 BP (AD 810 ± 170)	charcoal, f. 21	OWSA WY-12-83
48FR1561	RL-1851	1070 ± 110 (AD 900 ± 120)	charcoal, f. 14	OWSA WY-12-83
48FR1561	RL-1852	950 ± 110 (AD 1040 ± 120)	charcoal, f. 12	OWSA WY-12-83
48FR1561	RL-1853	1540 ± 120 (AD 440 ± 150)	charcoal, f. 28	OWSA WY-12-83
48FR1561	RL-1854	1150 ± 100 (AD 920 ± 120)	charcoal,f. 29	OWSA WY-12-83

Site Name	Lab No.	Date	Comments	Reference
GOSHEN COUNTY (48GO)				
48GO22	RL-1615	910 ± 210 BP (AD 1060 ± 200)		UW/OWSA WY-51-79
48GO49 Rawhide Creek Site	A-365	10,180 ± 480 BP (8230 BC)	charcoal	UW/OWSA
48GO305 Hell Gap Site	A-498	5830 ± 230 BP (3880 BC)	Locality II, Altithermal	Haynes 1967; Damon et al. 1964
48GO305 Hell Gap Site	A-707	8590 ± 350 BP (6640 BC)	Locality I, Alberta	Haynes 1967; Damon et al. 1964
48GO305 Hell Gap Site	A-501	8690 ± 380 BP (6740 BC)	Locality I, Fredrick	Haynes 1967; Damon et al. 1964
48GO305 Hell Gap Site	A-499	10,090 ± 200 BP (8140 BC)	Locality II, Midland	Haynes 1967; Damon et al. 1964
48GO305 Hell Gap Site	A-500	10,240 ± 300 BP (8290 BC)	Locality II, Hell Gap/Alberta	Haynes 1967; Damon et al. 1964
48GO305 Hell Gap Site	A-502	10,290 ± 500 BP (8340 BC)	Locality II, Midland	Haynes 1967; Damon et al. 1964
48GO305 Hell Gap Site	A-504	10,690 ± 500 BP (8740 BC)	Locality II	Haynes 1967; Damon et al. 1964
48GO305 Hell Gap Site	A-503	10,930 ± 200 BP (8980 BC)	Locality II	Haynes 1967; Damon et al. 1964
48GO305 Hell Gap Site	A-431	13,060 ± 600 BP (11,100 BC)	Locality II	Haynes 1967; Damon et al. 1964
48GO305 Hell Gap Site	A-432	1000 ± 160 BP (AD 950)	Late Prehistoric	Haynes 1967; Damon et al. 1964
48GO305 Hell Gap Site	A-563	3430 ± 200 BP (1480 BC)	Buried Fireplace	Haynes 1967; Damon et al. 1964
48GO305 Hell Gap Site	I-245	8600 ± 600 BP (6650 BC)	Scottsbluff	Haynes 1967; Damon et al. 1964
48GO305 Hell Gap Site	I-167	10,850 ± 500 BP (8900 BC)	Agate Basin	Haynes 1967; Damon et al. 1964
HOT SPRINGS COUNTY (48HO)				
48HO10 Wind River Canyon	RL-1876	3520 ± 140 BP (1930 BC ± 210)		UW/OWSA
48HO97	Beta-7348	1240 ± 100 BP (733 to 753 AD)	charcoal	Welch 1983
48HO131	Beta-2604	1520 ± 60 BP (AD 370)		Arch Services
48HO131	Beta-2606	1580 ± 60 BP (AD 370)		Arch Services
48HO131	Beta-2608	3810 ± 100 BP (1860 BC)		Arch Services
48HO131	Beta-2607	3920 ± 110 BP (1970 BC)		Arch. Services
48HO301 Wedding of the Waters Cave	RL-490	5500 ± 140 BP (3550 BC)	charcoal	Frison 1978
48HO301 Wedding of the Waters Cave	Grey 10	1620 ± 165 BP (AD 330)	charcoal	Frison 1962, 1978
Grass Creek NO site #	W-1199	2080 ± 300 BP (130 BC)		Ives, et al. 1964
48HO336	Beta-11042	3400 ± 310 BP	charcoal	Bighorn Basin Cons.
JOHNSON COUNTY (48JO)				
48JO301 Sweem-Taylor Site	Grey 30	4960 ± 180 BP (3010 BC)	charcoal, McKean	UW
48JO303 Grey-Taylor Site	Grey 2	5600 ± 190 BP (3650 BC)	charcoal, McKean	Grey n.d.
48JO303 Grey-Taylor Site	A-485	3980 ± 70 BP (2030 BC)	charcoal	Frison 1978
48JO303 Grey-Taylor Site	Grey 3	8600 ± 245 BP (6650 BC)	charcoal	Grey n.d.
48JO303 Grey-Taylor Site	A-484	7800 ± 110 BP (5850 BC)	charcoal	Frison 1978
48JO303 Grey-Taylor Site	Grey 4	4750 ± 180 BP (2800 BC)	charcoal, McKean	Grey n.d.
48JO303 Grey-Taylor Site	Grey 5	5230 ± 185 BP (3280 BC)	charcoal, McKean	Grey n.d.
48JO303 Grey-Taylor Site	Grey 6	3170 ± 160 BP (1220 BC)	charcoal, McKean	Grey n.d.
48JO303 Grey-Taylor Site	A-483	3450 ± 40 BP (1500 BC)	charcoal	Frison 1978
48JO303 Grey-Taylor Site	Grey 7	4180 ± 175 BP (2230 BC)	charcoal	Grey n.d.
48JO303 Grey-Taylor Site	Grey 8	4460 ± 175 BP (2510 BC)	charcoal	Grey n.d.
48JO303 Grey-Taylor Site	Grey 13	3750 ± 167 BP (1800 BC)	charcoal	Grey n.d.
48JO303 Grey-Taylor Site	Grey 14	3080 ± 160 BP (1130 BC)	charcoal	Grey n.d.
48JO303 Grey-Taylor Site	Grey 15	4620 ± 178 BP (2670 BC)	charcoal	Grey n.d.
48JO303 Grey-Taylor Site	Grey 16	2420 ± 153 BP (470 BC)	charcoal	Grey n.d.
48JO303 Grey-Taylor Site	Grey 17	2130 ± 155 BP (180 BC)	charcoal	Grey n.d.
48JO303 Grey-Taylor Site	Grey 9	1140 ± 145 BP (AD 810)	charcoal	Grey n.d.
48JO303 Grey-Taylor Site	Grey 18	1690 ± 150 BP (AD 260)	charcoal	Grey n.d.
48JO306 Shutiz-Taylor Site	Grey 19	3760 ± 167 BP (1810 BC)	charcoal, McKean	Grey n.d.
48JO311 Piney Creek	M-1747	340 ± 100 BP (AD 1610)	charcoal	Frison 1967
48JO311 Piney Creek	M-1748	370 ± 100 BP (AD 1580)	charcoal	Frison 1967
48JO312 Piney Creek	M-1749	100 ± 100 BP (AD 1850)	charred bone	Frison 1967
48JO312 Piney Creek	M-1750	120 ± 100 BP (AD 1830)	charcoal	Frison 1967
48JO312 Piney Creek	M-1751	75 ± 100 BP (AD 1875)	charcoal	Frison 1967
48JO312 Piney Creek	M-1752	50 ± 100 BP (AD 1900)	charcoal	Frison 1967
48JO311-312 Piney Creek	RL-162	2910 ± 140 BP (960 BC)		UW/OWSA
48JO314 Sisters Hill	A-372	9600 ± 230 BP (7650 BC)	fossil plant remains	Agogino & Galloway 1965
48JO314 Sisters Hill	I-221	9650 ± 250 BP (7700 BC)	Hell Gap complex	Agogino & Galloway 1965
48JO315 Rock Creek Cave	Grey lab	975 ± 180 BP (AD 975)	charcoal	UW/OWSA
48JO319 Schiffer Cave	RL-100	8360 ± 160 BP (6410 BC)	charcoal	Frison 1973a
48JO319 Schiffer Cave	RL-99	8500 ± 160 BP (6550 BC)	charcoal	Frison 1973a
48JO420	RL-1094	870 ± 110 BP (AD 1100 ± 120)	charcoal, level 3	OWSA/UW WPRB
48JO420	RL-1095	1280 ± 110 BP (AD 700 ± 120)	charcoal, level 2	OWSA/UW WPRB
48JO434	RL-1096	1200 ± 110 BP (AD 780 ± 130)	charcoal, feature 1	OWSA/UW WPRB
48JO434	RL-1097	940 ± 120 BP (AD 1050 ± 120)	charcoal, feature 1	OWSA/UW WPRB
LARAMIE COUNTY (48LA)				
48LA325 Lummis Site	RL-453	1080 ± 180 BP (AD 870)	charcoal, unit 10	Frison 1978
48LA325 Lummis Site	RL-472	1130 ± 110 BP (AD 820)	charcoal	Frison 1978
48LA481 Hunter Ranch	RL-1951	10,280 ± 280 BP	bone-collagen	UW/OWSA WY-6-84
LINCOLN COUNTY (48LN)				
48LN37 Thistle Meadow Site	RL-994	700 ± 110 BP (AD 1260 ± 90)	charcoal	UW/OWSA
48LN123 Green River Basin	UGa-3212	510 ± 330 BP (AD 1440)		WWC
48LN127 Green River Basin	UGa-3568	3445 ± 125 BP (1505 BC)		WWC
48LN127 Green River Basin	UGa-3570	3355 ± 70 BP (1405 BC)		WWC
48LN127 Green River Basin	UGa-3296	1280 ± 85 BP (AD 670)		WWC
48LN167	RL-1855	770 ± 110 (AD 1190 ± 110)	charcoal	OWSA WHD WY-14-83
48LN167	RL-1856	1300 ± 100 (AD 690 ± 110)	charcoal	OWSA WHD WY-14-83
48LN175 Overthrust Belt	UGa-3213	1085 ± 115 BP (AD 865)		WWC
48LN175 Overthrust Belt	UGa-3214	1410 ± 70 BP (AD 540)		WWC
48LN176 Overthrust Belt	UGa-3295	1235 ± 65 BP (AD 715)		Creasman 1981
48LN297	Beta-1632	1850 ± 70 BP		Greer 1981
48LN297	Beta-1631	1565 ± 70 BP		Greer 1981
48LN297	Beta-1634	1220 ± 55 BP		Greer 1981
48LN297	Beta-1633	1075 ± 75 BP		Greer 1981

