



**TREE - RING DATES**

FROM

**ARIZONA H-I**

**FLAGSTAFF AREA**

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LABORATORY OF TREE-RING RESEARCH

THE UNIVERSITY OF ARIZONA

TUCSON

1975



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## PREFACE

This report on tree-ring dates from the Flagstaff area is the sixteenth, and last, in an unnumbered series first issued in 1966. The reports present the results, by geographic areas, of a comprehensive and total re-analysis of all archaeological tree-ring samples from Southwestern sites. We gratefully acknowledge the generous support of the National Science Foundation, Grants GS-247, 908, 2232, and 35086, of both laboratory and publication aspects of our efforts.

The tree-ring samples and consequent dates from the Flagstaff area have suffered more than their share from the vagaries of physical and clerical confusion. We have made a valiant effort to make sense of the typographical errors of both dates and site numbers (and proveniences) found throughout the literature. We have tried to match loose sample tags to the correct sample. And we have tried to eliminate duplication of dates resulting from study of two pieces of the same original sample in two laboratories. There are, however, some remaining areas of confusion which we could not clarify. These may never be solved.

The frustration of re-analyzing this collection was undertaken primarily by Richard L. Warren. His work is essential in clearing up the confusions in the dates that have existed for some years. The basic text was prepared by Bruce G. Harrill who fought the frustrations of misprints, poor or no recordation, and general ambiguities. Mr. Harrill was most ably assisted by Deborah W. Mullon who, in addition to copy typing, is responsible for the included line drawings. I am most grateful to these specific contributors as well as to the general support of my colleagues Bryant Bannister and Jeffrey S. Dean.

William J. Robinson

Tucson, Arizona  
December 1, 1975



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I-35.	Juniper Terrace Pueblo	52
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Arizona I:14:1 (ASM)	see Turkey Hill Pueblo
Arizona I:14:2 (ASM)	see Elden Pueblo
Arizona I:15:1 (ASM)	see Winona Village
Arizona I:15:2 (ASM)	see Turkey Tank Caves
Arizona I:1:9 (MNA)	see Harbison Cave
Arizona I:5:3 (MNA)	see NA 11,142
Arizona I:6:1 (MNA)	see NA 10,971
Arizona I:10:1 (MNA)	see Fish Sawmill Site
Arizona I:10:2 (MNA)	see NA 1625
Arizona I:14:30 (NAU)	see Lake Mary Rockshelter
Baker Ranch Group	*
Bonito Terrace Group	*
Canyon Diablo Dam Group	*
Canyon Road House Ruin	*
Cinder Park	*
Citadel, The	*
Clarke's Caves	*
Clarke's Ruin	see Turkey Hill Pueblo
Coconino Forest Group	*
Cosnino Caves (Whipple)	see Turkey Tank Caves
Coyote Range Pithouse	*
Crack-in-Rock Pueblo	*
Crater 35 Group	*
Deadman's Fort	*
Elden Pithouse	*
Elden Pueblo	*
Fish Sawmill Site	*
Flagstaff Interstate East Group	*
Flagstaff Area	*
Grand Falls Pueblo	*
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Harbison Cave	*
Heiser Springs Pueblo	*
House of Tragedy	*
Jack Smith Alcove Houses	*
Jack Smith Pithouse	*
Juniper Terrace Pueblo	*
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LA 417	see Turkey Hill Pueblo
LA 422	see The Citadel
LA 536	see Medicine Fort
LA 571	see Elden Pueblo
LA 689	see Wupatki
LA 2080	see Winona Village
Lake Mary Rockshelter	*
Le Barron Kiva	*
Le Barron Pithouse	see Le Barron Kiva
Little Leroux Spring	*
Lomaki	*
Long House (Colton)	see Wupatki
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Medicine Pithouse	*
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NA 323	see Walnut Canyon Group
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NA 886	see Le Barron Kiva
NA 1121	*
NA 1123	*
NA 1125	*
NA 1135	*
NA 1138	*
NA 1139	see Wilson Pueblo
NA 1192	*
NA 1200	*
NA 1235	see Puma Cave
NA 1238	*
NA 1244	*
NA 1244B	see NA 1244
NA 1245	*
NA 1245B	see NA 1245
NA 1292	see Grand Falls Pueblo
NA 1295	see Jack Smith Alcove Houses
NA 1295A & B	see Jack Smith Alcove Houses
NA 1296	see Crater 35 Group
NA 1297	see Crater 35 Group
NA 1297B	see Crater 35 Group
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NA 1554	see Jack Smith Pithouse
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NA 1754	see Heiser Springs Pueblo
NA 1764	see Metate House
NA 1764A	see Metate House
NA 1765	see Deadman's Fort
NA 1765A & B	see Deadman's Fort
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NA 1785	see Ridge Ruin
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NA 1922A & B	see Bonito Terrace Group
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NA 1926A	see Bonito Terrace Group
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NA 2002	*
NA 2002A & B	see NA 2002
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NA 2134	see Winona Village
NA 2134A, B, E, E.1, & T	see Winona Village
NA 2135	see Winona Village
NA 2135C	see Winona Village
NA 2218	*
NA 2551	see Baker Ranch Group
NA 2797	see Baker Ranch Group
NA 2798	see Baker Ranch Group
NA 2800	see Baker Ranch Group
NA 3056	*
NA 3577	see Pittsberg Village
NA 3580	*
NA 3644	see Winona Village
NA 3644A.1, C, J, K, L, M, P, & Q	see Winona Village
NA 3673	see Ridge Ruin
NA 3673T	see Ridge Ruin
NA 3674	see Ridge Ruin
NA 3674R	see Ridge Ruin
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NA 3996	see Cinder Park
NA 4263	*
NA 4264	*
NA 4265	*
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NA 5145C	see NA 5145
NA 5149	*
NA 5150	*
NA 5150B	see NA 5150
NA 5155	*
NA 5159	*
NA 5160	*
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NA 5161	*
NA 5161A, B, & C	see NA 5161
NA 5166	*
NA 5167	*
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NA 5168	see Red Hill Site
NA 5607	see Walnut Canyon Group
NA 5866	*
NA 5903	*
NA 5947	*
NA 5947A	see NA 5947
NA 6620	*
NA 6918	*
NA 6929	*
NA 8507	see Flagstaff Interstate East Group
NA 8527	see Flagstaff Interstate East Group
NA 8529	see Flagstaff Interstate East Group
NA 8717	see Flagstaff Interstate East Group
NA 8717A	see Flagstaff Interstate East Group
NA 8722	see Flagstaff Interstate East Group
NA 8723	see Flagstaff Interstate East Group
NA 8725	see Flagstaff Interstate East Group
NA 8727	see Flagstaff Interstate East Group
NA 8735	see Flagstaff Interstate East Group
NA 8736	see Flagstaff Interstate East Group
NA 8737	see Flagstaff Interstate East Group
NA 8791	see Canyon Diablo Dam Group
NA 8793	see Canyon Diablo Dam Group
NA 8799	see Canyon Diablo Dam Group
NA 9474	see Lake Mary Rockshelter
NA 9528	see Harbison Cave
NA 9541	*
NA 9580	see Fish Sawmill Site
NA 10,779	*
NA 10,792	see Coconino Forest Group
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Old Caves Pueblo	*
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Turkey Hill Pueblo	*
Turkey Tank Caves	*
Two Kivas Pueblo	*
Walnut Canyon Group	*
Whistle House	see NA 2004
Wilson Pueblo	*
Winona Village	*
Wukoki	*
Wukoki (Fewkes)	see Wupatki
Wupatki	*

ASM - Arizona State Museum site survey  
 GP - Gila Pueblo site survey  
 LA - Laboratory of Anthropology (now Museum of New Mexico)  
       site survey  
 MNA - Museum of Northern Arizona site survey  
 NA - Museum of Northern Arizona site survey  
 NAU - Northern Arizona University site survey

## INTRODUCTION

The Laboratory of Tree-Ring Research has been serving as a repository for archaeological wood and charcoal specimens since 1916 when A.E. Douglass began seeking prehistoric wood in an effort to extend his modern ring chronologies into the past. While his primary interest was in compiling an extensive dendroclimatic record to facilitate long-range weather prediction studies, the collection and eventual dating of hundreds of pieces of prehistoric wood was of inestimable value to archaeologists.

Dendrochronology provides the most precise prehistoric temporal control in the world. Determination of the cutting date of artifactual and architectural materials made of wood is of the greatest importance to culture historians. At the present time Southwestern archaeologists have over 2000 years of continuous tree-ring records. From a beginning of an initial group of relatively few crossdated beams from the Southwestern United States, detailed regional records have been compiled for most of this area and parallel studies are being or have been developed in the Arctic, the Great Plains, California, Mexico, Europe, and western Asia.

Douglass acquired more than 10,000 laboratory specimens during a 45-year period. Small groups of dates derived by him and his staff appeared at intervals in diverse publications, most of them in the Tree-Ring Bulletin. Then, in 1951, Terah L. Smiley reviewed the existing collection and published a summary of reliable sites and dates. This was a major advancement of the state of knowledge and has been the standard reference in the field.

By the beginning of the 1960's it had become apparent that a new evaluation of archaeological specimens was necessary. A vast number of additional specimens had been collected and many new and better study techniques had been developed. In addition, at various times over the years, other institutions that maintained collections of dendrochronological materials had turned them over to the Laboratory of Tree-Ring Research for preservation and study. The original Douglass collection has been augmented by the acquisition of collections from Gila Pueblo, the Laboratory of Anthropology at Santa Fe, and the Museum of Northern Arizona. The aggregate group now numbers about 100,000 specimens and the time seems right to attempt an up-to-date synthesis of archaeological tree-ring dating.

## THE CURRENT PROJECT

In July 1963, the Laboratory of Tree-Ring Research received a National Science Foundation grant to cover the costs involved in reassessing and reworking all of the specimens in its collection. This study has been productive beyond expectations and renewal grants were received in July of 1965 and 1968 to carry this work to completion.

The development of more sophisticated techniques of sample preparation, analysis, and interpretation has now made it possible to achieve a high level of efficiency in the production of dates. The current project involves a systematic restudy of pertinent parts of the collection with the basic aims of: (1) checking past work, (2) obtaining as many new dates as possible,



(3) extracting the chronological parameters necessary for prehistoric climatic interpretation, and (4) organizing the resultant data. To this end a series of publications presenting a summary of the available information about the sites and the derived dendrochronological information is being produced. This paper, Tree-Ring Dates from Arizona H-I: Flagstaff Area, is the sixteenth of these. A complete list of titles in this series appears on the inside of the back cover. Specialized chronological data of interest to dendrochronologists, such as standardized indices and plotted growth curves, will appear at intervals in the Tree-Ring Bulletin.

This series should be of great importance to Southwestern archaeologists. With all prehistoric materials checked for provenience, dating, and possible duplication, the available dendrochronological controls for each site are exactly determined. The provenience of dated specimens within a site and the temporal ordering of sites within a geographic area are presented as precisely as possible. In most cases, existing published dates from individual sites have been corroborated; a few have been changed. In many cases, new dates have been obtained for these units which serve to augment the range and detail of chronological control. In addition, many specimens from new sites have been dated. Some of these are products of recent excavations; others, whose characteristics presented various procedural problems in the past, are now datable because of the knowledge derived from an intensive dendrochronological study of the geographic and temporal units involved.

These new data are translatable into the finest of prehistoric temporal controls. For example, the chronological data from the various quadrangles, largely derived from short occupancy sites with a localized geographic distribution, present an unequalled opportunity for studies of cultural attributes and change. Ceramic and architectural development, settlement patterns, population movements, demographic estimates, and numerous other studies can be undertaken with a precision previously impossible. The information derived by this project will be instrumental in any future synthesis of Southwestern archaeology.

#### ORGANIZATION OF RESEARCH

At the beginning of this project a procedural decision was made to organize the material on an areal basis with the archaeological site as the basic unit of study and to group the sites into arbitrary regional units which would allow thorough intensive analyses. The sites have been studied individually, and as a group, by comparing all the sites within a quadrangle. The quadrangles, which correspond to those established by the Survey System of the Arizona State Museum (Wasley 1964), encompass 1 degree of longitude and 1 degree of latitude. This grouping has allowed the building of firm regional tree-ring chronologies and has resulted in increased understanding of local ring variation which in turn has permitted more dating of individual specimens.



## THE FLAGSTAFF COLLECTION

Although the first samples from the Flagstaff area were collected by A.E. Douglass in 1926, the majority were obtained in the 10 to 15 years after 1929 and the "closing the gap" which established tree-ring dating as a viable dating technique. The method was met with considerable enthusiasm throughout the Southwest and the Museum of Northern Arizona in Flagstaff was the first institution to undertake a systematic program of archaeological excavation for the recovery of tree-ring material. Beginning in 1930 and continuing every summer through 1941, the Museum sponsored excavations at sites in the Flagstaff area. Most of the field work was supervised by Lyndon L. Hargrave or John C. Mc.Gregor. Tree-ring samples from most of the excavations were dated and cataloged at the Museum by Mc.Gregor who had been trained by Douglass and whose dating was reviewed by Douglass prior to publication.

The publication of dates from the Flagstaff area has taken various forms since Douglass (1929) published the first dates. Mc.Gregor first published dates in 1932 from sites investigated by the Museum of Northern Arizona and through the rest of the 1930s and the 1940s dates were published by Douglass (1935,1936,1938,1947) and Mc.Gregor (1936a,1936b, 1936c,1937,1938a,1941,1942). Other publications dealing with the archaeology of the Flagstaff area (Colton 1939,1946; Gladwin 1943,1944) cite either the Douglass or the Mc.Gregor dates or both. Generally, however, dates published by Mc.Gregor referred to samples in the collections of the Museum of Northern Arizona and those of Douglass to samples in the Laboratory of Tree-Ring Research collection. Occasionally there was some duplication between collections as samples were often broken in two, one fragment being sent to Douglass for dating confirmation.

Much of the source of confusion in dating arose from the presentation of dates. Tree-ring dates were usually published as a range -- the earliest outside date to the latest outside date. The number of dated samples was rarely indicated, and catalog numbers were not published. Ring counts were not consistently taken to the outermost ring on each sample and there was no system of notation for the condition of the outside of the sample. Duplicates (samples from the same original tree) were occasionally noted, but were not consistently recognized. Published dates often repeated earlier published dates with no acknowledgement of the repetition, and often with changes to the original date.

These problems received little recognition in the early applications of tree-ring dating to archaeology and the technique remained unquestioned and unchallenged until 1944 when Harold S. Gladwin of Gila Pueblo attacked the Douglass method of tree-ring dating and cited many of the problems outlined above. Gladwin's criticism was based on the apparent lack of agreement between archaeological evidence and tree-ring dates from the sites in Medicine Valley, north of Flagstaff. He reasoned that the lack of agreement was due to incorrect dating and that, therefore, the Douglass method was inaccurate. Using his own methods of correlation, Gladwin attempted to date samples sent to him by Mc.Gregor. Gladwin obtained

different dates for some samples, while others agreed with Mc.Gregor. This current re-analysis indicates that most of Gladwin's deviation from Mc.Gregor dates was incorrect. Although Gladwin's criticism of the method was unfounded, many of his criticisms relating to publication and interpretation of dates were indeed valid and have been a stimulus to improvement in the quality of presentation and notation systems for tree-ring dates.

In 1950, the entire collection was transferred to the Laboratory of Tree-Ring Research as maintenance and analysis of tree-ring material was abandoned by the Museum of Northern Arizona. A partial review of the collection was presented by Harlan (1962) and the current project undertook complete re-analysis. This report covers the re-analysis as well as material received from the Flagstaff area since 1950. Four sites--NA 1571, Jack Smith Pit-house, Lomaki, and Sunset Pithouse--for which dates had previously been reported were eliminated for lack of dating verification.