Site Name	Lab No.	Date	Comments	Reference
48LN317 Skull Point Mine	UGa-2047	300 ± 50 BP (AD 1650)		McGuire 1977
48LN317 Skull Point Mine	UGa-2046	1375 ± 55 BP (AD 575)		WWC
48LN329 Green River Basin	Beta-5462	4450 ± 70 BP (2500 BC)		Creasman 1983
48LN397	Beta-1630	2320 ± 130 BP		Greer 1981
48LN398	Beta-1629	1460 ± 75 BP		Greer 1981
48LN433	Beta-1628	1515 ± 95 BP		Greer 1981
48LN531	Beta-2449	2380 ± 110 BP		Brock 1982
48LN547	Beta-2432	1450 ± 220 BP		Angulski 1981
48LN685 Green River Basin	Beta-5463	2360 ± 450 BP (410 BC)		Creasman 1983
48LN700	Beta-3057	1160 ± 60 BP		Waitkus & Taylor 1981
48LN740	RL-1803	650 ± 100 BP (AD 1290 ± 90)	charcoal #1	OWSA WY-41-81
48LN740	RL-1804	940 ± 110 BP (AD 1050 ± 120)	charcoal #2	OWSA WY-41-81
48LN760 Zieglers Wash	Beta-3459	1530 ± 80 BP (AD 420 ± 80)	carbonized sagebruch	Decker & Wicek 1982
48LN760	Beta-3459	1530 ± 80 BP		Decker & Wicek 1982
48LN771	Beta-3808	2210 ± 180 BP		Sanders et al. 1982
48LN779	Beta-3806	510 ± 60 BP		Sanders et al. 1982
48LN787	Beta-3813	1380 ± 60 BP		Sanders et al. 1982
48LN787	Beta-3804	1120 ± 80 BP		Sanders et al. 1982
48LN788	Beta-3811	1030 ± 50 BP		Sanders et al. 1982
48LN789	Beta-3809	980 ± 50 BP		Sanders et al. 1982
48LN789	Beta-3810	800 ± 50 BP		Sanders et al. 1982
48LN1037 Green River Basin	Beta-5167	3800 ± 70 BP (1850 BC)		Creasman 1983
48LN1049	Beta-4553	5640 ± 70 BP	charcoal	High Plains Cons.
48LN1049	Beta-4554	3690 ± 50 BP	charcoal	High Plains Cons.
49LN1050	Beta-4555	1100 ± 50 BP	charcoal	High Plains Cons.
48LN1050	Beta-4556	950 ± 50 BP	charcoal	High Plains Cons.
48LN1051	Beta-4557	5500 ± 70 BP	charcoal	High Plains Cons.
48LN1100	Beta-7081	1470 ± 83 BP	hearth, feature 1	Archaeological Resuce
48LN1100	Beta-7082	1880 ± 95 BP	hearth, feature 2	Archaeological Resuce
48LN1100	Beta-7083	3000 ± 110	hearth, feature 3	Archaeological Resuce
48LN1100	Beta-7084	4030 ± 85	hearth, feature 4	Archaeological Resuce
NATRONA COUNTY (48NA)				
48NA67 Dunlap-McMurry Burial	RL-543	5250 ± 150 BP (3300 BC)	charcoal	Zeimens et al. 1978
48NA67 Dunlap-McMurry Burial	RL-651	5350 ± 160 BP (3400 BC)	charcoal	Zeimens et al. 1978
48NA67 Dunlap-McMurry Burial	RL-1313	5220 ± 150 BP (4070 BC ± 260)	charcoal	Zeimens et al. 1978
48NA95 Ervay Basin SW, Site 1	RL-613	1160 ± 140 BP (AD 790)	charcoal	OWSA
48NA139 Ma Bell Line	RL-708	1260 ± 110 BP (AD 690)	charcoal	OWSA
48NA185 Bates Creek	A-507B	6420 ± 210 BP (4470 BC)		Haynes et al. 1967
48NA215 Granite Mountains	UGa-2043	1655 ± 95 BP (295 AD)		Hillman n.d.
48NA220 Granite Mountains	UGa-2042	5490 ± 65 BP (3540 BC)		Hillman n.d.
48NA303 Casper Site	RL-208	10,060 ± 170 BP (8110 BC)	bison bone	Frison 1976a
48NA303 Casper Site	RL-125	9830 ± 350 BP (7880 BC)	charcoal	Frison 1976a
48NA326 Lee Site	Gulf 041	1020 ± 86 BP (AD 930)	charcoal	Frison 1978
48NA330 Brown-Weiser Site	Grey-11	450 ± 141 BP (AD 1500)	charcoal	Grey n.d.
48NA598	Beta-4771	550 ± 60 BP	charcoal, hearth B	Archaeological Services
48NA870	RL-1828	1040 ± 110 BP (AD 930 ± 110)	charcoal	OWSA WY-18-83
48NA959	RL-1912	4530 ± 370 BP (3290 BC ± 410)	bone & wood char.	OWSA WY-38-84
48NA960	RL-1913	900 ± 100 BP (AD 1080 ± 110)	charcoal	OWSA WY-38-84
NIOBRARA COUNTY (48NO)				
48NO11 Rawhide Butte Mammoth	A-366	10,550 ± 350 BP (8600 BC)		Damon et al. 1964
48NO65	Beta-2070	2410 ± 100 BP	charcoal	Arch. Services AS-80-WY-826-C
48NO65	Beta-2069	2050 ± 120 BP	charcoal	Arch. Services AS-80-WY-826-C
48NO158	RL-1800	2150 ± 110 BP (210 BC ± 200)	charcoal	OWSA WY-11-82
48NO201 Agate Basin Site	I-10,899	11,840 ± 330 BP	charcoal	Frison & Stanford 1982
48NO201 Agate Basin Site	RL-657	10,430 ± 570 BP (8480 BC)	charcoal	Frison & Stanford 1982
48NO201 Agate Basin Site	RL-736	10,200 ± 2000 BP	charcoal, .2 grms	Frison & Stanford 1982
48NO201 Agate Basin Site	I-472	10,375 ± 700 BP (8425 BC)		Agogino 1972
48NO201 Agate Basin Site	RL-1419	1520 ± 140 BP (AD 450 ± 150)	charcoal	Frison & Stanford 1982
48NO201 Agate Basin Site	M-1131	9990 ± 225 BP (8040 BC)	"Brewster"	Frison 1978
48NO201 Agate Basin Site	O-1252	9350 ± 450 BP (7400 BC)	"Brewster"	Frison 1978
48NO203 Betty Greene Site	WSU-670	7880 ± 430 BP (5930 BC)		Frison 1978
48NO203 Betty Greene Site	RL-1770	9860 ± 300 BP	mixed dirt/charcoal	UW/OWSA
48NO204 Lance Creek Site	A-364	2450 ± 75 BP (500 BC)		Frison 1978
48NO211 Agate Basin Site	RL-1241	10,140 ± 500	charcoal	Frison & Stanford 1982
48NO211 Agate Basin Site	RL-1263	10,030 ± 280 BP	bone, 700 grms	Frison & Stanford 1982
48NO211 Sheaman's Site	RL-1000	10,100 ± 2800 BP	charcoal	Frison & Stanford 1982
PARK COUNTY (48PA)				
48PA29 Horner Site	SI-4851	9390 ± 75 BP	charcoal	UW/OWSA
48PA29 Horner Site	SI-4851a	9875 ± 85 BP	charcoal	UW/OWSA
48PA29 Horner Site	UCLA-697A	8750 ± 120 BP (6800 BC)	bison bone	Frison 1978
48PA29 Horner Site	UCLA-697B	8840 ± 120 BP (6890 BC)	burnt bison bone	Frison 1978
48PA29 Horner Site	SI-74	7880 ± 1300 BP (5930 BC)	charcoal	Frison 1978
48PA29 Horner Site	I-10900	10,060 ± 220 BP	charcoal	UW/OWSA
48PA201 Mummy Cave	I-1074	370 ± 90 (AD 1580)		Wedel et al. 1968
48PA201 Mummy Cave	I-1005	1230 ± 110 BP (AD 720)	charcoal, layer 36	Wedel et al. 1968
48PA201 Mummy Cave	I-2350	5800 ± 120 BP (3850 BC)	charcoal, layer 20	Wedel et al. 1968
48PA201 Mummy Cave	I-1585	5610 ± 280 BP (3660 BC)	charcoal, layer 21	Wedel et al. 1968
48PA201 Mummy Cave	I-1466	5390 ± 140 BP (3440 BC)	charcoal, layer 24	Wedel et al. 1968
48PA201 Mummy Cave	I-1429	5255 ± 140 BP (3305 BC)	charcoal, layer 28	Wedel et al. 1968
48PA201 Mummy Cave	I-1428	4420 ± 150 BP (2470 BC)	charcoal, layer 30	Wedel et al. 1968
48PA201 Mummy Cave	I-1427	2820 ± 135 BP (870 BC)	charcoal, layer 32	Wedel et al. 1968
48PA201 Mummy Cave	I-1075	2050 ± 150 BP (100 BC)	charcoal, layer 34	Wedel et al. 1968
48PA201 Mummy Cave	I-1587	7140 ± 170 BP (5190 BC)	charcoal, layer 18	Wedel et al. 1968
48PA201 Mummy Cave	I-??	3600 ± 130 BP (1650 BC)	charcoal	Wedel et al. 1968
48PA201 Mummy Cave	I-1589	7970 ± 210 BP (6020 BC)	charcoal, layer 14	Wedel et al. 1968
48PA201 Mummy Cave	I-1588	7630 ± 170 BP (5680 BC)	charcoal, layer 16	Wedel et al. 1968
48PA201 Mummy Cave	I-2356	9250 ± 150 BP (7280 BC)	charcoal, layer 4	Wedel et al. 1968
48PA201 Mummy Cave	I-2352	8740 ± 140 BP (6790 BC)	charcoal, layer 10	Wedel et al. 1968
48PA202 Rabbit Bone Cave	SI-530	1670 ± 100 BP (AD 280)	charcoal	UW/OWSA
48PA551 Dead Indian Site	RL-321	3800 ± 110 BP (1850 BC)	charcoal	UW/OWSA
48PA551 Dead Indian Site	W-2599	4430 ± 250 BP (2480 BC)	charcoal	UW/OWSA
48PA551 Dead Indian Site	W-2597	4180 ± 250 BP (2230 BC)	charcoal	UW/OWSA
48PA??? Edgar Site	RL-396	8860 ± 170 (6910 BC)	cordage sample	UW/OWSA
48PA553 Bugas Site	RL-1871	380 ± 100 BP (AD 1510 ± 100)	charcoal	UW/OWSA
48PA848	Beta-11042	3400 ± 310 BP	0.1 gm carbon, ext. count	S. Hughes

Site Name	Lab No.	Date	Comments	Reference
PLATTE COUNTY (48PL)				
No site # Johnson Burial	RL-1517	1460 ± 110 BP (AD 520 ± 120)	charcoal	UW/OWSA
48PL23 North Platte River	M-972	2020 ± 200 BP (70 BC)		Mulloy 1965
48PL24 North Platte River	I-559	1525 ± 130 BP (AD 425)		Mulloy 1965
48PL24 North Platte River	M-971	1325 ± 150 BP (AD 625)		Mulloy 1965
48PL29 North Platte River	M-973	1025 ± 150 BP (AD 925)		Mulloy 1965
48PL65 Grey Rocks Site	RL-704	1750 ± 110 BP (AD 200)	charcoal	Frison 1978
48PL65 Grey Rocks Site	RL-1068	1480 ± 130 BP (AD 500 ± 140)	charcoal	OWSA
48PL65 Grey Rocks Site	RL-955	1890 ± 120 BP (AD 50 ± 150)	charcoal	OWSA
48PL65 Grey Rocks Site	RL-956	1800 ± 120 BP (AD 180 ± 110)	charcoal	OWSA
48PL65 Grey Rocks Site	RL-962	2190 ± 120 BP (280 BC ± 150)	charcoal	OWSA
48PL65 Grey Rocks Site	RL-965	1140 ± 120 BP (AD 830 ± 140)	charcoal	OWSA
48PL68 Patten Creek	A-497	1880 ± 180 BP (AD 170)	pt. Hell Gap Site	Irwin-Williams et al. 1973
48PL68 Patten Creek	A-706	2990 ± 140 BP (1040 BC)	pt. Hell Gap Site	Irwin-Williams et al.
48PL69 Bard Arrow	RL-972	1720 ± 120 BP (AD 250 ± 140)	charcoal	OWSA
48PL329 Bluegrass Creek Site	RL-1706	410 ± 200 BP (AD 1480 ± 170)	charcoal	OWSA WY -41-82
48PL329 Bluegrass Creek Site	RL-1784	1910 ± 120 BP (AD 30 ± 140)	charcoal #16	OWSA WY -41-82
48PL329 Bluegrass Creek Site	RL-1783	1850 ± 130 BP (AD 130 ± 120)	charcoal #15	OWSA WY -41-82
SHERIDAN COUNTY (48SH)				
48SH39 Prairie Dog Creek Project	RL-981	1280 ± 120 BP (AD 720 ± 130)	charcoal	OWSA
48SH44 Prairie Dog Creek Project	RL-989	420 ± 100 BP (AD 1490 ± 100)	charcoal	OWSA
48SH179	RL-1092	2080 ± 110 BP (170 BC ± 220)	8 grms charcoal	OWSA/UW WPRB
48SH198	RL-1093	1520 ± 120 BP (AD 440 ± 150)	4 grms charcoal	OWSA/UW WPRB
48SH199	Beta-2068	270 ± 70 BP	charcoal	Arch. Services AS-79-WY-734
48SH301 Kaufman Cave	Grey #1	6975 ± 275 BP (5025 BC)	charcoal	Grey n.d.
48SH308 P.K. Ranch Site Burial	A-548	990 ± 240 BP (AD 960)	human bone sample	Frison 1978
48SH311 Buffalo Creek	I-644	2600 ± 200 BP (650 BC)		Frison 1978
48SH311 Buffalo Creek	RL-160	2460 ± 140 BP (510 BC)	charocal	Frison 1978
48SH313 Big Goose Creek	M-1859	450 ± 110 BP (AD 1500)	charcoal	Frison et al. 1978
48SH313 Big Goose Creek	M-1860	530 ± 110 BP (AD 1420)	charcoal	Frison et al. 1978
48SH312 Powder River Bison Kill	RL-162	2910 ± 140 BP (960 BC)	charcoal	Frison 1968
SUBLETTE COUNTY (48SU)				
48SU176	Beta-5560	2320 ± 60 BP	feature 1	BLM, Rock Springs
48SU182	Beta-3522	1090 ± 60 BP (AD 860 ± 60)	carbonized sagebrush	Decker & Vicek 1982
48SU301 Wardell Site	RL-111	1170 ± 100 BP (AD 780)	charcoal	Frison 1973b
48SU301 Wardell Site	RL-103	990 ± 100 BP (AD 960)	charcoal	Frison 1973b
48SU301 Wardell Site	RL-102	1580 ± 110 BP (AD 370)	charred wood	Frison 1973b
48SU313 Bridger Basin Survey	RL-451	3230 ± 130 BP (1280 BC)	charcoal	UW/OWSA
SWEETWATER COUNTY (48SW)				
48SW5 Finley Site	SMU-276	9333 ± 107 BP (7383 BC)		UW
48SW5 Finley Site	SMU-277	9154 ± 80 BP (7204 BC)		UW
48SW5 Finley Site	RL-574	8950 ± 220 BP (7000 BC)	bone, 2000 grm	Frison 1978
48SW5 Finley Site	SMU-250	9026 ± 118 BP (7076 BC)		Frison 1978
48SW101 Pine Spring Site	GX-354	9695 ± 195 BP (7745 BC)		Sharrock 1966
48SW101 Pine Spring Site	GX-355	11,830 ± 410 BP (9880 BC)	date rejected	Sharrock 1966
48SW142 Black Buttes	RL-546	4330 ± 140 BP (2380 BC)		Metcalf 1975
48SW156 Black Buttes	RL-549	1020 ± 100 BP (930 AD)		Metcalf 1975
48SW212 Black Buttes	RL-551	1470 ± 100 BP (480 AD)		Metcalf 1975
48SW212 Black Buttes	RL-550	1240 ± 100 BP (710 AD)		Metcalf 1975
48SW283 Black Buttes	RL-547	2020 ± 100 BP (70 BC)		Metcalf 1975
48SW284 Black Buttes	RL-548	1300 ± 100 BP (AD 650)		Metcalf 1975
48SW304 Eden-Farson Site	RL-101	230 ± 100 BP (AD 1720)	charcoal	Frison 1971a
48SW502 Boars Tusk Burial	RL-617	2480 ± 120 BP (530 BC)	human bone	UW/OWSA
48SW515 PP&L Cherokee	RL-995	1140 ± 110 BP (AD 830 ± 130)	charcoal	OWSA
48SW517 Filemore's Finest	RL-711	1270 ± 110 BP (AD 680)	charcoal	OWSA
48SW517 Filemore's Finest	RL-712	1230 ± 110 BP (AD 720)	charcoal	OWSA
48SW543 Lots of Flakes Site	RL-978	1720 ± 120 BP (AD 250 ± 140)	charcoal	OWSA
48SW544 Six Points Site	RL-982	1260 ± 120 BP (AD 720 ± 120)	charcoal	OWSA
48SW548 Big Pits Site	RL-980	1800 ± 100 BP (AD 170 ± 100)	charcoal	OWSA
48SW552 Jim Bridger Project	RL-983	modern	charcoal	OWSA
48SW563 Horsehair Site	RL-958	1140 ± 110 BP (AD 830 ± 130)	charcoal	OWSA
48SW563 Horsehair Site	RL-955	1210 ± 110 BP (AD 760 ± 130)	charcoal	OWSA
48SW563 Horsehair Site	RL-1383	1220 ± 110 BP (AD 750 ± 130)	charcoal	OWSA
48SW572 Box Lunch Site	RL-1382	1310 ± 110 BP (AD 680 ± 110)	charcoal	OWSA
48SW572 Box Lunch Site	RL-960	1170 ± 110 BP (AD 800 ± 130)	charcoal	OWSA
48SW582 Metropolis Dune Site	RL-984	1760 ± 120 BP (AD 220 ± 140)	charcoal	OWSA
48SW583 Ant Hill Offering Site	RL-1003	1280 ± 100 BP (AD 710 ± 110)	charcoal	OWSA
48SW584 Days End Site	RL-985	1490 ± 120 BP (AD 500 ± 120)	combined charcoal	OWSA
48SW585 Dam Dune Site	RL-1004	1170 ± 110 BP (AD 810 ± 130)	charcoal	OWSA
48SW591 McKean City Site	RL-710	1040 ± 110 BP (AD 910)	charcoal	OWSA
48SW592 Deer Fly Heaven Site	RL-709	1390 ± 100 BP (AD 560)	charcoal	OWSA
48SW599 U.P. Springs Site	RL-986	720 ± 110 BP (AD 1230 ± 110)	charcoal	OWSA
48SW662	Beta-3772	1230 ± 70 BP		Bleacher 1982
48SW827	RL-1914	1540 ± 130 BP (AD 430 ± 150)	charcoal	OWSA WY-78-82
48SW827	RL-1915	1550 ± 110 BP (AD 430 ± 140)	charcoal	OWSA WY-78-82
48SW833 Minerals Exploration Proj.	RL-614	4490 ± 210 BP (2540 BC)	charcoal	OWSA
48SW871 5 Mile Gulch CSP	RL-988	1350 ± 120 BP (AD 630 ± 120)	charcoal	OWSA
48SW871 5 Mile Gulch CSP	RL-1324	1050 ± 100 BP (AD 920 ± 110)	charcoal	OWSA
48SW871 5 Mile Gulch CSP	RL-1323	1220 ± 100 BP (AD 760 ± 120)	charcoal, 5.8 gms.	OWSA
48SW872 Car View Dune Site	RL-987	1770 ± 120 BP (AD 210 ± 140)	charcoal	OWSA
48SW883 Amoco Uncloudy Day	RL-991	1170 ± 110 BP (AD 800 ± 130)	charcoal	OWSA
48SW912 CSP	RL-1078	1390 ± 110 BP (AD 580 ± 120)	charcoal	OWSA WY-205-78
48SW931 Red Desert	UGa-2050	1845 ± 60 BP (AD 105)		WWC
48SW931 Red Desert	UGa-2051	1670 ± 60 BP (AD 280)		WWC
48SW931 Red Desert	UGa-2053	1415 ± 70 BP (AD 535)		WWC
48SW931 Red Desert	UGa-2052	1115 ± 50 BP (AD 835)		WWC
48SW1028	Beta-2743	1550 ± 60 BP		Greer 1982
48SW1028	Beta-2744	5520 ± 70 BP		Greer 1982
48SW1028	Beta-2745	4400 ± 100 BP		Greer 1982
48SW1028	Beta-2746	1440 ± 70 BP		Greer 1982
48SW1028	Beta-2746	1440 ± 70 BP		Greer 1982
48SW1028	Beta-2747	1500 ± 60 BP		Greer 1982