### PRESENTATION OF DATA

Although the Laboratory's records include all archaeological sites from which tree-ring specimens have been collected, data are presented in this report only for sites with dated specimens. However, both dated and undated sites are shown in Figs. 1-3 and listed in the Table of Contents on page iii. The information available to the Laboratory on the dated sites is very uneven. In the past 40 years, many tree-ring specimens were collected for the primary purpose of chronology building and, as a consequence, the archaeological characteristics of the collection site were frequently recorded only in general terms. In some cases, the location of the site has been lost as a result of incomplete records or as a result of acceptance of specimens for chronology purposes without the details of archaeological provenience. Some sites have been placed in quadrangles only by inference on the part of the present staff and may, in fact, belong to a different area entirely. However, every effort has been made to obtain as much information as possible.

In a limited number of cases, specimens for which records exist have not been identified in the collections. The problems thus created are not great, as these specimens are usually only a few of many from a site. If they were previously dated, however, they are not so considered in this report. Occasionally, the lost specimens represent the total collection from a site and, as a consequence, the site does not appear in the reports. There are no such instances, however, in Arizona H or I.

To summarize the data presented, a chart has been prepared (Fig. 4) to represent the sequence of dated sites and structures. The components are ranked from late to early according to the latest outside dates only, and the charts are not intended to be used to chronologically position the listed sites. Temporal placement of sites must depend upon careful assessment of both archaeological and dendrochronological evidence.



The following notes help to explain the categories used in the presentation of data:

Site: The Laboratory has chosen, often arbitrarily, what it believes to be the most common designation of a site.

Alternate name and number: Many sites have been known by various names in the literature or in local usage. Many sites also carry two or more institutional designations. In this category, an attempt has been made to list all such alternates that have been applied to the site.

Location: Sites are located on maps (Figs. 1-3) as well as by a brief descriptive note. In some cases, the Laboratory records give more precise locations, particularly for recently excavated sites, but for the purposes of this report the location given was deemed sufficient. Some sites are presented with only approximate locations.

Description: Information about the site is taken from published reports and readily available knowledge. No exhaustive search to obtain unpublished notes was made.

Source of collection: The individual and/or institution, and the date of collection are listed to enable readers to assess the provenience data.

References: All known published sources for archaeological data pertaining to the site (Site Description) and the sources for previous publication of dates (Published Dates) from the site are given.

Dates: The dates are presented in chronological sequence and by provenience subgroupings when known. Catalogue numbers are given for future reference and specific identification of the dated specimens. GP indicates a Gila Pueblo catalogue number and F indicates a Museum of Northern Arizona catalogue number. All other numbers were assigned by the Laboratory of Tree-Ring Research. Every effort has been made during analysis to eliminate duplication of dates derived from the same piece of original wood. The identification of duplication has been done solely on ring characteristics except in cases where the provenience data specify duplication or for pieces that obviously fit together. The latter case is prevalent in large ruins that were sampled by more than one institution. In all cases of duplication, only one date appears in the list and the catalogue number is that of the best chronological piece.

Comment: The comments are based on the tree-ring evidence. A more sophisticated interpretation of the dates is reserved for the archaeologist who is analyzing the site as a whole.



## EXPLANATION OF SYMBOLS

The symbols used with the inside date are:

- year - no pith ring present
- p - pith ring present
- fp - the curvature of the inside ring indicates that it is far from the pith
- ±p - pith ring present, but due to the difficult nature of the ring series near the center of the specimen, an exact date cannot be assigned to it. The date is obtained by counting back from the earliest dated ring.
- ± - the innermost ring is not the pith ring and an absolute date cannot be assigned to it. A ring count is involved.

The symbols used with the outside date are:

- B - bark present
- G - beetle galleries are present on the surface of the specimen
- L - a characteristic surface patination and smoothness, which develops on beams stripped of bark, is present
- c - the outermost ring is continuous around the full circumference of the specimen. This symbol is used only if a full section is present
- r - less than a full section is present, but the outermost ring is continuous around available circumference
- v - a subjective judgment that, although there is no direct evidence of the true outside on the specimen, the date is within a very few years of being a cutting date
- vv - there is no way of estimating how far the last ring is from the true outside
- +
- ++ - one or more rings may be missing near the end of the ring series whose presence or absence cannot be determined because the specimen does not extend far enough to provide an adequate check
- ++ - a ring count is necessary due to the fact that beyond a certain point the specimen could not be dated

The symbols B, G, L, c and r indicate cutting dates in order of decreasing confidence, unless a + or ++ is also present.

The symbols L, G, and B may be used in any combination with each other or with the other symbols except v and vv. The r and c symbols are mutually exclusive, but may be used with L, G, B, + and ++. The v and vv are also mutually exclusive and may be used with the + and ++. The + and ++ are mutually exclusive but may be used in combination with all the other symbols.