Site Name	Lab No.	Date	Comments	Reference
48SW1029 CSP	RL-1079	3850 ± 230 BP (2460 BC ± 350)	charcoal, 2.4 gms	OWSA WY-205-78
48SW1029	Beta-2738	3390 ± 60 BP		Greer 1982
48SW1029	Beta-2739	1300 ± 60 BP		Greer 1982
48SW1029	Beta-2740	1290 ± 90 BP		Greer 1982
48SW1029	Beta-2741	1120 ± 50 BP		Greer 1982
48SW1029	Beta-2742	1330 ± 80 BP		Greer 1982
48SW1045 CIG Movin' on Site	RL-1007	1470 ± 120 BP (AD 510 ± 120)	charcoal	OWSA
48SW1091	Beta-3347	3920 ± 540 BP		O'Brien 1982
48SW1091	Beta-3617	1150 ± 70 BP		O'Brien 1982
48SW1091	Beta-3348	1230 ± 55 BP		O'Brien 1982
48SW1091	Beta-3616	2070 ± 80 BP		O'Brien 1982
48SW1091	Beta-3349	1340 ± 60 BP		O'Brien 1982
48SW1091	Beta-3615	2740 ± 540 BP		O'Brien 1982
48SW1153	Beta-3139	6310 ± 210 BP		J. Miller 1982
48SW1153	Beta-3140	970 ± 70 BP		J. Miller 1982
48SW1153	Beta-3141	3360 ± 180 BP		J. Miller 1982
48SW1153	Beta-3138	3160 ± 130		J. Miller 1982
48SW1184 Black Butte	UGa-2642	1775 ± 75 BP (AD 175)		Creasman 1981
48SW1211 Washakie/Gr. Divide	RL-1486	1820 ± 110 BP		Metcalf 1975
48SW1229 Green River Basin	UGa-2640	1975 ± 55 BP (25 BC)		Creasman 1981
48SW1229 Green River Basin	UGa-2643	1735 ± 75 BP (AD 215)		Metcalf & Anderson 1982
48SW1389 Red Desert	UGa-2979	1110 ± 55 BP (AD 840)		Creasman 1981
48SW1389 Red Desert	UGa-2973	1130 ± 50 BP (AD 820)		Creasman 1981
48SW1389 Red Desert	UGa-2975	1255 ± 70 BP (AD 695)		Creasman 1981
48SW1389 Red Desert	UGa-2975	1440 ± 95 BP (AD 510)		Creasman 1981
48SW1396 Birds Foot Site	RL-1384	1410 ± 110 BP (AD 560 ± 110)	charcoal	OWSA WY-39-77
48SW1455 Deadman Wash	UGa-3786	585 ± 300 BP		Armitage et al. 1982
48SW1455 Deadman Wash	Beta-3009	6000 ± 140 BP		Armitage et al. 1982
48SW1455 Deadman Wash	Beta-3127	1350 ± 60 BP		Armitage et al. 1982
48SW1455 Deadman Wash	Beta-3128	1120 ± 60 BP		Armitage et al. 1982
48SW1455 Deadman Wash	Beta-3125	1710 ± 200 BP		Armitage et al. 1982
48SW1455 Deadman Wash	Beta-3131	2870 ± 130		Armitage et al. 1982
48SW1455 Deadman Wash	Beta-3135	1180 ± 140 BP		Armitage et al. 1982
48SW1455 Deadman Wash	Beta-3133	5530 ± 140 BP		Armitage et al. 1982
48SW1455 Deadman Wash	Beta-3924	6840 ± 90 BP		Armitage et al. 1982
48SW1455 Deadman Wash	Beta-3010	2740 ± 100 BP		Armitage et al. 1982
48SW1455 Deadman Wash	Beta-3124	2640 ± 300 BP		Armitage et al. 1982
48SW1455 Deadman Wash	Beta-3129	2140 ± 90 BP		Armitage et al. 1982
48SW1455 Deadman Wash	Beta-3130	2580 ± 80 BP		Armitage et al. 1982
48SW1457	Beta-2930	3320 ± 100 BP		Greer 1982
48SW1588 North Baxter Basin	UGa-3210	1090 ± 75 BP (AD 860)		Creasman 1981
48SW1588 North Baxter Basin	UGa-3208	1200 ± 65 BP (AD 750)		Creasman 1981
48SW1600 Rock Springs Uplift	Beta-5402	modern		Creasman 1981
48SW1670 Rock Springs Uplift TP	Beta-4172	910 ± 60 BP (AD 1040)		Creasman 1981
48SW1670 Rock Springs Uplift TP	Beta-4173	590 ± 50 BP (AD 1360)		Creasman 1981
48SW1670 Rock Springs Uplift TP	Beta-3517	1310 ± 60 BP (AD 640)		Creasman 1981
48SW1670 Rock Springs Uplift TP	Beta-3516	980 ± 50 BP (AD 970)		Creasman 1981
48SW1668 Tenmile Draw	Beta-3013	4940 ± 80 BP	charcoal	Sall & Heffington 1981
48SW1668 Tenmile Draw	Beta-3012	6460 ± 130 BP	charcoal	Sall & Heffington 1981
48SW1688 Trailblazer Project	RL-1497	2310 ± 110 BP		WWC
48SW1690 Trailblazer Project	UGa-3777	1080 ± 65 BP		WWC
48SW1690 Trailblazer Project	UGa-3776	1005 ± 70 BP		WWC
48SW1690 Trailblazer Project	RL-1493	1560 ± 180 BP		WWC
48SW1690 Trailblazer Project	UGa-3781	1115 ± 100 BP		WWC
48SW1690 Trailblazer Project	UGa-3773	1050 ± 70 BP		WWC
48SW1695 Trailblazer Project	UGa-3775	3755 ± 75 BP		WWC
48SW1708	Beta-3316	1290 ± 80 BP		S. Miller 1982
48SW1708	Beta-3317	1160 ± 50 BP		S. Miller 1982
48SW1873 Washakie/Gr. Divide	UGa-3772	1075 ± 70 BP		WWC
48SW1873 Washakie/Gr. Divide	UGa-3774	1345 ± 95 BP		WWC
48SW1873 Washakie/Gr. Divide	UGa-3787	1110 ± 75 BP		WWC
48SW1900 Great Divide Basin	Beta-5695	5510 ± 70 BP (3560 BC)		Creasman 1983
48SW1900 Washakie/Gr. Divide	RL-1491	680 ± 110 BP		WWC
48SW1950 Washakie/Gr. Divide	RL-1492	960 ± 100 BP		WWC
48SW1950 Washakie/Gr. Divide	UGa-3779	1435 ± 75 BP		WWC
48SW1950 Washakie/Gr. Divide	UGa-3778	1225 ± 65 BP		WWC
48SW2028	Beta-4491	1480 ± 80 BP		High Plains Cons.
48SW2049 Jack Morrow Creek, south side	Beta-3449	1640 ± 90 BP (310 ± 90 AD)	charcoal	Decker & Vicek 1982
48SW2302	Beta-2433	1530 ± 110 BP		Tucker 1982a
48SW2302	Beta-3314	1210 ± 50 BP		Decker & Vicek 1982
48SW2302	Beta-2438	970 ± 130 BP		Tucker 1982a
48SW2302	Beta-2437	1300 ± 50 BP		Tucker 1982a
48SW2302	Beta-2436	1400 ± 50 BP		Tucker 1982a
48SW2369	Beta-2007	4320 ± 180 BP		Greer 1981
48SW2369	Beta-2008	2260 ± 100 BP		Greer 1981
48SW2369	Beta-2006	2410 ± 120 BP		Greer 1981
48SW2429	Beta-2441	1580 ± 60 BP		Drews 1981
48SW2429	Beta-2440	1510 ± 90 BP		Drews 1981
48SW2429	Beta-2450	1410 ± 60 BP		Drews 1981
48SW2590	UGa-3708	7290 ± 115 BP	charcoal	Davenport et al. 1982
48SW2590	Beta-4795	5295 ± 70 BP (3346 BC)		Creasman 1983
48SW2590	Beta-4794	5680 ± 70 BP (3730 BC)		Creasman 1983
48SW2590	UGa-3709	1235 ± 275 BP	charcoal	Davenport et al. 1982
48SW2599	Beta-2826	1090 ± 50 BP (AD 810-910)	charcoal	Greer 1982
48SW2599	Beta-2827	1240 ± 50 BP (AD 660-760)	charcoal	Greer 1982
48SW2624	Beta-2064	2440 ± 140 BP		Greer 1980
48SW2636 Little Colorado campsite	Beta-3517	690 ± 110 BP (AD 1260 ± 110)	carbonized sagebrush	Decker & Vicek 1982
48SW2642	Beta-2089	1020 ± 90 BP		Greer 1981
48SW2643	Beta-2092	700 ± 80 BP		Greer 1981
48SW2643	Beta-2090	960 ± 80 BP		Greer 1981
48SW2644	Beta-2091	1540 ± 90 BP		Greer 1981
48SW2649	Beta-2828	1410 ± 50 BP		Greer 1982
48SW2665	Beta-2439	1610 ± 50 BP		Tucker 1982a
48SW2951 Cedar Canyon Site	Beta-3453	1040 ± 60 BP (910 ± 60 AD)	carbonized cedar	Decker & Vicek 1982
48SW2972	Beta-3520	480 ± 60 BP (AD 1470 ± 60)	carbonized sagebrush	Decker & Vicek 1982
48SW3097	RL-1627	1840 ± 170 BP (AD 100 ± 190)	#34	UW/OWSA WY-71-81
48SW3102	RL-1630	1620 ± 110 BP (AD 350 ± 130)	#89	UW/OWSA WY-71-81
48SW3102	RL-1629	1140 ± 100 BP (AD 830 ± 120)	#88	UW/OWSA WY-71-81
48SW3102	RL-1631	5240 ± 150 BP (4110 BC ± 240)	#90	UW/OWSA WY-71-81
48SW3117	RL-1632	1980 ± 140 BP (50 BC ± 190)	#19	UW/OWSA WY-71-81
48SW3147	RL-1633	1140 ± 100 BP (AD 830 ± 120)	#2	UW/OWSA WY-71-81
48SW3147	RL-1634	1370 ± 120 BP (AD 610 ± 120)	#3	UW/OWSA WY-71-81
48SW3361	Beta-5561	4700 ± 150 BP	feature 1	BLM, Rock Springs
48SW3362 No. Cutthroat Draw	Beta-3458	2660 ± 50 BP (710 ± 50 BC)	carbonized juniper	Decker & Vicek 1982
48SW3268	Beta-2095	2590 ± 90 BP		Greer 1981

Site Name	Lab No.	Date	Comments	Reference
48SW3396	Beta-3454	1220 ± 50 BP (730 ± 50 AD)	carbonized juniper	Decker & Vlcek 1982
48SW3428 Rock Springs Uplift	Beta-4796	1040 ± 55 BP (AD 910)		Creasman 1983
48SW3450	Beta-5052	4390 ± 100 BP	carbonized soil	Archaeological Consultants
48SW3450	Beta-5053	4405 ± 65 BP	carbonized soil	Archaeological Consultants
48SW3518	Beta-3457	1180 ± 60 BP (AD 770 ± 60)	carbonized juniper	Decker & Vlcek 1982
48SW3555 So. Black Butte Creek	Beta-3456	3100 ± 90 BP (1150 ± 90 BC)	carbonized sagebrush	Decker & Vlcek 1982
48SW3604	RL-1635	1080 ± 100 BP (AD 890 ± 120)	#260	OWSA WY-71-81
48SW3604	RL-1636	1080 ± 110 BP (AD 900 ± 120)	#262	OWSA WY-71-81
48SW3655	no lab #	3600 ± 75 BP		Arch. Rescue
48SW3655	no lab #	3990 ± 85 BP		Arch. Rescue
48SW3726 La Fonte Canyon	Beta-3450	1270 ± 80 BP (AD 670 ± 80)	carbonized sagebrush	Decker & Vlcek 1982
48SW3729 Killpecker Dune Site	Beta-3732	1100 ± 60 BP (AD 850 ± 60)	charcoal	Decker & Vlcek 1982
48SW3736 Cedar Canyon SW	Beta-3455	1210 ± 50 BP (740 ± 50 AD)	carbonized cedar	Decker & Vlcek 1982
48SW3737 Firehole Rockshelter	Beta-3452	1460 ± 100 BP (490 ± 100 AD)	carbonized juniper	Decker & Vlcek 1982
48SW3739 Jack Morrow Creek	Beta-3448	1080 ± 80 BP (870 ± 80 AD)	carbonized sagebrush	Decker & Vlcek 1982
48SW3740 Big Sandy Reservoir	Beta-3447	1170 ± 90 BP (780 ± 90 AD)	carbonized sagebrush	Decker & Vlcek 1982
48SW3741 Amphitheatre Site	Beta-3446	1490 ± 60 BP (AD 460 ± 60)	carbonized cedar	Decker & Vlcek 1982
48SW3813	Beta-3719	3790 ± 80 BP (1840 ± 80 BC)	carbonized sagebrush	Decker & Vlcek 1982
48SW3828 Cherokee Trail Site	Beta-3451	430 ± 70 BP (1520 ± 70 AD)	carbonized sagebrush	Decker & Vlcek 1982
48SW4397	no lab #	3805 ± 110 BP		Arch. Rescue
48SW4381 Rock Springs Uplift	Beta-5164	1390 ± 50 BP (AD 560)		Creasman 1983
48SW4381 Rock Springs Uplift	Beta-5165	1390 ± 60 BP (AD 560)		Creasman 1983
48SW4381 Rock Springs Uplift	Beta-5166	3810 ± 70 BP (1860 BC)		Creasman 1983
48SW4491 Great Divide Basin	Beta-5390	5520 ± 80 BP (3570 BC)		Creasman 1983
48SW4492 Great Divide Basin	Beta-5391	8020 ± 90 BP (6070 BC)		Creasman 1983
48SW4752 Lyman-Granger Jct.	RL-1707	1220 ± 100 BP (AD 760 ± 120)	charcoal	OWSA WY-95-81
48SW4752 Lyman-Granger Jct.	RL-1708	3180 ± 130 BP (1510 BC ± 170)	charcoal	OWSA WY-95-81
48SW5006 Great Divide Basin	Beta-5395	4610 ± 140 BP (2660 BC)		Creasman 1983
48SW5007 Great Divide Basin	Beta-5396	980 ± 50 BP (AD 970)		Creasman 1983
48SW5016 Great Divide Basin	Beta-5404	1510 ± 90 BP (AD 440)		Creasman 1983
48SW5019 Rock Springs Uplift	Beta-5392	6150 ± 90 BP (4200 BC)		Creasman 1983
48SW5019 Rock Springs Uplift	Beta-5393	1070 ± 160 BP (AD 880)		Creasman 1983
48SW5020 Rock Springs Uplift	Beta-5394	5900 ± 80 BP (3950 BC)		Creasman 1983
48SW5023 Rock Springs Uplift	Beta-5405	2270 ± 200 BP (320 BC)		Creasman 1983
48SW5025 Rock Springs Uplift	Beta-5403	2360 ± 180 BP (410 BC)		Creasman 1983
48SW5090	RL-1920	1750 ± 260 BP (AD 220 ± 310)	charcoal	OWSA WY-78-82
48SW5096	RL1917	2640 ± 130 BP (690 BC ± 120)	charcoal	OWSA WY-78-82
48SW5096	RL-1918	1560 ± 120 BP (AD 420 ± 140)	charcoal	OWSA WY-78-82
48SW5096	RL-1916	2030 ± 130 BP (140 BC ± 240)	charcoal	OWSA WY-78-82
48SW5104	RL-1919	3960 ± 220 BP (2540 BC ± 370)	charcoal	
48SW5115	Beta-5802	2830 ± 70 BP	carbonized soil	Archaeological Consultants
48SW5128	RL-1834	1170 ± 110 BP (AD 800 ± 130)	charcoal	OWSA WY-78-82
48SW5128	RL-1835	1190 ± 110 BP (AD 780 ± 120)	charcoal	OWSA WY-78-82
TETON COUNTY (48TE)				
48TE455 Jackson Hole Elk Refuge	RL-163	390 ± 115 BP (AD 1560)	charcoal	UW
UINTA COUNTY (48UT)				
48UT27	RL-1840	1610 ± 120 BP (AD 370 ± 150)	charcoal	OWSA WY-2-83
48UT27-57	RL-1841	1930 ± 100 BP (AD 20 ± 120)	charcoal	OWSA WY-2-83
48UT27-57	RL-1842	1590 ± 100 BP (AD 390 ± 130)	charcoal	OWSA WY-2-83
48UT27-57	RL-1839	1960 ± 100 BP (AD1-1BC) ± 130)	charcoal	OWSA WY-2-83
48UT27	RL-1829	1750 ± 120 BP (AD 240 ± 140)	charcoal	OWSA WY-2-83
48UT35 Oyster Ridge	UGa-2046	1375 ± 55 BP		Zier 1982
48UT63	RL-1160	5040 ± 160 BP		Metcalf 1981
48UT194	Beta-2442	980 ± 150 BP		Bleacher 1981a
48UT199	Beta-2448	1490 ± 60 BP		Tucker 1982b
48UT199	Beta-2447	1410 ± 80 BP		S. Miller 1982
48UT199	Beta-2446	1320 ± 60 BP		S. Miller 1982
48UT369	Beta-3318	1170 ± 50 BP		S. Miller 1982
48UT370	Beta-3319	5300 ± 110 BP		S. Miller 1982
48UT372	Beta-3320	6870 ± 120 BP		Bleacher 1982a
48UT375	Beta-3323	5690 ± 100 BP		Angulski 1982
48UT375	Beta-2435	1820 ± 80 BP		Angulski 1982
48UT375	Beta-2431	2780 ± 190 BP		Angulski 1982
48UT375	Beta-3322	5490 ± 120 BP		Angulski 1982
48UT375	Beta-2434	5360 ± 100 BP		Angulski 1982
48UT375	Beta-2435	1820 ± 80 BP		Angulski 1982
48UT390	Beta-2445	3030 ± 120 BP		Reiss & Sanders 1982
48UT390	Beta-2444	1100 ± 70 BP		Reiss & Sanders 1982
48UT390	Beta-3325	1140 ± 80 BP		Reiss & Sanders 1982
48UT390	Beta-3324	1740 ± 75 BP		Reiss & Sanders 1982
48UT397 near Church Butte	Beta-3521	1540 ± 80 BP (AD 410 ± 80)	carbonized sagebrush	Decker & Vlcek 1982
48UT524	RL-1815	1070 ± 110 BP (AD 900 ± 120)	charcoal	OWSA WY-78-80
48UT525	RL-1805	1550 ± 120 BP (AD 290 ± 140)	charcoal	OWSA WY-78-80
48UT525	RL-1806	2450 ± 110 BP (620 BC ± 180)	charcoal	OWSA WY-78-80
48UT534	Beta-2762	1340 ± 90 BP		Greer 1982
48UT590	Beta-3720	1560 ± 280 BP (AD 390 ± 280)	carbonized sagebrush	Decker & Vlcek 1982
48UT771	Beta-5491	3900 ± 150 BP	carbonized soil	Archaeological Consultants
48UT771	Beta-5492	4080 ± 110 BP	charcoal	Archaeological Consultants
48UT918	RL-1858	1810 ± 100 (AD 170 ± 100)	charcoal	OWSA WY-62-83
48UT918	RL-1927	34,300 BP	charcoal, date rejected	OWSA WY-62-83
WASHAKIE COUNTY (48WA)				
48WA1 Spring Creek Cave	M-433	1725 ± 200 BP (AD 225)	charcoal	Frison 1965
48WA40 Tenneco, Slick Creek	RL-1329	1270 ± 100 BP (AD 720 ± 110)	charcoal	OWSA
48WA40 Tenneco, Slick Creek	RL-1312	1020 ± 110 BP (AD 950 ± 110)	charcoal	OWSA
48WA46 Hot Jeans Site	RL-966	1540 ± 110 BP (AD 440 ± 150)	charcoal	OWSA
48WA46 Hot Jeans Site	RL-1001	1210 ± 110 BP (AD 760 ± 130)	charcoal	OWSA
48WA46 Hot Jeans Site	RL-1066	1330 ± 110 BP (AD 660 ± 110)	charcoal	OWSA
48WA46 Hot Jeans Site	RL-1326	1220 ± 90 BP (AD 750 ± 100)	charcoal	OWSA
48WA47 Big Sissy Site	RL-969	1270 ± 110 BP (AD 720 ± 130)	charcoal	OWSA
48WA47 Big Sissy Site	RL-1315	1310 ± 130 BP (AD 680 ± 140)	charcoal	OWSA
48WA47 Big Sissy Site	RL-1330	1320 ± 100 BP (AD 670 ± 100)	charcoal	OWSA