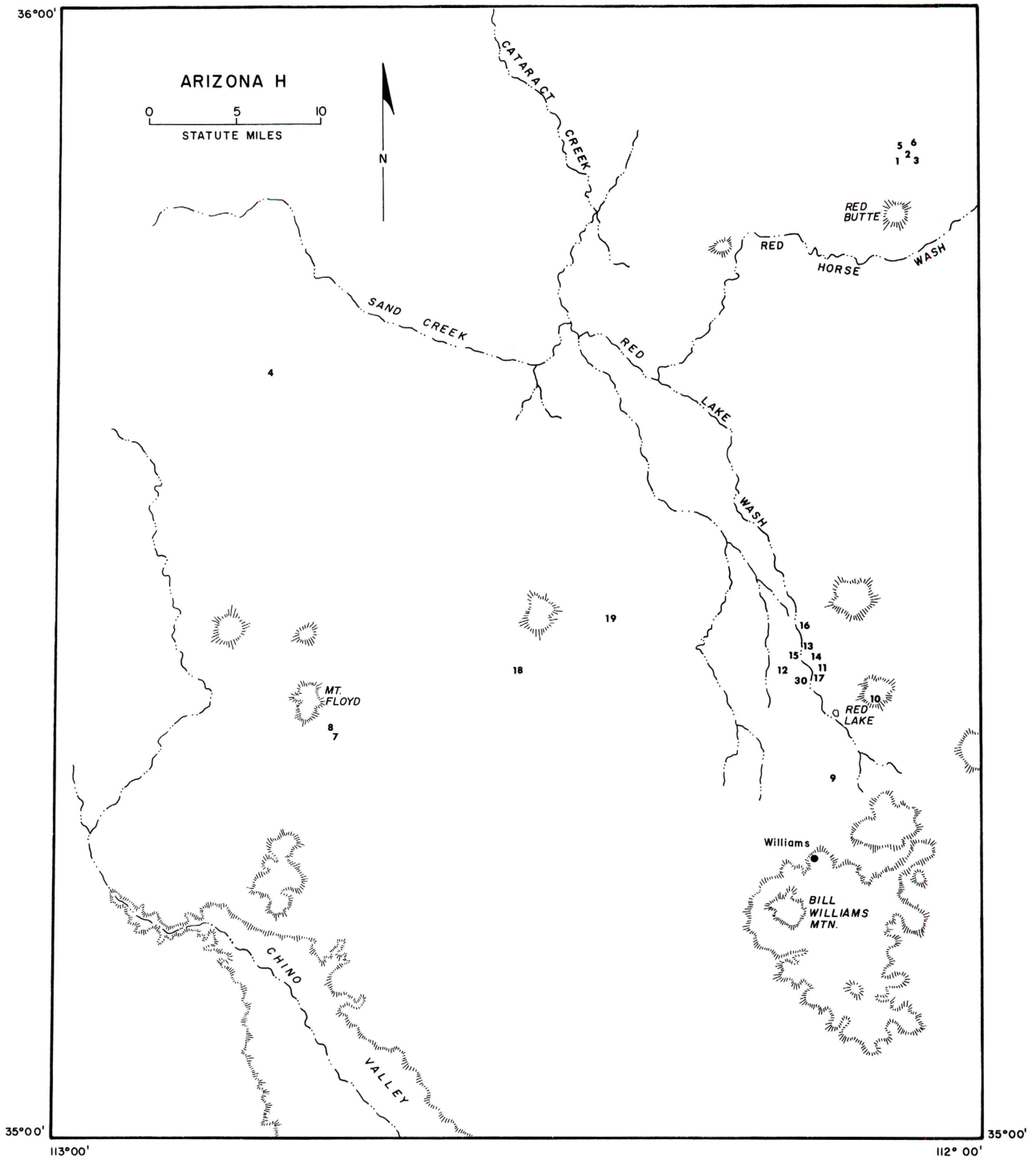


Figure 1. Location of Sites in Arizona H

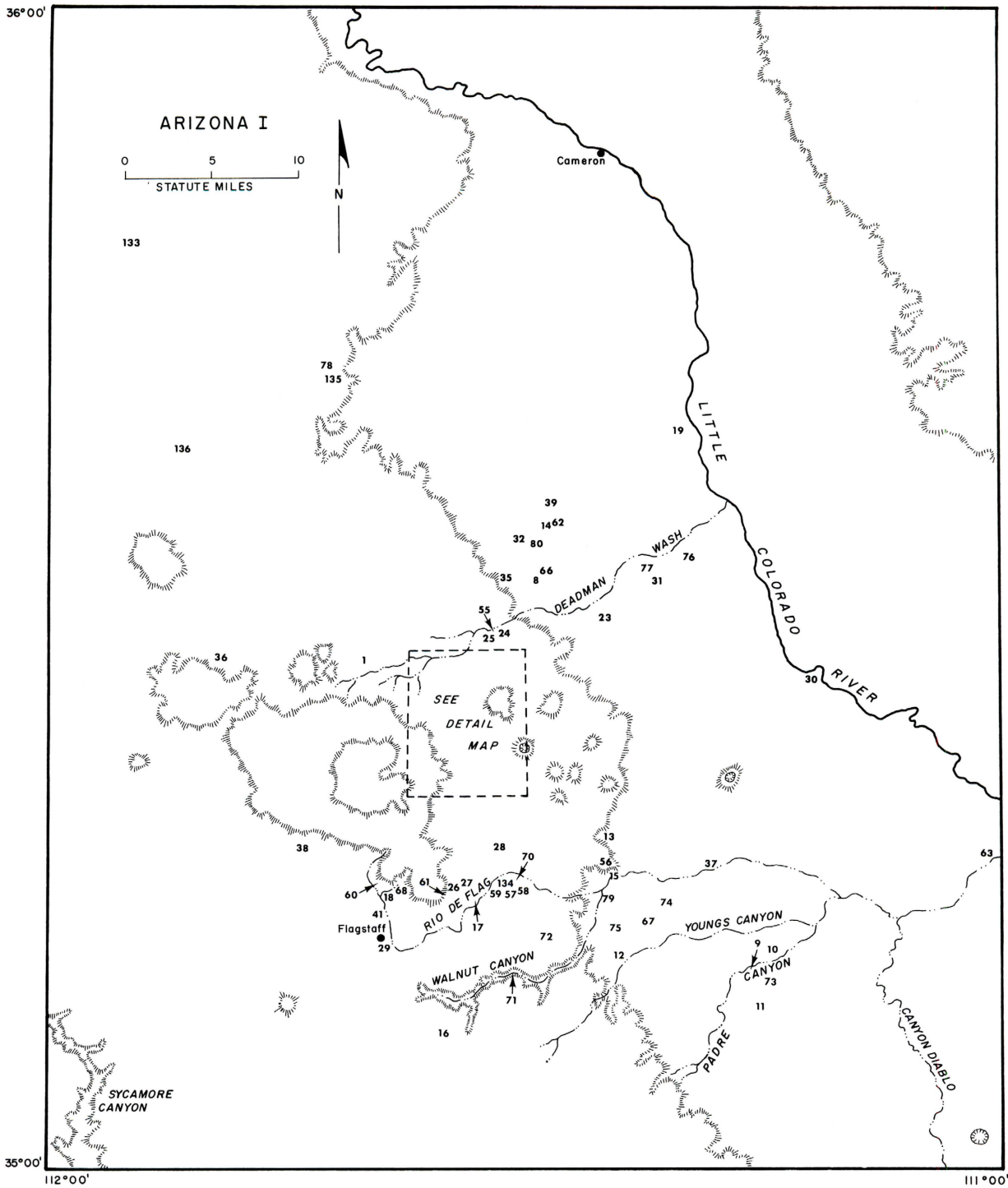


Figure 2. Location of Sites in Arizona I

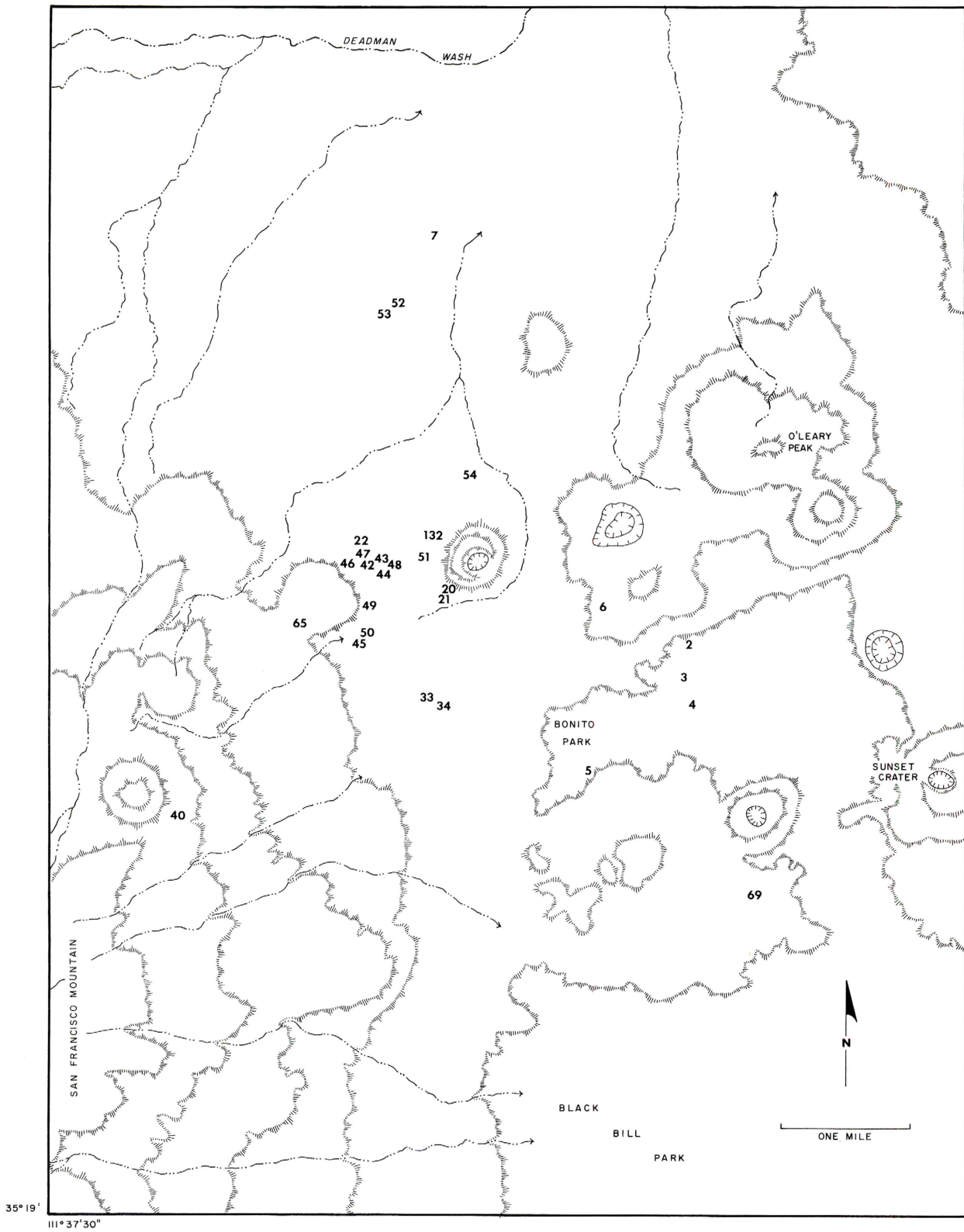


Figure 3. Location of Sites in Medicine Valley-Sunset Crater Area



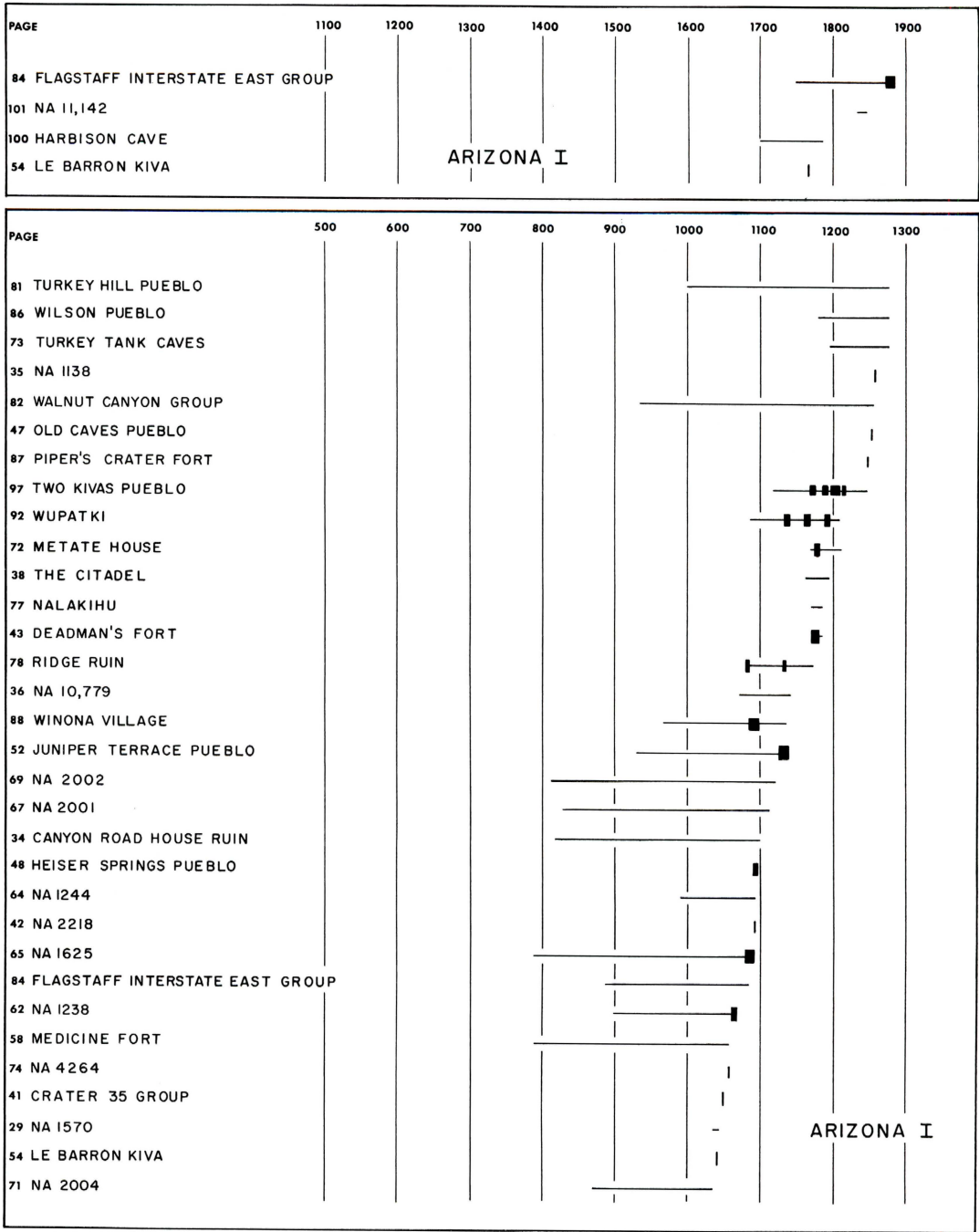


Figure 4. Sequence of Chronological Components in Arizona H and Arizona I. Horizontal lines indicate range of outside dates. Narrow vertical lines indicate single outside dates. Wide vertical bars indicate substantial clusters of dates in relation to total range and number of dates.

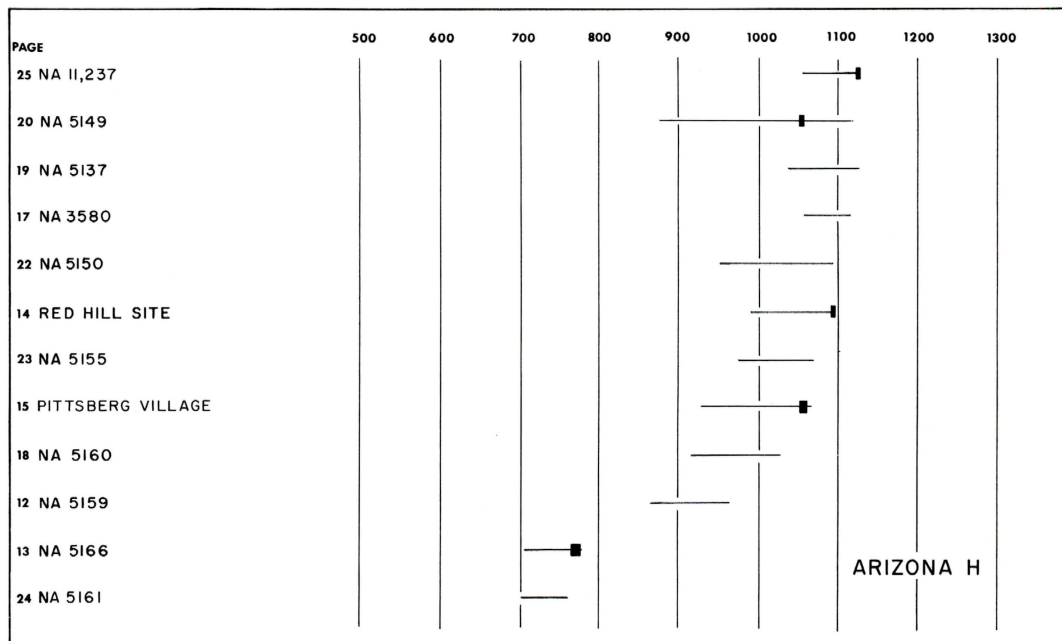
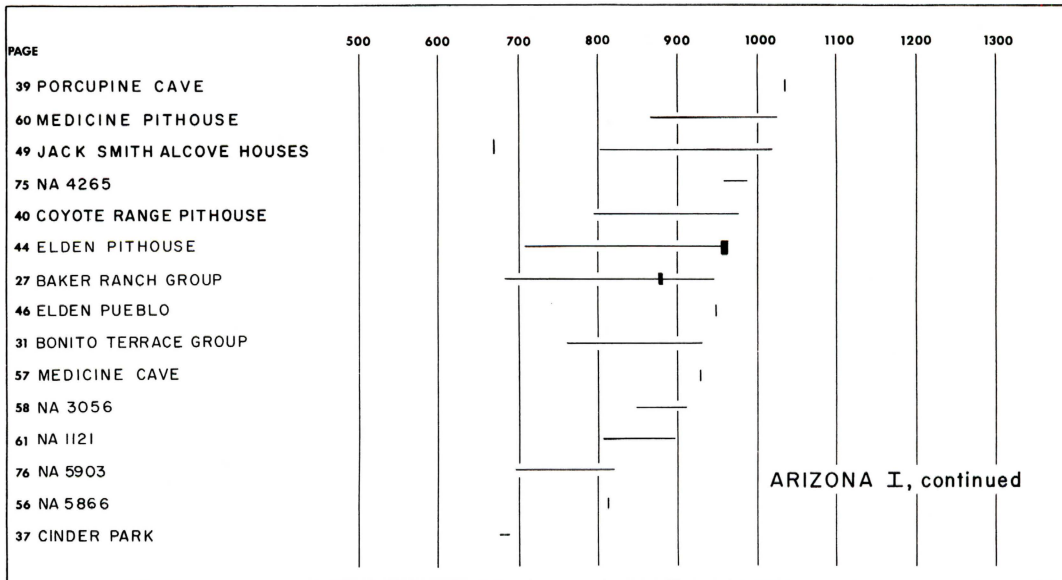


Figure 4, continued

TREE-RING DATES FROM ARCHAEOLOGICAL SITES

NA 5159

MAP REFERENCE: H-2

ALTERNATE NAME/NUMBER: None known

LOCATION:

NA 5159 is near Naylier Tank about three miles east of Arizona Route 64 and just north of Grand Canyon Airport in Coconino County, Arizona.

DESCRIPTION:

A small rectangular masonry surface room and an adjacent brush structure were the only features unearthed at NA 5159.

SOURCE OF COLLECTION:

Tree-ring samples were obtained for the Museum of Northern Arizona during excavations by the University of Illinois Field School in 1949 under the direction of John C. Mc.Gregor.

REFERENCES:

Site Description: Mc.Gregor 1951

Published Dates: Mc.Gregor 1951

DATES:

Miscellaneous Proveniences

F-5546	772p	-	863vv	F-5550	888fp	-	958vv
F-5549	862p	-	949vv	F-5551	889p	-	960vv
F-5923	927p	-	956vv	F-5547	853p	-	961vv

COMMENTS:

Mc.Gregor dated four samples falling in the same time range as those presented here. Re-analysis enabled identification of duplicates and the dating of some previously undated samples. These six non-cutting dates indicate occupation beginning no earlier than the end of the 10th century A.D.



MAP REFERENCE: H-3

ALTERNATE NAME/NUMBER: None known

LOCATION:

This site is near Naylier Tank about three miles east of Arizona Route 64 and northeast of Grand Canyon Airport in Coconino County, Arizona.

DESCRIPTION:

NA 5166 is a burned shallow circular pit house with evidence of at least three different floor levels.

SOURCE OF COLLECTION:

The University of Illinois Field School under the supervision of John C. Mc.Gregor collected tree-ring samples for the Museum of Northern Arizona in 1949.

REFERENCES:

Site Description: Mc.Gregor 1950, 1951

Published Dates: Mc.Gregor 1951; Smiley 1951

DATES:

Pithouse C

F-5896	0588p	-	0701vv	F-5888	0728	-	0770vv
F-5536	0656p	-	0729vv	F-5540	0731p	-	0770vv
F-5535	0624p	-	0730vv	F-5539	0704p	-	0772rB
F-5535-1	0685	-	0730vv	F-5875	0709	-	0773vv
F-5880A	0716p	-	0751vv	F-5545	0691p	-	0775vv
F-5879A	0681p	-	0755vv	F-5877	0716	-	0775vv
F-5542	0649p	-	0757vv	F-5879	0709p	-	0775r
F-5538	0678p	-	0762v	F-5544	0728p	-	0775r
F-5876	0715p	-	0768vv	F-5881	0730p	-	0775r
F-5874	0727p	-	0769vv	F-5882	0730p	-	0775r
F-5881A	0715p	-	0770vv				

COMMENTS:

Restudy of this collection more than doubled the number of dates over Mc.Gregor's original eight dated samples. Although the time span covered by the dates has changed negligibly, the new cluster of cutting dates at 775 argues convincingly for construction of this pit house at that time.

Red Hill Site

MAP REFERENCE: H-6

ALTERNATE NAME/NUMBER: NA 5168

LOCATION:

The site is on a small red hill one-half mile south of Miller Cabin Seep and just northeast of the Grand Canyon Airport in Coconino County, Arizona.

DESCRIPTION:

Although not completely excavated, the structure at this site consists of a shallow floor area of irregular outline containing considerable charcoal and burned structural material.

SOURCE OF COLLECTION:

The University of Illinois Field School under the direction of John C. Mc.Gregor collected tree-ring samples for the Museum of Northern Arizona in 1949.

REFERENCES:

Site Description: Mc.Gregor 1951

Published Dates: None

DATES:

Ramada

F-5797	0846	-	0993vv	F-5802	1017p	-	1074vv
F-5786	0843p	-	1009v	F-5809	1032p	-	1075vv
F-5567	0876p	-	1010++vv	F-5784-7	1047	-	1078vv
F-5798	0969	-	1028vv	F-5801	0998p	-	1082vv
F-5791	0848	-	1042vv	F-5569	0999p	-	1083vv
F-5784-6	1002	-	1042vv	F-5788	1013	-	1083vv
F-5800	0958p	-	1044vv	F-5792	0998p	-	1085vv
F-5568	0958p	-	1049vv	F-5785	1020	-	1088vv
F-5567-1	0960p	-	1050vv	F-5784-3	1021	-	1088vv
F-5793	0955p	-	1052vv	F-5784-5	1041	-	1089vv
F-5555	1005	-	1064vv	F-5784-2	1056p	-	1093r
F-5784-8	1031	-	1069vv	F-5784-1	1063p	-	1093r

COMMENTS:

Non-cutting dates in the late 1080s and cutting dates at 1093 suggest placement of construction at the end of the 11th century.

## Pittsberg Village

MAP REFERENCE: H-9

ALTERNATE NAME/NUMBER: NA 3577

LOCATION:

Pittsberg Village is on the northeast flank of Crater Number 297 about one-quarter mile east of Arizona Route 64 and four miles north of Williams in Coconino County, Arizona.

DESCRIPTION:

The central feature of this site is a large rectangular thick-walled masonry "fort" with four hearths, many postholes, and remains of a collapsed roof. Nearby structures include variously shaped houses of either timber or timber and masonry construction.

SOURCE OF COLLECTION:

Tree-ring samples were collected by the Museum of Northern Arizona in 1938 during excavations under the direction of L.L. Hargrave.

REFERENCES:

Site Description: Colton 1946; Hargrave 1938

Published Dates: None

DATES:

Structure A

F-5586 0845p - 0928r  
F-4713 0827 - 0926vv  
F-5610 0931fp - 0999vv  
F-5628 0998fp - 1037v  
F-4712 0988 - 1041vv  
F-4380 0978p - 1042vv  
F-5636 1006p - 1047v  
F-4703 0972p - 1050vv  
F-4711 0960 - 1051vv  
F-5631 0996p - 1051vv  
F-5607B 0991p - 1052vv  
F-4715 1015fp - 1052vv  
F-5584 0981p - 1052v  
F-5594 1015 - 1052r  
F-5573 0988 - 1053vv  
F-5627 0989 - 1053vv  
F-5589 1021p - 1054rB

Structure A, continued

F-5583 0984 - 1065v  
F-4378 0965p - 1065r

Structure B

F-5651 0994 - 1047vv

Structure C

F-5702 0871p - 0981vv  
F-5704 0861p - 0994vv  
F-5708 0970p - 1010vv  
F-5659 0988p - 1033vv  
F-5655 1000fp - 1035vv  
F-5654 0987fp - 1045vv  
F-5680 0980fp - 1062vv



Pittsberg Village, continued

DATES: continued

Structure D

F-5697 0834p - 0916vv  
F-4384 0866fp - 0952vv  
F-5721A 0919fp - 0958vv  
F-6776 0935p - 1012vv  
F-5678 0971p - 1016vv  
F-5718 0981 - 1019vv  
F-5714 0959p - 1022vv  
F-5665A 0988p - 1022vv  
F-5675 0986fp - 1025vv  
F-5685 0994p - 1035vv

Structure D, continued

F-6774 0987fp - 1037vv  
F-4388 0987 - 1044vv  
F-5686A 0966p - 1051rB  
F-5664 1019p - 1053r  
F-5683 0990fp - 1058vv

General

F-4395 0987 - 1050vv

COMMENTS:

The general lack of cutting dates precludes precise placement of Pittsberg Village, but the non-cutting dates as well as the few cutting dates terminate by A.D. 1065. This, together with the number of dates, suggests synchronous occupation and construction in the late 11th century.