Site Name	Lab No.	Date	Comments	Reference
48WA48 Altus Exp.	RL-973	1260 ± 100 BP (AD 730 ± 110)	charcoal	OWSA WY-80-77
48WA48 Altus Exp.	RL-1322	1010 ± 100 BP (AD 990 ± 100)	charcoal	OWSA WY-80-77
48WA49 Cottonwood Oil Field	RL-968	1490 ± 110 BP (AD 500 ± 110)	charcoal	OWSA
48WA54 Altus 18-1	RL-979	1150 ± 110 BP (AD 820 ± 130)	fire pit #1	OWSA WY-80-77
48WA71 Wail Way	RL-1325	4890 ± 180 BP (3390 BC ± 210)	charcoal	OWSA
48WA72 Altus 13-2	RL-1327	1270 ± 120 BP (AD 720 ± 120)	charcoal	OWSA
48WA72 Altus 13-2	RL-1328	2340 ± 130 BP (670 BC ± 170)	charcoal	OWSA
48WA73 Altus 35-2	RL-1073	1830 ± 120 BP (AD 150 ± 110)	charcoal	OWSA
48WA73 Altus 35-2	RL-1075	1470 ± 110 BP (AD 520 ± 120)	charcoal	OWSA
48WA73 Altus 35-2	RL-1076	1310 ± 110 BP (AD 680 ± 110)	charcoal	OWSA
48WA79 Altus 35-6	RL-1077	1520 ± 110 BP (AD 450 ± 140)	charcoal	OWSA
48WA167 Nelson Fire Pits	RL-1085	1280 ± 100 BP (AD 710 ± 110)	charcoal, 9.9 gms	UW/OWSA
48WA236 Biscuit Butte	RL-1405	1190 ± 110 BP (AD 790 ± 120)		UW/OWSA
48WA274 Worland Water System	Beta-4368	1060 ± 70 BP	charcoal	Archaeological Services
48WA276	Beta-5538	1000 ± 70 BP	charcoal	Archaeological Consultants
48WA276	Beta-5539	1150 ± 70 BP	charcoal	Archaeological Consultants
48WA300 Box Elder Creek Dog Burial	RL-964	990 ± 130 BP (AD 990 ± 130)	bison bone	Walker & Frison 1982
48WA301 Turk Burial	A-583	760 ± 150 BP (AD 1190)	bone	Frison 1978
48WA303 Badlands Site (Joe Emge)	Grey-12	365 ± 135 BP (AD 1585)	charcoal	Frison 1978
48WA304 Leigh Cave	Grey-25	4178 ± 153 BP (2228 BC)		Frison & Huseaus 1968, Frison 1978
48WA322 Colby Site	RL-392	11,200 ± 220 BP (9250 BC)	mammoth bone	Frison 1976b
48WA322 Colby Site	SMU-278	8465 ± 392 BP (6515 BC)		Frison 1976b
48WA322 Colby Site	SMU-254	10,548 ± 141 BP (8598 BC)		Frison 1978
48WA323 Little Canyon Creek	RL-640	8790 ± 210 BP (6840 BC)		Frison 1978
48WA323 Little Canyon Creek	RL-641	10,170 ± 250 BP (8220 BC)		Frison 1978
48WA323 Little Canyon Creek	I-10636	7510 ± 115 BP	bone, date rejected	UW/OWSA
48WA323 Little Canyon Creek	RL-1084	6270 ± 170 BP (5180 BC ± 150)	charcoal, 6.3 gms	UW/OWSA
48WA323 Little Canyon Creek	RL-1083	5300 ± 170 BP (4160 BC ± 230)	charcoal, 20 gms	UW/OWSA
48WA324 Bush Shelter	RL-1407	9000 ± 240 BP		UW/OWSA
48WA363 Rice Cave	RL-676	5100 ± 330 BP (3150 BC)	3'10" BD	Frison 1978
48WA363 Carter Cave	RL-676	4430 ± 140 BP (2480 BC)	charcoal	Frison 1978
48WA449 Big Trails #2	RL-1702	1410 ± 110 BP (AD 560 ± 110)	charcoal	OWSA WY-18-82
48WA450 Big Trails #3	RL-1703	1560 ± 110 BP (AD 430 ± 130)	charcoal	OWSA WY-18-82
48WA452 Big Trails #5	RL-1704	1680 ± 120 (AD 290 ± 130)	charcoal	OWSA WY-18-82
WESTON COUNTY (48WE)				
48WE302 Fulton Site	RL-350	2150 ± 150 BP (200 BC)	charcoal	Frison 1978

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BOOK REVIEWS

The Garnsey Spring Campsite: Late Prehistoric occupation in southeastern New Mexico. WILLIAM J. PARRY and JOHN D. SPETH. With contributions by Regge N. Wiseman, Stephen A. Hall, and Virginia Popper. University of Michigan Technical Report number 15, Research Reports in Anthropology number 15. The Museum of Anthropology, University of Michigan, Ann Arbor, 1984. xi + 228 pp., figures tables, appendices, references. $8.00 (paper).

At one time or another almost every archaeologist working in the western United States, whether avocational or professional, has encountered a site similar to the Garnsey Spring Campsite reported by Parry and Speth. The site is not deeply buried, poorly stratified, with abundant surface materials dating to within the last one thousand or so years covering a large area. Sites of this sort are frequently tested with a few excavations into "hot spots"; the results are almost always inconclusive.

Parry and Speth first tested the Garnsey Spring Campsite because they thought it might be the residential camp associated with the Garnsey Bison Kill a few hundred meters away (see Speth and Parry 1978, 1980; Speth 1983). Surficial materials, ceramic, lithic, and historic artifacts, covered an approximately twenty thousand square meter area. Debitage densities greater than ten items per 100 square meters were used to define an arbitrary site area of 5200 square meters. Limited testing was done within this area. The results were not spectacular, and the authors feel that the results were not conclusive.

The authors have published this report in a spirit of intellectual honesty. It is intended to make accessible the detailed results, however inconclusive, of their work on the site. The report is without pretense. No grand generalizations about the Late Prehistoric period on the Southern High Plains are to be found in this work. Instead, it is a thorough statement of the fieldwork and analysis performed. Appendices provide all the artifactual data (including provenience) used in the report. The report is well-organized and concise. Of special note is the reasonable price of the report, which is in keeping with the authors' goals of disseminating their findings to the widest range of readers.

The report begins with an examination of the environmental and climatological setting of the site. The potential attractiveness of the site to humans is discussed as a function of seasonal predictability and abundance of resources. The site is situated close to Garnsey Spring, presently one of the few permanent water sources in the area, perhaps accounting for its

apparent re-use for many hundreds of years.

Next in the report is a consideration of formation processes of the site deposits. The results of a through surface collection intended to isolate potentially intact deposits are presented first. Then, the vertical distribution of excavated items is presented. Parry and Speth then bring in results from artifact trampling experiments to show that the Garnsey Spring Campsite artifact distributions are similar to those in known trampled and turbated settings. No clear stratigraphy is present, and much of the site deposit is shown to have been deflated or otherwise eroded. Typological dating, and even radiometric dating, of any specific occupation of the site is therefore problematic.

The lithic assemblage from the Garnsey Spring Campsite is then discussed. Parry and Speth first focus on the recovered projectile points and those from collections made at the site by local amateurs. Late Prehistoric projectile points in southeastern New Mexico are poorly dated at present. The authors are able, nonetheless, to provide an approximate dating bracket for the site.

A functional analysis of the lithics then follows. This analysis is clearly presented, and the campsite tool assemblage is compared to that of the Garnsey Kill Site assemblage and its processing areas in terms of tool edge angles.

The next chapter, by Regge Wiseman, discusses the small but diverse ceramic assemblage from the site. The discussion is mostly typological. Too few sherds were found to allow much functional analysis of the vessel assemblage to be undertaken. Consequently, the results are mostly useful for dating. Here too, Wiseman's analysis provides an independent dating bracket for the site's occupation(s) that fits with that based on the projectile point assemblage.

As is common in southern Plains Late Prehistoric sites, trade connections with Rio Grande Puebloan groups are evidenced by non-local lithic materials (especially sourced obsidian) and decorated ceramic wares. "Plains-Pueblo interaction" is not developed in this report, but it does add to the increasing body of evidence for contact between hunters and gatherers of the Llano Estacado region and horticulturalists to the west (see Baugh and Terrell 1982; Spielman 1982).

The final chapter of the report is a palynological study of the Garnsey Creek drainage basin by Stephen Hall. A good record for the latter part of the Late Prehistoric Period and Protohistoric period is present in a four meter section in Garnsey Wash as a section spanning four hundred to six hundred years B.P. Hall presents evidence which indicates a fifty to one hundred year drought period about four hundred and fifty to five hundred years ago. This might have led to an increasingly predictable bison distribution in the region as a whole, for spring and permanent water sources would have been foci for bison populations when they were present in the area. Human groups, too, would have been tethered to the same water sources as bison. This may go a long way towards explaining the repeated occupations at the Garnsey Spring Campsite.

A series of appendices present the results of wood identifications of charcoals, all the lithic data, all the ceramic data, all the faunal data, and all the surface collection data. The appendices are thorough without being labyrinthine and are useful sources of informa-

tion about the site.

In summary, Parry and Speth have put together a concise but thorough report on a site that many would dismiss as mundane. Their work shows that it is possible to place such sites into a format that is inexpensive and useful to a wide audience. The inclusion of Hall's palynological study, which has some important implications for the region as a whole, adds greatly to the utility of this volume. While I hesitate to say that this report is "must" reading for those interested in Southern Plains archaeology or the Late Prehistoric Period, it should be in every library as an example of how one can add to a regional database by working with an uninspiring site. When one thinks of what eight dollars will buy on the academic book market, this report is a bargain and worth every penny.

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The Archaeology of Colorado. E. STEVE CASSELLS. Johnson Books, Boulder, Colorado, 1983. vi + 325 pp., figures, tables. $14.95 (paper), $22.95 (cloth).

Regional archaeological syntheses written by professional archaeologists but directed toward the avocational or amateur archaeologist are not common. Professionals have often not been willing to invest the time to do so; Steve Cassells and his book on the archaeology of Colorado is a rare exception. However, not only is this book of prime value to the avocational archaeologist, it is also an excellent source book for the professional archaeologist who is not familiar with the archaeology of Colorado.

Cassells begins the book with a general review and introduction to the science of archaeology, directed primarily to the avocational archaeologist. Much of the information presented in these first four chapters should be common knowledge to the professional and can generally be easily skimmed over by such persons, particularly the chapters on Colorado's environment and methods of dating archaeological materials.

The next seven chapters address various time periods or cultural groups that have been documented in the archaeological record of Colorado. Each of these chapters is an excellent review of the evidence collected on the time period or group, covering all aspects of the data. Most of the discussion reviews the published data available, although there are occasional presentations of data or Cassells' own ideas or theories on topics that have not been published.

One example of this is the discussion of the Dent site, long considered to be a Clovis Mammoth kill. Cassells reviews unpublished manuscripts and oral interviews on recent reinvestigations of the site suggesting no cultural involvement in the formation of the bonebed. Such an interpretation of the data is of prime importance to studies of the Paleoindian occupation of North America and deserves more attention than given by Cassells. If his interpretations presented here are to be seriously considered, even further additional work at Dent is needed to establish beyond any doubt whether the site is cultural or not.

Another concept of Paleoindians that Cassells appears to be perpetuating is the dependence by these peoples on big-game hunting as the main or even sole source for food. Evidence is accumulating throughout North America this is not the real situation and a foraging strategy did not "suddenly" appear in the Archaic Period due to the creation of "considerable cultural stress" (p. 73). This method of obtaining food was practiced before the beginning of the Archaic, and its sudden appearance may be because Archaic sites are more visible and therefore more have been excavated and studied.

To anyone familiar with the topic of Colorado archaeology, many other minor problems such as these would probably become readily apparent. It appears Cassells deliberately refrained from discussing in detail and taking a stand on any of the controversial topics in Colorado archaeology, such as the theoretical approaches advanced for high altitude Archaic origins and the problems involved with peopling the area from three directions, Plains, Southwest and Great Basin. Such discussions can be found throughout the professional literature and I commend Cassells for refraining from their discussion in

a publication directed at people who want to learn about the archaeology, not the theory behind the archaeology.

Chapter 12 presents a discussion of where Cassells feels Colorado archaeology is heading, both at the professional and avocational level. Cassells especially addresses the problem that is becoming of greater and greater concern to anyone interested in prehistory, that is the destruction of the data base by vandals.

The last chapter is one I thoroughly enjoyed; short biographical sketches of the "old-timers" of Colorado archaeology. One can begin to realize what archaeology in Colorado was like in the early days and appreciate what these early leaders went through to bring the knowledge on Colorado archaeology to the point it is at today.

The book concludes with a series of appendices on cultural terminology, selected radiocarbon dates for Colorado, a list of governmental agencies and institutions working with Colorado archaeology, a glossary of archaeological terms and an index.

Although primarily written for the avocational or amateur archaeologist, this book will prove to be of value to anyone interested in the archaeology of Colorado. His method of presenting the material in an easily read manner, not in a strict scientific format interrupted by reference citations, will make the book easier for the non-professional to read and understand. At the same time, including references to the professional literature at the end of each chapter will help the professional and other interested readers enter the more specific literature.

This book will be an excellent reference source for Colorado archaeology for years to come and Steve Cassells is to be commended for taking the time and trouble to prepare it. I would recommend this book to anyone interested in the prehistory of the central Rocky Mountains or western Great Plains region. The book can be easily read and understood by anyone, regardless of their background.

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Early Man in the New World. RICHARD SHUTLER, JR., editor. Sage Publications, Beverly Hills, 1983. 222 pp., illus., glossary, references, indices. $29.95 (cloth) $16.50 (soft cover).