MAP REFERENCE: H-10

ALTERNATE NAME/NUMBER: None known

LOCATION:

This site is on the lower south slope of Cinder Cone Number 291 (Cedar Mountain) three miles east of Arizona Route 64 and nine miles north of Williams in Coconino County, Arizona.

DESCRIPTION:

NA 3580 consists of an irregular rock outline marking a floor, but lacking any features.

SOURCE OF COLLECTION:

The Museum of Northern Arizona collected tree-ring samples in 1938 during excavations by L.L. Hargrave.

REFERENCES:

Site Description: Colton 1946

Published Dates: None

DATES:

Structure

F-5735	0994p - 1058vv	F-5730	1007p - 1087vv
F-5734	1006p - 1077vv	F-5728	1063p - 1104vv
F-5739	1036p - 1078vv	F-5741	1051 - 1117vv

COMMENTS:

The 60-year range in these six non-cutting dates makes precise temporal placement difficult. Occupation sometime in the early 1100s is probable.

NA 5160

MAP REFERENCE: H-11

ALTERNATE NAME/NUMBER: NA 5160A & B

LOCATION:

NA 5160 is on the north side of Red Lake Wash about one-half mile west of Arizona Route 64 and 12 miles north of Williams in Coconino County, Arizona.

DESCRIPTION:

This is a rockshelter which extends four meters beneath the overhanging ledge and contains 145 centimeters of cultural fill. It adjoins a nearly identical rockshelter designated NA 5161(H-17).

SOURCE OF COLLECTION:

Tree-ring samples were obtained for the Museum of Northern Arizona from a test pit excavated by the University of Illinois Field School in 1949.

REFERENCES:

Site Description: Mc.Gregor 1951

Published Dates: None

DATES:

Feature A	Feature A, <u>continued</u>
F-5753 0827p - 0917vv	F-5758 0901 - 0968vv
F-5752 0834 - 0924vv	F-5749-1 0937 - 0971vv
F-5749 0897fp - 0925vv	F-5771 0930p - 0985vv
F-5774 0852 - 0926vv	F-5769 0842p - 1023vv
F-5748 0860p - 0928vv	F-5757 0916p - 1027vv
F-5779 0823 - 0932vv	
F-5750 0841p - 0935vv	Feature B
F-5756 0852 - 0936vv	F-5781 0855p - 0938vv
F-5770 0871p - 0941vv	F-5780 0840p - 0957vv
F-5755 0857p - 0956vv	

COMMENTS:

Interpretation of these dates should be approached with caution as most of them are charcoal fragments from between 60 and 100 centimeters in the fill and may well represent the remains of firewood. The meaning of the proveniences is unclear since they are mentioned in the tree-ring catalog but not in the literature.



NA 5137

MAP REFERENCE: H-12

ALTERNATE NAME/NUMBER: NA 5137B, C, F, G, & H

LOCATION:

NA 5137 is on the north side of a tributary near the head of Red Lake Wash about two miles west of Arizona Route 64 and 12 miles north of Williams in Coconino County, Arizona.

DESCRIPTION:

Six surface brush structures with irregularly shaped floors comprise the features at this site. Several of the structures are delineated by crude boulder alignments.

SOURCE OF COLLECTION:

Excavations by the University of Illinois Field School in 1949 recovered tree-ring samples for the Museum of Northern Arizona.

REFERENCES:

Site Description: Mc.Gregor 1951

Published Dates: Mc.Gregor 1951

DATES:

Structure B

F-5566 1038p - 1102vv  
F-5564 1009 - 1120r  
F-5910 1082p - 1124r

Structure G

F-5916-1 0993p - 1049vv  
F-5916 1001p - 1081vv  
F-5916-3 1039p - 1110vv

Structure F

F-5920 1041p - 1084vv

Structure H

F-5918 0985p - 1037vv  
F-5917 0948p - 1082vv  
F-5918-1 1014fp - 1084vv

COMMENTS:

Two cutting dates in the 1120s indicate a probable construction of Structure B at that time. The dates from the other structures are all earlier non-cutting dates supporting occupations either contemporary with or slightly earlier than Structure B.

MAP REFERENCE: H-14

ALTERNATE NAME/NUMBER: None known

LOCATION:

NA 5149 is on the east side of Red Lake Wash about one mile west of Arizona Route 64 and 13 miles north of Williams in Coconino County, Arizona.

DESCRIPTION:

The site contains an irregularly defined ramada with an adjoining rectangular masonry room. A masonry roomblock of three long narrow rooms is adjacent to this room and ramada complex.

SOURCE OF COLLECTION:

Tree-ring samples were recovered by the University of Illinois Field School for the Museum of Northern Arizona in 1949.

REFERENCES:

Site Description: Mc.Gregor 1951

Published Dates: Mc.Gregor 1951

DATES:

Room 1

F-5847	0791p	-	0874vv
F-5557	0802p	-	0977++v
F-5847-2	0854p	-	1008v
F-5868	0862p	-	1013vv
F-5560	0874p	-	1017vv
F-5867	0975p	-	1024vv
F-5556	0838p	-	1026vv
F-5870	0978p	-	1028vv
F-5847-1	0865p	-	1029vv
F-5860	0871p	-	1041vv
F-6779	0982	-	1045vv
F-5561	0936	-	1048vv
F-5858	0931p	-	1049vv
F-5852	0987fp	-	1051vv
F-5563	0811±p	-	1054v

Room 1, continued

F-5845	0842p	-	1054v
F-5854-1	0818p	-	1054r
F-5559	0948p	-	1056v
F-5560-1	0966p	-	1056vv
F-5855	0969p	-	1057r
F-6777	0966fp	-	1060v
F-5558	0895±p	-	1062r
F-5844	1072p	-	1111r
F-5843	1041	-	1112rB
F-5842	1045p	-	1124rB

Room 5

F-5871	0968	-	1049vv
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COMMENTS:

The re-analysis changed the dating of Mc.Gregor's three previously dated samples and added considerably to the inventory of dates from this site. Most of the dates from Room 1, the ramada, are non-cutting dates falling in the first half of the 11th century. Cutting dates in the A.D. 1054 to 1062 range would suggest initial construction at that time. Three additional cutting dates in the first quarter of the 12th century might indicate a re-occupation. The single non-cutting date from Room 5 allows no further interpretation.

NA 5150

MAP REFERENCE: H-15

ALTERNATE NAME/NUMBER: NA 5150B

LOCATION:

NA 5150 is on the west side of Red Lake Wash two miles west of Arizona Route 64 and 13 miles north of Williams in Coconino County, Arizona.

DESCRIPTION:

The structure excavated at NA 5150 is a "patio house" consisting of two masonry surface rooms connected by a narrow passageway. One room is interpreted as a living room and the other as a work or activity area.

SOURCE OF COLLECTION:

Tree-ring samples were collected for the Museum of Northern Arizona by the University of Illinois Field School in 1949 under the direction of John C. Mc.Gregor. In 1973 additional material was obtained during re-excavation of the site by D.C. Fiero of the Museum of Northern Arizona.

REFERENCES:

Site Description: Mc.Gregor 1951

Published Dates: None

DATES:

NA 5150B

F-5899 0849p - 0952vv  
F-5901 0868 - 0967vv  
F-5898 0968fp - 1009vv  
F-5897 0988 - 1086+vv  
F-5900 1033p - 1096vv

NA 5150D

APS-2 0976p - 1052vv

COMMENTS:

There are no cutting dates from this site. The latest non-cutting date at 1096 might indicate an early 12th century occupation.



NA 5155

MAP REFERENCE: H-16

ALTERNATE NAME/NUMBER: None known

LOCATION:

This site is on a slope on the east side of Red Lake Wash about one mile west of Arizona Route 64 and 13 miles north of Williams in Coconino County, Arizona.

DESCRIPTION:

NA 5155 contains a poorly preserved surface structure or shallow pit house with an indistinct outline. Its floor was poorly defined and featureless.

SOURCE OF COLLECTION:

The University of Illinois Field School under the direction of John C. Mc.Gregor excavated this site in 1949 and recovered tree-ring samples for the Museum of Northern Arizona.

REFERENCES:

Site Description: Mc.Gregor 1951

Published Dates: None

DATES:

Miscellaneous Proveniences

F-5904-1 0924fp - 0974vv  
F-5904 0869p - 0993vv  
F-5908 1015p - 1070vv

COMMENTS:

These three non-cutting dates permit no further interpretation.

NA 5161

MAP REFERENCE: H-17

ALTERNATE NAME/NUMBER: NA 5161A, B, & C

LOCATION:

This is adjacent to NA 5160 on the north side of Red Lake Wash about one-half mile west of Arizona Route 64 and 12 miles north of Williams in Coconino County, Arizona.

DESCRIPTION:

This rockshelter extends four meters beneath a ledge and contains 145 centimeters of cultural fill. It adjoins NA 5160(H-11), a nearly identical rockshelter.

SOURCE OF COLLECTION:

Tree-ring samples were obtained for the Museum of Northern Arizona from a test pit excavated by the University of Illinois Field School in 1949.

REFERENCES:

Site Description: Mc.Gregor 1951

Published Dates: None

DATES:

NA 5161A

F-5832-1	0643	-	0700vv	F-5823-1	0697fp	-	0744vv
F-5831	0632±p	-	0707vv	F-5832	0679fp	-	0751vv
F-5821	0656fp	-	0722vv	F-5824	0622±p	-	0759vv
F-5823	0663p	-	0743vv				

COMMENTS:

These non-cutting dates all fall within the first 60 years of the eighth century. They were recovered from unknown depths of a test pit and lack precise provenience data, rendering further interpretation impossible.

NA 11,237

MAP REFERENCE: H-30

ALTERNATE NAME/NUMBER: None known

LOCATION:

NA 11,237 is on a flat ridgetop south of Red Lake Wash about 1.75 miles west of State Route 64 and 12 miles north of Williams in Coconino County, Arizona.

DESCRIPTION:

The eight limestone masonry rooms at this site exhibit a variety of shapes and construction techniques. Three of these are contiguous and the rest are single units. Two hearths and a firepit were also found in the site area.

SOURCE OF COLLECTION:

Tree-ring samples were collected in 1973 during excavation of the site by D.C. Fiero of the Museum of Northern Arizona.

REFERENCES:

Site Description: None

Published Dates: None

DATES:

Room 1

APS-19 0993p - 1065vv  
APS-20 1024p - 1081vv  
APS-22 1012p - 1084vv  
APS-15 1003p - 1090vv  
APS-16 1036p - 1094vv  
APS-17 0985p - 1101vv  
APS-14 1025p - 1111v

Room 5

APS-48 0958p - 1056vv  
APS-63 0961p - 1056vv  
APS-51 0989p - 1059vv  
APS-55 0949p - 1061vv  
APS-37 0965p - 1062vv  
APS-38 0974p - 1065+vv  
APS-58 0959p - 1068vv  
APS-69 0888p - 1074+vv

Room 5, continued

APS-32 0970±p - 1078vv  
APS-62 1008p - 1079vv  
APS-39 0934p - 1080vv  
APS-36 1036p - 1081vv  
APS-65 0859p - 1086vv  
APS-57 0967p - 1086vv  
APS-47 0990p - 1086vv  
APS-23 1004p - 1086vv  
APS-26 1004p - 1087vv  
APS-59 0960p - 1092vv  
APS-30 0962±p - 1098vv  
APS-43 1059p - 1100vv  
APS-33 0927p - 1102vv  
APS-52 0995p - 1102vv  
APS-25 1020p - 1103vv  
APS-40 0911p - 1105+vv  
APS-31 1050p - 1106vv  
APS-41 1016p - 1111+vv

NA 11,237, continued

DATES: continued

Room 5, continued

APS-46 0930±p - 1112vv  
APS-35 1032p - 1113vv  
APS-54 1054p - 1115vv  
APS-24 1031p - 1116vv  
APS-73 1003p - 1117vv  
APS-42 0989p - 1118vv  
APS-53 1064p - 1118v  
APS-64 1017p - 1119v  
APS-61 1051p - 1120r  
APS-50 0966p - 1122vv

Room 5, continued

APS-28 1091p - 1123r  
APS-27 1087p - 1123B  
APS-44 0991p - 1125r  
APS-70 1077p - 1128r  
APS-72 1080p - 1128r  
APS-71 1088p - 1128r

Room 8

APS-76 0969p - 1077vv

COMMENTS:

The cluster of cutting dates at A.D. 1128 suggests construction of Room 5 during or shortly after 1128. The dates from the two other proveniences are inconclusive, but would favor a late 11th or early 12th century occupation.



Baker Ranch Group

MAP REFERENCE: I-1

ALTERNATE NAME/NUMBER: NA 2551, NA 2797, NA 2798, NA 2800

LOCATION:

These sites are on the north side of the San Francisco Peaks about four miles west of the Deadman's Ranger Station and 18 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

The Baker Ranch Group consists of four sites. NA 2551, NA 2798, and NA 2800 each contain one timber pit house. NA 2797 consists of four contiguous surface rooms which were probably granaries.

SOURCE OF COLLECTION:

E.H. Spicer supervised the Museum of Northern Arizona excavations which recovered these tree-ring samples in 1934.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Mc.Gregor 1936a, 1936b; Spicer 1934

Published Dates: Colton 1939, 1946; Douglass 1936, 1938, 1947; Gladwin 1943, 1944; Harlan 1962; Mc.Gregor 1936a, 1936b, 1938a; Smiley 1951

DATES:

NA 2551

F-4040 0638p - 0686vv  
F-4050 0734fp - 0773vv  
F-3402 0730fp - 0805vv  
F-4036 0811p - 0888vv  
F-3976 0831fp - 0903vv

NA 2797

F-3953 0691p - 0731vv  
F-3960 0733fp - 0765vv

NA 2798

F-3983-2 0638fp - 0711vv  
F-3996 0691fp - 0749vv  
F-3984 0654p - 0771vv  
F-3993 0669fp - 0772vv

NA 2798, continued

F-4000 0697 - 0797+vv  
F-3992 0528fp - 0800vv  
F-4089 0714fp - 0802vv  
F-3995 0693fp - 0829vv  
F-4015 0784fp - 0838vv  
F-3997 0800fp - 0844vv  
F-4095 0818fp - 0882vv  
F-4097 0841fp - 0889vv  
F-4007 0864fp - 0911vv  
F-4020 0860fp - 0928r  
F-4003 0650fp - 0930vv  
F-4013 0877p - 0937r  
F-4102 0862p - 0942B  
F-3987 0891p - 0948r

Baker Ranch Group, continued

DATES: continued

NA 2800

F-4060	0623	-	0683vv
F-3415	0636p	-	0691vv
F-4053	0641p	-	0711vv
F-4052	0658p	-	0721vv
F-4073	0682	-	0721vv
F-4079	0647p	-	0747vv
F-4062	0734p	-	0792vv
F-4083	0789p	-	0845vv
F-4076	0799	-	0852vv
F-4078	0820p	-	0856vv

NA 2800, continued

F-4068	0800p	-	0865B
F-4058	0805p	-	0873+B
F-3416	0799p	-	0876vv
F-4080	0802p	-	0876+v
F-4070	0814p	-	0877vv
F-4069	0821p	-	0878r
F-4084	0840	-	0880vv
F-4072	0806p	-	0881vv
F-3412	0817p	-	0881v

COMMENTS:

NA 2551 was first dated by Douglass(1936) at A.D. 685 (this appears as a misprint in Mc.Gregor 1936a as 658). The present analysis dated five samples, all non-cutting dates ranging from A.D. 686 to 903. A probable 10th century occupation can be suggested for this pit house.

The dates from NA 2798, first dated by Douglass in 1936, have remained remarkably consistent within the upper limit of the range of dates and has been revised upward by only 21 years by the present analysis. Douglass' dates were A.D. 710 to 927, and the dates from the re-analysis are A.D. 911 to 948. Several cutting dates suggest construction of this pit house in the 920s to 940s.

The main change in the dating of NA 2800 is an increase in the number of samples dated. This has revised the upper limit of the range of dates from A.D. 792 to A.D. 881. Several scattered cutting dates between A.D. 865 and 881 favor an interpretation of construction activity in the late ninth century.

NA 1570

MAP REFERENCE: I-2

ALTERNATE NAME/NUMBER: NA 1570A & D

LOCATION:

NA 1570 is on Bonito Terrace about two miles west of Sunset Crater and 15 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

There are two separate groups of pit houses buried under cinders from Sunset Crater. Five pit houses were excavated, but only two are described. One is an oval timber pit house and the other is a rectangular timber pit house.

SOURCE OF COLLECTION:

Tree-ring samples were recovered in 1932 during excavations for the Museum of Northern Arizona under the direction of L.L. Hargrave.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Hargrave 1933; Mc.Gregor 1936b

Published Dates: Colton 1946; Gladwin 1943, 1944; Mc.Gregor 1932, 1938a; Smiley 1951

DATES:

NA 1570A, F111

NA 1570A, Floor

F-2435 1001fp - 1041vv

F-2446 1010fp - 1046vv

COMMENTS:

The total number of samples has been reduced from three to two because the sample dated by Mc.Gregor at A.D. 941 could not be confirmed by the re-analysis. These dates suggest an occupation of Pit House A sometime after A.D. 1046.

NA 1571

MAP REFERENCE: I-3

ALTERNATE NAME/NUMBER: NA 1571A

LOCATION:

This site is on Bonito Terrace about two miles west of Sunset Crater and 15 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

NA 1571 is a small pit house village buried under cinders from Sunset Crater. The limited testing in the site does not allow description of the architecture.

SOURCE OF COLLECTION:

L.L. Hargrave collected tree-ring samples for the Museum of Northern Arizona during test excavations in 1932.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Hargrave 1933

Published Dates: Harlan 1962

DATES:

No dates

COMMENTS:

Harlan(1962) previously dated two samples at A.D. 881 and A.D. 911, but these were not confirmed by the present project.



Bonito Terrace Group

MAP REFERENCE: I-4

ALTERNATE NAME/NUMBER: NA 1918, NA 1920, NA 1920B, NA 1922, NA 1922A & B,  
NA 1925, NA 1925B, NA 1926, NA 1926A, NA 1927,  
NA 1927A

LOCATION:

This group of sites is on Bonito Terrace near the west edge of the Bonito Lava Flow about two miles west of Sunset Crater, three miles east of U.S. Highway 89, and 13 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

These six Bonito Terrace sites all contain pre-eruptive timber pit houses. Most of these structures are roughly circular or sub-rectangular pit houses with a central firepit, a four-post roof support posthole pattern, and often a southeast oriented ventilator or entry.

SOURCE OF COLLECTION:

Tree-ring samples were recovered during excavations by L.L. Hargrave in 1931 and J.C. Mc.Gregor in 1935, both for the Museum of Northern Arizona.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Mc.Gregor 1935, 1936b  
Published Dates: Colton 1939, 1946; Douglass 1936, 1938; Gladwin 1943, 1944; Harlan 1962; Mc.Gregor 1936b, 1938a; Smiley 1951

DATES:

NA 1918		NA 1922, Pit House A
F-1645-2	0796fp - 0875vv	F-3490 0734fp - 0770vv F-3492 0810fp - 0845vv
NA 1920, Pit House B		NA 1925, Pit House B
F-1658	0713fp - 0760vv	F-2450 0675p - 0773vv
F-1662	0736fp - 0775vv	F-2444 0787p - 0832vv
F-1656	0770fp - 0816vv	F-2451 0803fp - 0834r
F-3463	0799p - 0841vv	
F-1674	0787p - 0843+vv	NA 1927, Pit House A
F-3466	0784fp - 0855vv	F-2454 0747fp - 0811vv
F-1651	0824p - 0866v	F-2463 0833fp - 0832vv
F-1667	0835fp - 0873vv	
F-1688	0820fp - 0873v	
F-1666	0826fp - 0874vv	

Bonito Terrace Group, continued

COMMENTS:

NA 1918 was previously undated, and the single non-cutting date provided by the present analysis suggests little more than a post-A.D. 875 construction date.

Pit House B at NA 1920 reveals 10 dates ranging from A.D. 760 to 874. The previous dating of a single sample was consistently published as A.D. 860 with the exception of its dating by Smiley (1951) at A.D. 859. Harlan's (1962) analysis dated 23 samples from A.D. 745 to 907, but the current project discovered many duplicates of samples and failed to confirm any date later than A.D. 874. Two probable cutting dates indicate construction activity in the 860s and 870s.

There are two dates from NA 1922, Pit House A. The only previous dating was by Harlan (1962) who dated two samples in the eighth century. These dates were not confirmed in the re-analysis and two previously undated samples provide the dates presented here.

NA 1925, Pit House B, currently has three dates of which one cutting date at A.D. 834 would argue for a middle ninth century occupation. Mc.Gregor had previously published two dates at A.D. 840 and 855, and Douglass dated two samples at A.D. 833 and 859. The inconsistency between the two groups is probably due to their dating different pieces of the same sample.

Pit House A at NA 1927 has two non-cutting dates, one of these, A.D. 932, being the very latest of this site cluster. A middle 10th century occupation of this pit house is probable.

MAP REFERENCE: I-6

ALTERNATE NAME/NUMBER: None known

LOCATION:

This site is north of Bonito Park, about two miles east of U.S. Highway 89, two and one-half miles northwest of Sunset Crater, and 14 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

The single excavated structure at this site consists of a rectangular timber pit house with a central clay-rimmed firepit, a four-post roof construction pattern, and an eastward oriented ventilator.

SOURCE OF COLLECTION:

W.W. Taylor collected tree-ring samples for the Museum of Northern Arizona during excavation of this structure in 1935.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Mc.Gregor 1935, 1936b

Published Dates: Harlan 1962

DATES:

Floor Fill

F-3443 0793fp - 0848vv

F-3450 0848fp - 0914vv

COMMENTS:

Harlan's single date at A.D. 812 could not be confirmed by re-analysis. Two previously undated samples could be dated, both of which are non-cutting dates and can only barely suggest an early to middle 10th century occupation.

Canyon Road House Ruin

MAP REFERENCE: I-7

ALTERNATE NAME/NUMBER: NA 192, NA 192B

LOCATION:

The site is on the south side of Deadman Flat immediately west of the junction of the Old Grand Canyon Road and U.S. Highway 89. It is 17 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a group of two pit houses, one timber and the other masonry, and an L-shaped masonry granary of three rooms.

SOURCE OF COLLECTION:

Tree-ring samples were recovered during excavation for the Museum of Northern Arizona under the direction of L.L. Hargrave in 1930.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Hargrave 1933

Published Dates: Colton 1946; Douglass 1936, 1938, 1947; Gladwin 1943, 1944; Harlan 1962; Mc.Gregor 1932, 1938a; Smiley 1951

DATES:

Room 2	No Provenience
F-829 0736fp - 0818vv	GP-1577 0909fp - 0992vv
F-1219 0889fp - 0921vv	F-783 1044p - 1093B
F-745 0845p - 0925vv	
F-824 0816fp - 0931vv	
F-1207 1065fp - 1097vv	
F-1172 1034fp - 1099vv	
F-1177 1043fp - 1109vv	

COMMENTS:

Previous dating was limited to only a few samples dating between A.D. 910 and A.D. 924. Harlan dated 16 samples between A.D. 1073 and A.D. 1106, but many of his dates were not confirmed by the present analysis. Room 2 may have been constructed sometime after 1109. Other cutting activity is indicated by the unprovenienced cutting date of A.D. 1093. No further comment is possible.



MAP REFERENCE: I-10

ALTERNATE NAME/NUMBER: None known

LOCATION:

The site is one mile from Canyon Padre, about one mile south of Hibbard Station and 25 miles east of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a cliff ruin. No other description is available.

SOURCE OF COLLECTION:

Tree-ring samples were collected by personnel from the Museum of Northern Arizona sometime in the early 1930s.

REFERENCES:

Site Description: None

Published Dates: None

DATES:

No Provenience

F-31 1158p - 1256+r

COMMENTS:

This single date may indicate a middle to late 13th century occupation for this poorly described cliff ruin.

NA 10,779

MAP REFERENCE: I-12

ALTERNATE NAME/NUMBER: None known

LOCATION:

This site is about one-quarter mile north of Young's Canyon, about one-quarter mile west of the power line substation, and one and one-half miles south of Winona in Coconino County, Arizona.

DESCRIPTION:

NA 10,779 is a five-room pueblo with four adjacent pit houses and a trash area.

SOURCE OF COLLECTION:

Tree-ring samples were collected in 1970 during excavation of this site by J. Mueller and B.G. Harrill for the Museum of Northern Arizona.

REFERENCES:

Site Description: None

Published Dates: None

DATES:

Pit House 1A

FLG-125-1 0901±p - 1069vv  
FLG-125-4 1005fp - 1076vv

Pit House 1B

FLG-119 1052p - 1106vv  
FLG-118 1051p - 1107±±vv  
FLG-105 1030p - 1141v

COMMENTS:

Pit House 1B appears to date to the middle 12th century, while Pit House 1A may date to the late 11th or early 12th century.

Cinder Park

MAP REFERENCE: I-13

ALTERNATE NAME/NUMBER: NA 3996

LOCATION:

The site is just east of the Arizona Public Service Transmission Line in the Cinder Basin area about 16 miles northeast of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

Three pit houses were revealed by the excavations. Two are oval, one is rectangular, and all have central firepits and lateral entries to the east.

SOURCE OF COLLECTION:

Tree-ring samples were obtained for the Museum of Northern Arizona in 1941 during excavations by Bryn Mawr College under the direction of F. de Laguna.

REFERENCES:

Site Description: Colton 1946; de Laguna 1942

Published Dates: Colton 1946 (only refers to tentative dates by Mc.Gregor)

DATES:

No Provenience

F-5340-2 0651fp - 0683vv

F-5271 0607p - 0688vv

F-5284 0636fp - 0688vv

COMMENTS:

The site number heading in Colton(1946) appears as a typographical error as NA 3696. All three dates are non-cutting dates, but might suggest occupation in the late seventh century.

## The Citadel

MAP REFERENCE: I-14

ALTERNATE NAME/NUMBER: NA 355, LA 422, Site No. 2(Barrett)

LOCATION:

The Citadel is on a residual lava mesa in Wupatki National Monument, 28 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a 30-room masonry pueblo constructed to conform to the irregularly-shaped mesa top. It is estimated to have stood at least two stories high in some portions, and a depression in the central plaza may be a kiva. The ceramic assemblage indicates the site to be of Kayenta affinity.

SOURCE OF COLLECTION:

In 1927 or 1928 tree-ring samples were collected by the Museum of Northern Arizona and by A.E. Douglass in 1928.

REFERENCES:

Site Description: Barrett 1927; Colton 1932a, 1946; Fewkes 1900, 1904a, 1904b

Published Dates: Colton 1946; Douglass 1929, 1935, 1938, 1947

DATES:

No Provenience

CIT-3 1136p - 1160r  
CIT-1 1144p - 1192rL

COMMENTS:

The date presented by Douglass(1935, 1938) at A.D. 1260 was probably a typographic error. The three dates published by Smiley(1951) were reduced to two dates because one was a duplicate. The two dates presented here establish a middle to late 12th century occupation. Lack of additional dates or provenience information prohibits any further interpretation.



Porcupine Cave

MAP REFERENCE: I-17

ALTERNATE NAME/NUMBER: NA 219

LOCATION:

Porcupine Cave is in the side of a basalt-walled canyon on the north bank of the Rio de Flag in Picture Canyon about seven miles northeast of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a four-room cavate dwelling.

SOURCE OF COLLECTION:

H.S. Colton collected tree-ring samples for the Museum of Northern Arizona about 1930.

REFERENCES:

Site Description: Colton 1932a, 1946

Published Dates: None

DATES:

No Provenience

COLC-1 1003fp - 1039vv

COMMENTS:

This single non-cutting date permits no further interpretation.

Coyote Range Pithouse

MAP REFERENCE: I-18

ALTERNATE NAME/NUMBER: NA 1959

LOCATION:

This pit house is on the east side of the Rio de Flag, east of U.S. Highway 180, about two miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This structure is a shallow subrectangular pit house with a four-post roof support posthole pattern and an eastward oriented ventilator.

SOURCE OF COLLECTION:

L.L. Hargrave of the Museum of Northern Arizona obtained tree-ring samples in 1932 during excavation of this structure.

REFERENCES:

Site Description: Colton 1946; Hargrave 1933

Published Dates: Colton 1946; Douglass 1936, 1938, 1947; Gladwin 1943, 1944; Smiley 1951

DATES:

No Provenience

F-2361	0733p	-	0796vv	F-2368	0900p	-	0954vv
F-2355	0727fp	-	0854vv	F-2377-2	0915fp	-	0959vv
F-2350	0789fp	-	0871++vv	F-2374	0824fp	-	0967vv
F-2382	0813fp	-	0907+vv	F-2365	0949fp	-	0978v
F-2371	0856fp	-	0933vv				

COMMENTS:

Re-analysis of this material revealed eight additional dates. The single sample originally dated by Douglass was extended from A.D. 784 to A.D. 796. The eight new dates range from A.D. 854 to A.D. 978 which extends the dating by almost 200 years beyond the original dating. The latest date of A.D. 978 would place the occupation of this pit house in the late 10th century. This site has been referred to in several published sources (Douglass 1938, Gladwin 1943, and Mc.Gregor 1938b) as "Sunset Crater" and "Sunset Pithouse," creating potential confusion with NA 1653 (I-69).

## Crater 35 Group

MAP REFERENCE: I-20

ALTERNATE NAME/NUMBER: NA 860, NA 860A, NA 1296, NA 1297, NA 1297B

LOCATION:

These three sites are on the rim of Crater 35 on the east side of Medicine Valley about one-quarter mile east of U.S. Highway 89 and about 14 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a series of three sites with rectangular timber-lined pit houses. NA 860A is a rectangular structure with a central firepit, and a southeast oriented ventilator. NA 1296 consists of two pit houses, one, a Pueblo II structure, superimposed on a deeper Basketmaker III structure. Another timber pit house occurs at NA 1297B, but it was not completely excavated.