When did humans first enter the New World? Where did they come from and what routes did they take? Who were their ancestors and descendants? What evidence of their cultures did they leave behind?

These questions and more are addressed in Early Man in the New World. This book contains thirteen articles which review the development in Early Man studies over the past ten years. Several of these articles focus on the controversial topic of pre-Clovis peoples and their projected arrival in the New

World between 60,000 and 20,000 years ago. The remaining articles examine evidence of Paleoindian cultures which began to appear in the Americas between 12,000 and 14,000 years ago.

The availability of access routes into the New World is a question of primary concern to Paleoindian and pre-Clovis studies. The most direct and easily traversed route would have been across the Bering Strait from northern Asia to what is now Alaska. Knut R. Fladmark (Times and Places: Environmental Correlates of Mid-to-Late Wisconsinan Human Population Expansion in North America) draws together geological and paleoenvironmental data to conclude that there were no insurmountable barriers to New World entry during the last 60,000 years. However, even during mild climatic periods, early migrants would have been faced with harsh tundra-like conditions in the northern latitudes. The possibility of coastal migration and adaptation as discussed by Fladmark is interesting. If pacific coastal areas were accessible, they may have provided rich and mild habitats for Paleoindian or pre-Clovis groups.

The study of human physical data may shed new light on the origins, times and places of early human migrations. Richard Shutler, Jr., (The Australian Parallel to the Peopling of the New World) combines data from skeletal material and blood group distributions to illustrate a similar pattern for migrations to Australia and the New World. He postulates that both groups had a common origin in Southern China. An important point is that migrants had to cross at least 65 km of open water to reach Australia. This it is reasonable to assume that migrants could have crossed the Bering Strait with or without the aid of a land bridge.

Christy G. Turner II (Dental Evidence for the Peopling of the Americas) uses a study of prehistoric human dentition to propose that two and possibly three distinct groups entered the New World. All three American groups show close odontological affinity to Northern Asian groups. Furthermore, Turner suggests that all American groups entered the New World at a late date.

A more hotly debated topics in archaeology today concerns evidence of pre-Clovis peoples entering the New World 60,000 to 20,000 years ago. Dennis Stanford (Pre-Clovis Occupation South of the Ice Sheets) contends that the criteria of: (1) a clearly defined stratigraphy, (2) reliable radiometric dates, (3) cooperative interdisciplinary data, and (4) artifacts in primary context, must be met before a site can be clearly identified as pre-Clovis. Stanford reviews the data from several sites, including Dutton, Selby, Lamb Springs, Meadowcroft and Lewisville. He concludes than these nor other sites reviewed meet all the criteria for acceptance as pre-Clovis in age.

Evidence for pre-Clovis occupations is also presented by Richard E. Morlan for Eastern Beringia (Pre-Clovis Occupation North of the Ice Sheets) and Alan L. Bryan (South America) for South America. Both writers contend that the sites they discuss provide clear evidence of pre-Clovis occupations more than 20,000 years ago. Due to the format of this book, the key pre-Clovis sites are described only briefly. The reader will want to do additional reading about these sites to formulate their own opinion about the topic of pre-Clovis peoples.

A widely discussed Early Man sites in North America in recent

years is Meadowcroft Rockshelter in Pennsylvania. This stratified sites contains a deeply buried stratum, dating to 17,000 years ago and associated with stone tools. The interpretation of this stratum as pre-Clovis has been hotly debated. J.M. Adovasio et al. (Evidence from Meadowcroft Rockshelter) provide an overview of investigations at Meadowcroft and specifically address the controversy over the pre-Clovis stratum. The writers argue effectively for the accuracy of the radiocarbon dates, geological data and botanical remains as evidence of pre-Clovis age for the stratum. The curious presence of modern animal remains and absence of extinct animal remains in this proposed Pleistocene stratum is not discussed. The debate concerning the Meadowcroft pre-Clovis stratum will probably continue for many years.

Of great importance to all archaeological studies is the ability to produce accurate dates for archaeological sites and artifacts. Rainer Berger (New Dating Techniques) describes the uses and potentials for dating techniques, such as radiocarbon dating, amino acid racemization, uranium series dating, and fission track dating. It is encouraging to see that improvements in accuracy and reductions in required sample sizes are occurring with each technique. Radiocarbon dating with accelerators or small counters may hold the greatest potential for dating the antiquity of man in the New World.

The most widely accepted time of entry into the New World occurred about 12,000 to 14,000 years ago with the appearance of Paleoindian cultures. During the past ten years, researchers have been concerned with the development of regional Paleoindian chronologies and the study of Paleoindian technology. Reviews of new sites and current Paleoindian research are provided for many New World regions by Roy L. Carlson (The Far West), George F. Macdonald (Eastern North America), George C. Frison (The Western Plains and Mountain Region), Richard S. MacNeish (Mesoamerica), and Alan L. Bryan (South America).

The discussion of the Western Plains by George C. Frison will be of particular interest to those familiar with Wyoming archaeology. Frison provides a description of the Paleoindian cultures, their ages and their diagnostic projectile points. The author points out that more research is needed on the inter-relationships between various Paleoindian complexes. The study of foothill/mountain Paleoindian groups promises to be an exciting new approach in Paleoindian research on the High Plains.

Alan L. Bryan presents a thoughtful discussion of the development of three distinct Paleoindian traditions in South America. Bryan argues that the South American Paleoindian traditions developed independently without external stimuli from northern Paleoindian groups.

Finally, H. Marie Wormington (Early Man in the New World: 1970-1980) summarizes the articles in this book and shares some of her thoughts about Early Man studies. She contends that universally acceptable proof of New World occupation before Clovis times has not yet been produced. However, she concludes that the growing body of data will eventually produce clear evidence of pre-Clovis occupations.

In conclusion, Early Man in the New World provides a good overview of recent pre-Clovis and Paleoindian studies. This book will serve best as an introductory text and as a guide to additional

readings in Early Man studies. Due to the summary style format of the book, little in the way of in-depth analyses or well developed arguments concerning Early Man research are presented. However, many of the summaries are based on years of field work and intensive laboratory analyses. Therefore, this book can serve as a solid reference work for Early Man studies.

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Grassland, Forest, and Historical Settlement: An Analysis of Dynamics in Northeast Missouri. Michael J. O'Brien, with contributions by Jacqueline A. Ferguson, Dennis E. Lewarch, Chad K. McDaniel, William M. Selby, Lynn M. Snyder and Robert E. Warren. Studies in North American Archaeology, W. Raymond Wood, general editor, University of Nebraska Press, Lincoln, 1984. xxii + 345 pp., figures, tables, biblio., index. $25.00(cloth).

This volume, the first in the series "Studies in North American Archaeology", examines the sociocultural and environmental variables responsible for early historical settlement in the Salt River valley region of northeast Missouri. Research was conducted as part of the Cannon Reservoir Human Ecology Project, for those portions of the Salt River valley that will be flooded by the U.S. Army Corps of Engineers Clarence Cannon Dam and Mark Twain Lake. Extensive use of archival and documentary sources was enlisted, along with field reconnaissance and limited archaeological excavations, to provide and test hypotheses concerning the 'frontier' occupation of the region.

A research design was formulated with goals to document all historical sites in the project area, provide functional classification of these locales, utilize a model of environmental adaptation to the region, analyze settlement pattern, and compare results to previous studies of the eastern and midwestern United States. A theory of rural settlement location was adopted from Hudson (1969) that postulates three successive processes of frontier settlement: colonization, spread, and competition. Environmental factors such as biome, forest density, slope, susceptibility to flooding, and soil quality were considered, as well as socio-cultural and economic factors including kinship, commonality of origin, religious affiliation, transportation routes, and proximity to market and service centers, to pose a three-stage model of human occupation of the Salt River valley.

Chapters of this volume include descriptions of the territory from which the settlers emigrated (the Bluegrass region of Kentucky and the Boonslick region of central Kentucky), the environmental landscape, settlement pattern and growth, and social structure. Intrasite spatial pattern and architecture are discussed, as are the subsistence base and resultant socioeconomic characteristics. Also discussed are the archeological excavations. Conclusions are then drawn related to the research de-

sign and questions, and the settlement model initially posed in the study.

The investigations presented in this book are an excellent example of what Adams (1983) has termed "ethnoarchaeology", the combination of historical and archaeological information to form a more unified perception of the area under study. The material leans more to the former, however, a bias not incurred by the authors but by contract constraints. Archaeological excavations were limited to a few select sites where historical records were also available. The authors were fortunate in having adequate historical documentation for the project area, a condition that is not always the case in many investigations, especially in the field of contract archaeology. Biases are adequately discussed that relate not only to the extensive documentary evidence versus the limited archaeological data, but also to the inherent problems of historical records. This discussion allows the reader to view the results objectively.

The study utilized an ecological model with social dimensions taken into account, an approach also favored by Hardesty (1980). Environmental variables are probably best employed in a settlement model for the early stages of colonization, for once the "frontier" period is over, diversification of the economic base entails less dependency on environmental constraints.

The only significant criticism by this reviewer lies within the final paragraph of the book. In this section, subtitled "For the Future", the authors state that "...an almost endless number of avenues remain open for investigation". This statement could be expanded to include categories of data acquisition or research questions that may be addressed in future research designs.

Although the topic presented is aimed more at settlement geography or biogeography, applications are useful for multidisciplinary studies as well. Overall, the investigations presented in this volume are an important contribution to the development of historical archaeology, a field that is maturing rapidly from early stages of descriptive reporting. The book provides a valuable reference for anyone involved in studies of the historical past, especially in the compilation of regional research designs and methodologies.

References Cited

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