SOURCE OF COLLECTION:

L.L. Hargrave obtained tree-ring samples for the Museum of Northern Arizona during excavation of these sites in 1930 and 1931.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Hargrave 1933;  
Mc.Gregor 1936a

Published Dates: None

DATES:

NA 1296, ventilator

F-1030 1014p - 1049r

COMMENTS:

The dated sample clearly comes from the Pueblo II pit house which was constructed on the Basketmaker III structure. This cutting date suggests a middle 11th century occupation of the pit house.

NA 2218

MAP REFERENCE: I-23

ALTERNATE NAME/NUMBER: None known

LOCATION:

The exact location of this site is not known. It is somewhere along Deadman Wash, north of Flagstaff, Coconino County, Arizona.

DESCRIPTION:

NA 2218 is a masonry pueblo of about 30 rooms.

SOURCE OF COLLECTION:

The circumstances of collection of these samples are uncertain. It is believed that H.S. Colton and J.C. Mc.Gregor collected them for the Museum of Northern Arizona in 1933 during excavations at the site.

REFERENCES:

Site Description: None

Published Dates: Harlan 1962

DATES:

No Provenience

F-2646 1037fp - 1094+vv

COMMENTS:

Re-analysis extended Harlan's(1962) outside date of A.D. 1088 to the date presented above. The lack of detailed information about the site allows no further interpretation of this single non-cutting date.



Deadman's Fort

MAP REFERENCE: I-24

ALTERNATE NAME/NUMBER: NA 1765, NA 1765A & B

LOCATION:

Deadman's Fort is on the north edge of Deadman Mesa, one and one-half miles east of U.S. Highway 89 and 20 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This site contains two structures. NA 1765A is a large parallelogram-shaped masonry structure, or "fort" with one meter thick walls. Twenty feet to the east is NA 1765B, a poorly constructed rectangular masonry room.

SOURCE OF COLLECTION:

L.L. Hargrave obtained tree-ring samples for the Museum of Northern Arizona during excavations in 1931.

REFERENCES:

Site Description: Colton 1932a, 1946

Published Dates: None

DATES:

NA 1765A

NA 1765B

F-2193-3 1114p - 1174v

F-2195-3 1130fp - 1172vv

F-2193-4 1117fp - 1174r

F-2195-2 1118fp - 1174vv

F-2193-7 1127fp - 1174r

F-2195-6 1158fp - 1183vv

F-2193-5 1151p - 1182r

COMMENTS:

The cluster of dates at A.D. 1174 indicate occupation of the "fort" by that year. The non-cutting dates from the masonry room place its occupation at about the same time. If the structures are not precisely contemporary, there is a possibility of borrowed timbers in one or the other of the two structures.

Elden Pithouse

MAP REFERENCE: I-26

ALTERNATE NAME/NUMBER: NA 1531

LOCATION:

This structure is one-half mile west of Elden Pueblo, west of U.S. Highway 89, and six miles northeast of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

Elden Pithouse is a deep timber pit house with a ventilator or ramp on its east side. It is round with a four-post roof support pattern.

SOURCE OF COLLECTION:

Tree-ring samples were collected during excavations by the Museum of Northern Arizona in 1932 under the direction of L.L. Hargrave. Re-excavation of the structure by D.A. Breternitz for the Museum of Northern Arizona in 1956 failed to recover additional samples.

REFERENCES:

Site Description: Breternitz 1957b; Colton 1946; Gladwin 1943; Mc.Gregor 1936a

Published Dates: Colton 1939, 1946; Douglass 1936, 1938, 1947; Gladwin 1943, 1944; Harlan 1962; Mc.Gregor 1936a, 1936b, 1938a; Smiley 1951

DATES:

No Provenience

F-2623	0633fp	-	0708vv	F-3064	0928p	-	0962vv
F-2612	0772p	-	0837vv	F-3073	0929p	-	0962vv
F-2613	0773p	-	0848vv	F-3093	0926p	-	0962v
F-3101	0935	-	0956vv	F-3085	0937	-	0963vv
F-3100	0933	-	0958vv	F-3088	0932p	-	0963v
F-3072	0924	-	0959vv	F-3094	0939fp	-	0963v
F-3076	0930p	-	0959vv	F-2621	0927p	-	0964vv
F-3087	0926p	-	0959v	F-3082	0941p	-	0964vv
F-2929	0928p	-	0960vv	F-2636	0933p	-	0964v
F-2637	0942p	-	0960vv	F-3061	0898p	-	0964r
F-2625	0930p	-	0961vv				

Elden Pithouse, continued

COMMENTS:

Mc.Gregor originally published three dates ranging from A.D. 708 to A.D. 855 which were cited in at least five successive publications. In 1947 Douglass extended the upper limit of this range to A.D. 963. The present study has not discovered any significant difference in the range, but the number of dated samples has increased. The date cluster between A.D. 958 and A.D. 964 provides good evidence for construction of this pit house at or shortly after A.D. 964.

## Elden Pueblo

MAP REFERENCE: I-27

ALTERNATE NAME/NUMBER: NA 142, LA 571, Arizona I:14:2(ASM), Arizona  
I:14:32(ASC), San Francisco Mtn. 14:2(GP), Sheep  
Hill Ruin, Pueblo 142

LOCATION:

The pueblo is immediately west of U.S. Highway 89, about one-half mile east of the base of Mt. Elden, and seven miles northeast of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

Elden Pueblo is a large masonry pueblo containing approximately 64 ground floor rooms, some of which are in smaller outlying mounds or room clusters. A cemetery area was located to the east of the pueblo during Fewkes' excavations in 1926.

SOURCE OF COLLECTION:

Most of the tree-ring samples from Elden Pueblo were collected from Fewkes' 1926 excavations for the Smithsonian Institution. Several additional samples were obtained by R.E. Kelly in 1966-68 during his excavations for Northern Arizona University and the Museum of Northern Arizona.

REFERENCES:

Site Description: Colton 1927, 1946; Colton and Colton 1918;  
Fewkes 1926, 1927; Hargrave 1929; Kelly 1970

Published Dates: Colton 1946; Douglass 1935, 1938, 1947; Harlan 1962;  
Smiley 1951

DATES:

No Provenience

EP-5      0795      - 0945+tvv

COMMENTS:

In 1935 Douglass published a date of A.D. 1162 for Elden Pueblo. Smiley(1951) revised the date of this sample to A.D. 1159, and Harlan (1962) again revised it to A.D. 1160. The dating of this sample could not be confirmed in the present analysis, and one previously undated sample now provides the only date from this site. This single non-cutting date allows no further comment.



## Old Caves Pueblo

MAP REFERENCE: I-28

ALTERNATE NAME/NUMBER: NA 72

LOCATION:

Old Caves Pueblo is on the south slope of a cinder cone known as Old Caves Crater about one-half mile east of U.S. 89 and overlooking Doney Park. It is about eight miles northeast of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a 70 to 80 room pueblo of which about two-thirds of the rooms have extensive storage rooms hollowed out of the partially cemented volcanic agglomerate underlying the site.

SOURCE OF COLLECTION:

R.E. Kelly of the Museum of Northern Arizona collected tree-ring samples in 1968 from the wall of a pothunted room.

REFERENCES:

Site Description: Colton 1932, 1946; Fewkes 1900

Published Dates: None

DATES:

No Provenience

FLG-80 1134fp - 1253+v

COMMENTS:

The ceramic assemblage from this site indicates it to be one of the latest in the Flagstaff area. This is partially supported by the late tree-ring date.

Heiser Springs Pueblo

MAP REFERENCE: I-31

ALTERNATE NAME/NUMBER: NA 1754

LOCATION:

This site is at the base of the east side of Woodhouse Mesa about one-half mile west of Heiser Springs in Wupatki National Monument about 26 miles northeast of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

Heiser Springs Pueblo consists of a three-room masonry surface pueblo and a circular masonry kiva with an encircling bench and eastern recess. Two rectangular masonry pit houses are probably slightly earlier. One of the pit houses is partly overlain by the pueblo.

SOURCE OF COLLECTION:

L.L. Hargrave of the Museum of Northern Arizona obtained tree-ring samples during excavation of the site in 1932.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Hargrave 1933

Published Dates: Harlan 1962

DATES:

Pit house southwest of kiva	No Provenience, <u>continued</u>
F-2245 1037 - 1094rB	F-2275 1009p - 1095B
	F-2324 1055p - 1096vv
No Provenience	F-2285 1038p - 1096r
	F-2316 1070p - 1096r
F-2339 1057p - 1094v	

COMMENTS:

Many of the samples dated by Harlan(1962) were duplicates of one log and several others could not be confirmed in the re-analysis. As they now stand the dates reveal a period of construction activity in the 1090s. Precise provenience information is not available on most of the samples so the temporal relationships between structures cannot be further defined.

Jack Smith Alcove Houses

MAP REFERENCE: I-33

ALTERNATE NAME/NUMBER: NA 408, NA 408A & B, NA 409, NA 1295,  
NA 1295A & B

LOCATION:

These structures are adjacent to Jack Smith Pithouse (I-34) about 300 feet south of Jack Smith Tank and one-quarter mile northeast of the junction of the Sunset Crater entrance road with U.S. Highway 89. They are 12 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

The Jack Smith Alcove Houses are a group of four alcove houses and one unidentified wooden structure. The alcove houses are all shallow rectangular or subrectangular pit houses with an east-oriented entry. They are entirely outlined on the surface by a single course of rock, and have a central firepit. A four-post roof support pattern is evident and numerous postholes are aligned along the base of the walls.

SOURCE OF COLLECTION:

L.L. Hargrave collected tree-ring samples during excavations for the Museum of Northern Arizona in 1931 and 1932.

REFERENCES:

Site Description: Colton 1932a, 1946; Gladwin 1943; Hargrave 1933;  
Mc.Gregor 1936b

Published Dates: Colton 1939, 1946; Douglass 1936, 1938; Gladwin  
1943, 1944; Harlan 1962; Mc.Gregor 1932, 1936b,  
1938a; Smiley 1951

DATES:

NA 408A		NA 1295A	
F-713	0863fp - 0898vv	F-2390	0580p - 0673vv
F-1011	0810 - 0908vv	F-2406	0759fp - 0807vv
F-832	0862p - 0911vv		
F-721	0864p - 0923vv		
F-1040	0970p - 1006vv		
F-1024	0964p - 1008vv		
F-717	0833p - 1014vv		
F-999	0964fp - 1022vv		

Jack Smith Alcove Houses, continued

COMMENTS:

Previous dating by Douglass and Mc.Gregor revealed an earlier range than could be confirmed by the present analysis. The obvious discrepancy in the dates published separately by Douglass and Mc.Gregor may be due to dating of different pieces of the same beam. Most of Harlan's 27 dates were dropped because of sample duplication. The eight dates come from two pit houses and are non-cutting dates with little interpretative value. For both structures the latest dates can be considered as the date of the earliest possible occupation.

Jack Smith Pithouse

MAP REFERENCE: I-34

ALTERNATE NAME/NUMBER: NA 1554, NA 1554A

LOCATION:

This site is about 300 feet south of Jack Smith Tank and about one-quarter mile northeast of the junction of the Sunset Crater Entrance Road with U.S. Highway 89. It is 12 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

Excavation of this pit house village revealed four timber pit houses and a large clay-lined pit. A masonry granary on the site was not excavated.

SOURCE OF COLLECTION:

Tree-ring samples were obtained during L.L. Hargrave's excavation of the site in 1930 for the Museum of Northern Arizona.

REFERENCES:

Site Description: Colton 1946

Published Dates: Colton 1946; Gladwin 1943, 1944; Mc.Gregor 1932

DATES:

No dates

COMMENTS:

Mc.Gregor(1932) published a date of A.D. 832 for this site. This date was not mentioned in later publications and could not be confirmed in the current project.



## Juniper Terrace Pueblo

MAP REFERENCE: I-35

ALTERNATE NAME/NUMBER: NA 1814A, B, C, D, E, & F

LOCATION:

This pueblo is on the edge of a lava terrace in Deadman Flat about two miles east of U.S. Highway 89 and 23 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a complex site containing two masonry pueblos(A & B), two masonry pit houses(E & F), an isolated rectangular masonry room with a banquette on two walls(D), and a timber pit house(C) probably belonging to an earlier occupation. The larger of the two pueblos is on the west side of the site and contains 10 ground floor rooms. The smaller pueblo on the east side originally had four rooms, but later partitioning of two of the rooms made a total of six rooms. The large rectangular pit house east of Pueblo A had also been partitioned into three rooms.

SOURCE OF COLLECTION:

Tree-ring samples were collected during excavations by the Museum of Northern Arizona under the direction of L.L. Hargrave in 1931-32. Additional excavation of Pit House E in 1948 by W. Smith for the Museum of Northern Arizona recovered additional samples.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Smith 1952

Published Dates: Colton 1946; Gladwin 1943, 1944; Mc.Gregor 1932, 1938a; Schulman 1950; Smiley 1951

DATES:

No Provenience

F-2015	0811fp	- 0927+vv	F-2102	1061p	- 1129r
F-2226	0819p	- 0928vv	F-2087	1070p	- 1129r
F-2016	0809p	- 0932vv	F-2088	1080p	- 1129r
F-2211	0830p	- 0942vv	F-2100	1080p	- 1129r
F-2106-6	1058p	- 1103vv	F-2105	1081p	- 1129r
F-2094	1053p	- 1128vv	F-2081	1085p	- 1129r
F-2214	1042p	- 1128+r	F-2101-2	1102fp	- 1129r
F-2106-3	1077p	- 1129vv	F-2215	1104p	- 1129r
F-2106-2	1062	- 1129v	F-2110	1081p	- 1131vv

Juniper Terrace Pueblo, continued

DATES: continued

No Provenience, continued

F-2186	1049p	- 1132+r	F-2189	1063p	- 1136+rB
F-5472-1	1046p	- 1133+v	F-5468	1074p	- 1137r
F-5469	1076p	- 1134+r	F-2112-3	1080p	- 1137r
F-2241	1085p	- 1135rB	F-2112-1	1112p	- 1138r
F-2196-1	1093fp	- 1136vv	F-5472-2	1096p	- 1139rB
F-2112-2	1079p	- 1136+r	F-2185	1103p	- 1139rB
F-2190	1087p	- 1136r			

COMMENTS:

The proveniences of the samples from this site are unintelligible due to changes in the provenience designations of site features. To avoid guesswork and further confusion, the dates are listed without these provenience designations. Unfortunately this limits the amount of chronological interpretation which might be possible for a site of this complexity. The group of four early to middle 10th century dates probably belong to the timber pit house (C). The rest of the dates all fall in the first half of the 12th century. Two periods of building activity are possibly represented, one at A.D. 1129, and the other at A.D. 1136-39.

Le Barron Kiva

MAP REFERENCE: I-37

ALTERNATE NAME/NUMBER: Le Barron Pithouse, NA 886

LOCATION:

This kiva is in an overhang in a lava flow on the north side of lower Walnut Canyon about five miles northeast of Winona in Coconino County, Arizona.

DESCRIPTION:

This is a rectangular kiva or "Padre" pit house with a ventilator on its south side. The intact roof consists of a single pine beam spanning the structure's length with smaller poles as stringers which are then covered with shakes as closing material.

SOURCE OF COLLECTION:

In 1930 H.S. Colton and A.E. Douglass obtained tree-ring samples for the Laboratory of Tree-Ring Research. Additional material was collected by personnel from the Museum of Northern Arizona in the early 1930s, and in 1951 H.S. Colton and K. Bartlett visited the site and again sampled it for the Museum of Northern Arizona. Several samples were also collected by P.J. Pilles of the Museum of Northern Arizona in 1969.

REFERENCES:

Site Description: Colton 1932a, 1946

Published Dates: None

DATES:

No Provenience

F-5987 1016p - 1042++v  
F-4883 1400p - 1764vv

COMMENTS:

Both of these dates are ambiguous. Lack of provenience information limits interpretation of the historic date, but it may be dead wood brought into the overhang in recent times.

Lomaki

MAP REFERENCE: I-39

ALTERNATE NAME/NUMBER: NA 379, Ruin J of Group A(Fewkes), Site Number  
43(Barrett)

LOCATION:

Lomaki is on the western edge of a small canyon about one mile northeast of the Citadel in Wupatki National Monument and 28 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is an eight- or nine-room limestone masonry pueblo with walls standing two stories high. Several small semi-circular rooms are present in the wall of the canyon adjacent to the ruin.

SOURCE OF COLLECTION:

The tree-ring samples were probably collected by A.E. Douglass for the Laboratory of Tree-Ring Research in 1927.

REFERENCES:

Site Description: Barrett 1927; Colton 1946; Fewkes 1900, 1904a

Published Dates: Colton 1946; Douglass 1929, 1935, 1938; Smiley 1951

DATES:

No dates

COMMENTS:

The sample dated by Douglass(1935, 1938) at A.D. 1192 could not be confirmed.

NA 5866

MAP REFERENCE: I-40

ALTERNATE NAME/NUMBER: McCormack Spring

LOCATION:

NA 5866 was in a sand pit at the base of Sugarloaf Mountain about two miles west of the junction of U.S. Highway 89 and the Schultz Pass Road, and 12 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a walled-in spring consisting of a catch basin lined with cobbles and covered with log cribbing chinked with flat slabs.

SOURCE OF COLLECTION:

A single tree-ring sample was collected by E.B. Danson and M.A. Wetherill of the Museum of Northern Arizona when they visited the site in 1957.

REFERENCES:

Site Description: None

Published Date: Harlan 1962

DATES:

No Provenience

F-6211 0717p - 0813vv

COMMENTS:

No interpretation is possible based on a single non-cutting date.



Medicine Cave

MAP REFERENCE: I-42

ALTERNATE NAME/NUMBER: NA 863

LOCATION:

Medicine Cave is under the broken edge of a lava flow near the head of Medicine Valley about a mile north of the Coconino Divide. It is 100 yards west of U.S. Highway 89 and 14 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a northwest facing cave under the edge of a lava ridge. It extends 27 feet back from the opening, is ten feet high, and measures 63 feet across the front. A crude wall of lava blocks defines the front of the occupation area.

SOURCE OF COLLECTION:

Byron Cummings excavated here for the University of Arizona in 1929 and obtained tree-ring samples at that time. Additional samples were collected during continuing excavation of the cave by the Museum of Northern Arizona in 1930.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Hargrave 1933;  
Mc.Gregor 1938b

Published Dates: Colton 1946; Gladwin 1943, 1944; Harlan 1962;  
Mc.Gregor 1932, 1938a; Smiley 1951

DATES:

2nd level firepit

F-88-1 0816fp - 0929vv

COMMENTS:

Samples from this cave were originally dated by Mc.Gregor(1932) at A.D. 1000 to 1025. In 1938 he published a single date of A.D. 1025, presumably one of the same samples as published in 1932. Since sample numbers were not published, it is impossible to determine whether this sample is still in the collection. Harlan's(1962) analysis dated a sample at A.D. 1076, but neither this nor the Mc.Gregor date could be confirmed. The single sample dated is a non-cutting date and it permits no further interpretation.

Medicine Fort

MAP REFERENCE: I-43

ALTERNATE NAME/NUMBER: NA 862, LA 536

LOCATION:

Medicine Fort is on a small lava ridge at the head of Medicine Valley just west of U.S. Highway 89 and less than one mile north of the Coconino Divide. It is 14 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a large thick-walled rectangular structure measuring about 40 by 55 feet with three long narrow rooms along its east side. The large rectangular "patio" is interpreted as being lined on all four sides by wood portals with an open area in the center. This interpretation has received some well-founded published criticisms.

SOURCE OF COLLECTION:

L.L. Hargrave obtained tree-ring samples during his excavations for the Museum of Northern Arizona in 1930.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943, 1944; Hargrave 1933

Published Dates: Colton 1939, 1946; Douglass 1936, 1938, 1947; Gladwin 1943, 1944; Harlan 1962; Mc.Gregor 1932, 1936b, 1938a

DATES:

Room East I

F-103 1021p - 1054r

Room East II

F-133 0971fp - 0995vv

F-179 0965p - 0996vv

F-181 0959 - 1033vv

F-124 0956fp - 1043r

Room East III

F-223 0737 - 0793vv

F-207 0787p - 0860vv

Room East III, continued

F-199 0843fp - 0918vv

F-235 0858fp - 0932vv

F-215 0993p - 1031vv

F-198 0954p - 1032vv

F-209 0970 - 1034vv

F-234 0978fp - 1043vv

F-201 0968p - 1049r

F-197 1002p - 1058r

F-228 1009p - 1059vv

F-205 0992p - 1059r

Medicine Fort, continued

DATES: continued

Room IV

F-246	0692	-	0789vv
F-319	0739fp	-	0827vv
F-310	0766np	-	0901vv
F-255	0979p	-	1010vv
F-244	0964p	-	1011vv
F-260	1004p	-	1028v
F-296	0995p	-	1032vv
F-253	0933p	-	1033++vv
F-265	0975fp	-	1045v
F-241	0986p	-	1047r

Room IV, continued

F-266	1003fp	-	1049vv
F-268	1030p	-	1052vv
F-278	1018p	-	1056vv
F-305	1006p	-	1060vv
F-274	1029p	-	1063vv

No Provenience

DMF-3	0963fp	-	1007vv
DMF-4	0993fp	-	1048v

COMMENTS:

In his attack on the Douglass method of tree-ring dating and the dating of the Medicine Valley sites, Gladwin(1944) singled out this site as one point of contention. Tree-ring dates had been published six times before 1944 beginning with Mc.Gregor's(1932) published range of A.D. 904 to 1060. These published dates did contain minor discrepancies, a point criticized by Gladwin, but none of the discrepancies were so great as to alter their interpretation. Some of the differences were probably due to Douglass and Mc.Gregor dating different pieces of the same samples (longer or shorter ring series). Apart from Gladwin's distrust of the Douglass method of dating, the thrust of the controversy was not so much one of dating as it was one of interpretation, or more aptly misinterpretation. It appears that Gladwin was attempting to demonstrate that Medicine Fort was not built before A.D. 1039, and that Mc.Gregor's 10th century dates were wrong. It seems clear from the published literature that no one ever claimed that it was built in the 10th century.

Using his own method of correlation, Gladwin analyzed fragments of seven samples which had been dated by Mc.Gregor. Gladwin found minor differences in five of the samples and contended that two of Mc.Gregor's 10th century dates actually belonged in the 11th century. The present analysis has determined that there was some inaccuracy in the dating of these seven samples on both Mc.Gregor's and Gladwin's part, but Mc.Gregor's dates more closely approximate the present dating.

The present dates range from A.D. 789 to 1063. A terminal date cluster at A.D. 1058 to 1063 would argue for construction near that time.

## Medicine Pithouse

MAP REFERENCE: I-44

ALTERNATE NAME/NUMBER: NA 1680

LOCATION:

This structure is about 40 feet east of Medicine Fort (I-43) on the rim of a lava ridge at the head of Medicine Valley within a mile of the Coconino Divide and just west of U.S. Highway 89. It is 14 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is an unusually large subrectangular timber pit house. It has a four-post roof support pattern and an entry or ventilator oriented to the east.

SOURCE OF COLLECTION:

Tree-ring samples were collected by L.L. Hargrave during excavations for the Museum of Northern Arizona in 1930.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Hargrave 1933;  
Mc.Gregor 1936b

Published Dates: Colton 1946; Douglass 1936, 1938; Gladwin 1943,  
1944; Harlan 1962; Mc.Gregor 1932, 1936b, 1938a;  
Smiley 1951

DATES:

Miscellaneous Proveniences

F-916 0784p - 0868vv  
F-903 0788±p - 0889vv  
F-892 0803p - 0890vv  
F-911 0937p - 1001vv

No Provenience

F-926 0881f - 0926v  
F-774 0879fp - 0939vv  
F-971 0956p - 1030vv

COMMENTS:

The date of A.D. 990 reported by Douglass(1936) is cited by Mc.Gregor(1938b) as a misprint for A.D. 909. Published dates prior to Harlan(1962) gave the latest date as A.D. 909. Harlan dated a sample at A.D. 1031, and this was revised to A.D. 1030 by the present analysis. Although there is a possible cutting date at A.D. 926, the two non-cutting dates at A.D. 1001 and 1030 would favor an occupation of this structure in the early to middle 11th century.



NA 1121

MAP REFERENCE: I-46

ALTERNATE NAME/NUMBER: None known

LOCATION:

NA 1121 is on the north side of a cinder cone about one-half mile west of U.S. Highway 89 at the head of Medicine Valley 14 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

The only available description of this site is a shallow timber pit house.

SOURCE OF COLLECTION:

L.L. Hargrave obtained tree-ring samples for the Museum of Northern Arizona during excavations in 1929-30.

REFERENCES:

Site Description: Colton 1946

Published Dates: Harlan 1962

DATES:

No Provenience

F-1502 0727 - 0805vv

F-1503 0806fp - 0898vv

COMMENTS:

Of the five samples dated by Harlan(1962), four could not be confirmed in the re-analysis. The fifth sample was extended by nine years to A.D. 898. One additional previously undated sample was dated at A.D. 805. The pit house may date to the 10th century A.D.



MAP REFERENCE: I-48

ALTERNATE NAME/NUMBER: None known

LOCATION:

This site is under U.S. Highway 89 about 100 yards northeast of Medicine Fort (I-43) 14 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This pit house is one of a group of four circular depressions of which two others were excavated as NA 1237. This pit house is square with a four-post roof support and an east oriented ventilator.

SOURCE OF COLLECTION:

Tree-ring samples were collected by L.L. Hargrave during excavation for the Museum of Northern Arizona in 1930.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943

Published Dates: Breternitz 1967; Colton 1939, 1946; Douglass 1938, 1947; Gladwin 1943, 1944; Harlan 1962; Mc.Gregor 1932, 1936b, 1938a; Smiley 1951

DATES:

Ventilator

F-433 0817fp - 0931vv  
 F-348 0959p - 1000vv  
 F-343 0959p - 1017vv  
 F-353 1009p - 1040vv  
 F-432 1020fp - 1047vv  
 F-363 1015fp - 1055vv  
 F-359 0965p - 1061B  
 F-349 0966fp - 1062+r  
 F-423 1007p - 1065vv  
 F-424 1020fp - 1066B  
 F-426 1007p - 1066rB  
 F-355 0997p - 1066rGB  
 F-414 1010p - 1068rB

Miscellaneous Proveniences

F-4160 0866fp - 0904vv  
 F-567 0805p - 0927vv  
 F-591 0874fp - 0955vv  
 F-476 0915fp - 0966vv  
 F-508 0945p - 0985vv  
 F-537 0938fp - 0987vv  
 F-496 0955p - 0995vv  
 F-506 0986fp - 1012vv  
 F-477 0928fp - 1020vv  
 F-694 0959p - 1043vv  
 F-664 0983fp - 1046v  
 F-650 0954p - 1062+v  
 DNP-1 0985p - 1064r  
 DNP-2 0997p - 1065vv  
 F-697 1000p - 1065rB  
 F-493 1024fp - 1066r

NA 1238, continued

DATES: continued

No Provenience

F-389	0876fp	-	0911vv
F-527	0869fp	-	0915vv
F-460	0957p	-	1051vv

COMMENTS:

The previous dating very closely approximates that of the present analysis. These 32 dates range from A.D. 904 to 1068 with a distinct terminal cluster at A.D. 1064-68. The single cutting date at A.D. 1068 would favor an interpretation of construction of the pit house about A.D. 1066 with repair in A.D. 1068. It is also conceivable that it could have been built in A.D. 1068 using trees which were cut or killed in A.D. 1066.

MAP REFERENCE: I-49

ALTERNATE NAME/NUMBER: NA 1244B

LOCATION:

NA 1244 is on the southeast base of Crater No. 34 just west of U.S. Highway 89 and 13 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a burned timber pit house with a four-post roof support, a central firepit and a ventilator.

SOURCE OF COLLECTION:

L.L. Hargrave of the Museum of Northern Arizona collected tree-ring samples during excavation of the pit house in 1931.

REFERENCES:

Site Description: Mc.Gregor 1932

Published Dates: Colton 1946; Gladwin 1943, 1944; Harlan 1962;  
Mc.Gregor 1932, 1938a; Smiley 1951

DATES:

Miscellaneous Proveniences

F-1763	0955fp - 0993vv
F-1725	0943p - 1011vv
F-1757	1026p - 1094rB

COMMENTS:

Previous analysis by Mc.Gregor dated this structure in the early ninth century and possibly as late as the middle 10th century. Harlan's(1962) analysis dated 13 samples to the 10th and 11th centuries, but the current analysis found most of these dates to be duplicates and reduced the total number of dated samples to three. The cutting date at A.D. 1094 may indicate the approximate construction date for this pit house.

NA 1625

MAP REFERENCE: I-51

ALTERNATE NAME/NUMBER: NA 1625A, B, & C, Arizona I:10:2(MNA)

LOCATION:

NA 1625 is within the confines of a Highway Department materials pit in Medicine Valley about 200 yards west of the base of Crater No. 36, one-quarter mile east of U.S. Highway 89, and 14 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

The site consists of two timber pit houses, Structures A and C, a wooden surface structure, Structure B, and a small trash deposit to the north of Structure A. The two timber pit houses are rectangular with an east or southeast oriented ventilator or entry. Floor features in Structure C were a central firepit and a four-post roof support posthole pattern. No floor features were located in Structure A. Structure B is a subrectangular slab-lined surface structure (probably a pit house) with a four-post roof support pattern, but lacking a firepit.

SOURCE OF COLLECTION:

In 1930 L.L. Hargrave excavated Structures B and C for the Museum of Northern Arizona at which time tree-ring samples were obtained. Additional excavations of Structure A and the trash mound were undertaken by C.H. Jennings for the Museum of Northern Arizona in 1967, but no tree-ring samples were collected at that time.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Hargrave 1933; Jennings 1968

Published Dates: Colton 1946; Douglass 1936, 1938, 1947; Gladwin 1943, 1944; Harlan 1962; Jennings 1968; Mc.Gregor 1932, 1936b, 1938a; Smiley 1951

DATES:

NA 1625B

F-732 0717p - 0788vv  
F-841 0947fp - 0982+vv  
F-734 0947fp - 1000vv  
F-1526 0996fp - 1031vv  
F-1615 0859fp - 1045vv

NA 1625C

F-1355 0715p - 0800vv  
F-1344 0771fp - 0811vv  
F-1335 0820fp - 0872vv  
F-1417 0816p - 0893vv  
F-865 0870fp - 0913vv  
F-844 0887fp - 0941vv

NA 1625, continued

DATES: continued

NA 1625C, continued

F-1343	0731fp - 0947vv	F-1137	1052p - 1086vv
F-1125	0933fp - 0959vv	F-813	1025p - 1091vv
F-1162	0932fp - 0962vv	F-1440	1033p - 1092vv
F-791	0871p - 0966vv	F-798	1060fp - 1092vv
F-792	0868p - 0973vv	F-810	1060fp - 1092vv
F-817	0923fp - 0997vv	F-854	1034p - 1092v
F-1453	0972fp - 1070r	F-808	1009 - 1092r
F-1430	1034p - 1072vv	F-1108	1032p - 1092r
F-797	1040p - 1072vv	F-1100	1044fp - 1093v
F-1118	1045p - 1076vv	F-1388	1056p - 1093v
F-1159	1044p - 1078vv	F-1371	1008p - 1093r
F-1263	1016fp - 1084vv	F-1379	1040p - 1093r

COMMENTS:

Douglass and Mc.Gregor were not in agreement on the previous dating of Structure B. Douglass dated one sample at A.D. 1045 while Mc.Gregor dated two samples at A.D. 879 and 927. Both sets of dates fall within the present range for that structure, the upper end still being A.D. 1045. They were in closer agreement on the dating of Structure C, but held the upper end of the range to the middle 900s. Harlan's(1962) work and the present re-analysis have revised the range upward to A.D. 1093.

The dates from Structure B are all non-cutting dates and do not allow determination of a construction date. This structure was probably built after A.D. 1045. The terminal cluster of cutting dates from Structure C places construction in A.D. 1093. One earlier cutting date at A.D. 1070 is evidence for either beam reuse or use of dead wood.



NA 1625, continued

DATES: continued

NA 1625C, continued

F-1343	0731fp - 0947vv	F-1137	1052p - 1086vv
F-1125	0933fp - 0959vv	F-813	1025p - 1091vv
F-1162	0932fp - 0962vv	F-1440	1033p - 1092vv
F-791	0871p - 0966vv	F-798	1060fp - 1092vv
F-792	0868p - 0973vv	F-810	1060fp - 1092vv
F-817	0923fp - 0997vv	F-854	1034p - 1092v
F-1453	0972fp - 1070r	F-808	1009 - 1092r
F-1430	1034p - 1072vv	F-1108	1032p - 1092r
F-797	1040p - 1072vv	F-1100	1044fp - 1093v
F-1118	1045p - 1076vv	F-1388	1056p - 1093v
F-1159	1044p - 1078vv	F-1371	1008p - 1093r
F-1263	1016fp - 1084vv	F-1379	1040p - 1093r

COMMENTS:

Douglass and Mc.Gregor were not in agreement on the previous dating of Structure B. Douglass dated one sample at A.D. 1045 while Mc.Gregor dated two samples at A.D. 879 and 927. Both sets of dates fall within the present range for that structure, the upper end still being A.D. 1045. They were in closer agreement on the dating of Structure C, but held the upper end of the range to the middle 900s. Harlan's(1962) work and the present re-analysis have revised the range upward to A.D. 1093.

The dates from Structure B are all non-cutting dates and do not allow determination of a construction date. This structure was probably built after A.D. 1045. The terminal cluster of cutting dates from Structure C places construction in A.D. 1093. One earlier cutting date at A.D. 1070 is evidence for either beam reuse or use of dead wood.

NA 2001

MAP REFERENCE: I-52

ALTERNATE NAME/NUMBER: NA 2001A & B

LOCATION:

This site is on a ridge in the lower end of Medicine Valley about one-half mile west of U.S. Highway 89 and 16 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

NA 2001 consists of two structures designated A and B which are among a group of pit house depressions and alcove houses designated as NA 2002. A shallow rectangular pit house with a long southeast oriented ventilator or entry comprises Structure A. Structure B is a rock-outlined surface structure of approximately the same size, but no further description of it is available.

SOURCE OF COLLECTION:

Tree-ring samples were recovered during excavations by the Museum of Northern Arizona in 1931 under the direction of L.L. Hargrave.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943; Mc.Gregor 1936b

Published Dates: Colton 1939, 1946; Douglass 1938, 1947; Gladwin 1943, 1944; Harlan 1962; Mc.Gregor 1932, 1936b, 1938a; Smiley 1951

DATES:

Miscellaneous Proveniences

No Provenience

F-1822 0790fp - 0827vv  
F-1789 0731 - 0828vv  
F-1792 0827fp - 0930vv  
F-2169 0925fp - 0963vv  
F-1780 0825p - 0977+v  
F-2171-1 0914fp - 0984vv  
F-1818 0881fp - 0987vv  
F-1787 0882fp - 0997vv  
F-1799 0850fp - 1020vv  
F-1811 1060p - 1114r

F-1770 0823p - 0964vv  
F-2159 0881fp - 0971vv  
F-1812 0945fp - 0988vv  
F-1969 0983fp - 1021vv

NA 2001, continued

COMMENTS:

This site, along with NA 2002, and Medicine Fort (NA 862), figured in Gladwin's (1944) attack on the Douglass method of dating and the dating of the Medicine Valley sites. Only one sample (F-1789) from this site was re-examined by Gladwin from which he derived a date of A.D. 825 which was in agreement with Mc.Gregor's date for that sample. The present analysis found this sample to have a non-cutting date of A.D. 828.

The original dating by Mc.Gregor provided a range of dates from A.D. 825 to 964. In 1938 Douglass extended this range to A.D. 1008. The current analysis dates 14 samples ranging from A.D. 827 to 1114. Most of these dates are probably from the pit house, Structure A, as it was the only structure described as fully excavated. However, Douglass' (1938) date of A.D. 1008 supposedly came from Structure B suggesting some testing may have been undertaken here. The single cutting date of A.D. 1114 may place construction at or shortly after that time.

NA 2002

MAP REFERENCE: I-53

ALTERNATE NAME/NUMBER: NA 2002A & B

LOCATION:

NA 2002 is adjacent to NA 2001 on a ridge at the lower end of Medicine Valley about one-half mile west of U.S. Highway 89, about 16 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

The site is part of a group of pit house depressions and outlines of alcove houses also designated as NA 2001. The two excavated structures are designated as A and B. Structure A is a shallow sub-rectangular pit house with a four-post roof support and a stepped entry on the east side. Structure B is a surface granary with no additional description available.

SOURCE OF COLLECTION:

L.L. Hargrave of the Museum of Northern Arizona supervised the 1931 excavations during which the tree-ring samples were collected.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943, 1944

Published Dates: Colton 1939, 1946; Douglass 1938, 1947; Gladwin 1943, 1944; Harlan 1962; Mc.Gregor 1932, 1936b, 1938a; Smiley 1951

DATES:

Pit House

F-1833 0716fp - 0805vv  
F-2209 0750fp - 0805vv  
F-1999 0719fp - 0806vv  
F-2001 0734fp - 0842vv  
F-2210 0805fp - 0856vv  
F-2011 0834fp - 0872vv  
F-1888 0826fp - 0881vv  
F-2055-2 0826fp - 0893vv  
F-2006 0841p - 0928vv  
F-2008 0886fp - 0940vv  
F-1832 0890p - 0941v  
F-1995 0857fp - 0945vv  
F-2045 0807fp - 0949vv  
F-2000 0885fp - 0959vv

Pit House, continued

F-2037 0887fp - 0962vv  
F-1942 0844p - 0964vv  
F-1986 0911fp - 0973vv  
F-1941 0846p - 0974vv  
F-2004-2 0927fp - 0978vv  
F-2009 0927fp - 0982vv  
F-1940 0759fp - 0986vv  
F-1925 0856fp - 0986vv  
F-1905 0865fp - 0988vv  
F-1866 0846fp - 0992vv  
F-2051 0901fp - 0992vv  
F-1949-2 0939fp - 0996vv  
F-1988 0918fp - 1024vv  
F-1981 0955fp - 1024vv

NA 2002, continued

DATES: continued

Pit House, continued

F-2065	0945fp - 1027vv
F-2047	0874fp - 1036vv
F-2061	0922fp - 1037vv
F-2048	0937fp - 1045vv
F-2030	0945fp - 1056vv
F-2208	0821fp - 1059vv
F-2053	0927fp - 1065vv
F-2003	0952fp - 1078vv
F-1976	0989fp - 1088vv
F-1881	0944fp - 1092vv
F-1977	0807 - 1096vv

Pit House, continued

F-1926-3	1072fp - 1104vv
F-1935	0946fp - 1105v
F-1851	0879fp - 1114+v
F-2031	0850fp - 1117vv
F-2046-3	1015fp - 1117vv
F-1917	0890fp - 1117v
F-1854	1060fp - 1118r
F-2055-3	1017fp - 1119vv
F-2034	0946fp - 1123vv
F-1897	0982fp - 1127+r

COMMENTS:

As with NA 862 and NA 2001, the dating of this site played a major role in Gladwin's(1944) attack on the Douglass method. Gladwin re-dated five samples which had been dated by Mc.Gregor, and Gladwin disagreed with Mc.Gregor and placed these samples into the early to middle 800s. Re-analysis of Mc.Gregor's samples and of the sections of them which he sent to Gladwin have determined that Gladwin's dates were incorrect. The present dates on these five samples vary from Mc.Gregor's dates by no more than 10 years.

Mc.Gregor's(1932) dates for this site provided a range from A.D. 912 to 1115. The present dates conform fairly closely, the upper limit having been extended by 12 years due to the dating of previously undated samples. All but one of the pre-1100 dates are non-cutting dates. The cluster of five dates at A.D. 1117 to 1119 might argue for construction activity at that time with occupation in the early to middle 12th century.



NA 2004

MAP REFERENCE: I-54

ALTERNATE NAME/NUMBER: Whistle House

LOCATION:

NA 2004 is in Medicine Valley about one-half mile east of U.S. Highway 89 and 14 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a group of eight pit houses and a granary of which one pit house and the granary were excavated. The pit house is rectangular with an entry in the northwest corner. It has a four-post roof support pattern, walls composed of small poles lined up side by side, and two firepits. The granary is undescribed.

SOURCE OF COLLECTION:

L.L. Hargrave collected tree-ring samples during excavations for the Museum of Northern Arizona in 1931.

REFERENCES:

Site Description: Colton 1946; Gladwin 1943

Published Dates: Colton 1946; Gladwin 1943, 1944; Harlan 1962; Mc.Gregor 1932; Smiley 1951

DATES:

NA 2004A

NA 2004B

F-2139-1 0822p - 0881vv  
F-2139-2 0865fp - 0907vv  
F-2130 0879fp - 0988vv  
F-2122 0855 - 0992vv  
F-2125 0866fp - 1000vv  
F-2140 0960p - 1001vv  
F-2136 0852fp - 1041vv

F-2237 0801p - 0876vv

COMMENTS:

The pit house was probably constructed sometime after A.D. 1041. The lack of cutting dates makes finer chronological interpretation impossible.

Metate House

MAP REFERENCE: I-55

ALTERNATE NAME/NUMBER: NA 1764, NA 1764A

LOCATION:

Metate House is on the north rim of Deadman Mesa about one and one-half miles east of U.S. Highway 89 and 20 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

The major features at this site are a rectangular two-room masonry surface structure, a rectangular masonry-lined pit house or kiva, and a stone circle of unknown function.

SOURCE OF COLLECTION:

Tree-ring samples were collected during excavations by L.L. Hargrave for the Museum of Northern Arizona in 1931.

REFERENCES:

Site Description: Colton 1932, 1946

Published Dates: None

DATES:

Room 2

F-2113-1 1154fp - 1188vv  
F-2115 1126p - 1192vv  
F-2173 1135±p - 1204vv  
F-2114 1162p - 1207v

No Provenience

F-2180-5 1136p - 1170vv  
F-2178-3 1139p - 1173r

No Provenience, continued

F-2183-1 1116p - 1174r  
F-2175-1 1119p - 1174r  
F-2117-1 1124p - 1174r  
F-2180-1 1128p - 1174r  
F-2176-2 1140p - 1175rB  
F-2179-1 1140p - 1183v  
F-2174 1162fp - 1198vv

COMMENTS:

A strong cluster of cutting dates indicates some construction activity on the site about A.D. 1175, but, unfortunately, few proveniences are known. Non-cutting dates from Room 2 suggest it was constructed in the early 1200s.

## Turkey Tank Caves

MAP REFERENCE: I-56

ALTERNATE NAME/NUMBER: Cosnino Caves(Whipple), Arizona I:15:2(ASM),  
NA 117

LOCATION:

Turkey Tank Caves are along the edge of a basaltic lava flow on the north bank of San Francisco Wash, one-half mile upstream from Turkey Tanks, three miles north of Winona and 14 miles east of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

The site is a series of 21 cavate dwellings excavated into a layer of volcanic agglomerate capped by basaltic lava flows. Most of the rooms are circular with a masonry wall and entry across their open side. Three have masonry antechambers outside the front of the cave opening.

SOURCE OF COLLECTION:

L.L. Hargrave collected tree-ring samples for the Museum of Northern Arizona during excavations in 1932.

REFERENCES:

Site Description: Colton 1946; Colton and Colton 1918; Fewkes 1900, 1904a

Published Dates: None

DATES:

NA 117S

NA 117V

F-2480 1032 - 1194vv

F-2476 1107fp - 1276v

COMMENTS:

The two dates support occupation in the 1200s as also indicated by the ceramic assemblage.

MAP REFERENCE: I-58

ALTERNATE NAME/NUMBER: None known

LOCATION:

This site is on a ridge on the north side of Turkey Hill along the El Paso Natural Gas Pipeline right-of-way. It is about one-half mile south of old U.S. Highway 66 and eight miles northeast of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a pit house village of which a single pit house and two rock-filled cooking pits were excavated.

SOURCE OF COLLECTION:

Tree-ring samples were collected during excavation of the site by F. Wendorf and F. Fenenga in 1953 for the Museum of Northern Arizona.

REFERENCES:

Site Description: Ezell 1956; Fenenga 1956

Published Dates: None

DATES:

No Provenience

F-6290 0848p - 1059vv

COMMENTS:

No interpretation is possible for this single non-cutting date.

NA 4265

MAP REFERENCE: I-59

ALTERNATE NAME/NUMBER: Page Site

LOCATION:

NA 4265 is north of Turkey Hill along the El Paso Natural Gas Company right-of-way about one-half mile south of old U.S. Highway 66 and about eight miles northeast of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

NA 4265 contains two pit houses, two depressions, and an area of sheet trash. No other description is available.

SOURCE OF COLLECTION:

Tree-ring samples were obtained from excavations at the site by the Museum of Northern Arizona in 1956 and 1966.

REFERENCES:

Site Description: None

Published Dates: None

DATES:

No Provenience

FLG-78 0845p - 0960vv

F-6182 0940fp - 0989vv

COMMENTS:

These two non-cutting dates would favor a late 10th to 11th century occupation. No further interpretation is possible.



NA 5903

MAP REFERENCE: I-60

ALTERNATE NAME/NUMBER: None known

LOCATION:

NA 5903 is in a pasture east of the Museum of Northern Arizona Research Center, 150 yards south of the Flagstaff Country Club, and about three miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a shallow rectangular pit house with a central firepit and a stepped alcove entry oriented to the southeast. The house is outlined by a single layer of basalt boulders.

SOURCE OF COLLECTION:

D.A. Breternitz collected tree-ring samples during excavations for the Museum of Northern Arizona in 1956.

REFERENCES:

Site Description: Breternitz 1957a

Published Dates: None

DATES:

Pit House

F-6133 0618p - 0697vv

F-6134 0759p - 0820vv

COMMENTS:

Two non-cutting dates allow no detailed interpretation.

Nalakihu

MAP REFERENCE: I-62

ALTERNATE NAME/NUMBER: NA 358, Ruin A in Group A(Fewkes), Site  
Number 7(Barrett)

LOCATION:

Nalakihu is at the foot of the north side of Citadel Butte in Wupatki National Monument, 28 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a small masonry pueblo of 10 ground floor rooms which probably had three or four second story rooms.

SOURCE OF COLLECTION:

D.S. King collected tree-ring samples in 1933 and 1934 during excavations for the Civil Works Administration through the Museum of Northern Arizona and the National Park Service.

REFERENCES:

Site Description: Colton 1946; Fewkes 1900, 1904a, 1904b, King 1949

Published Dates: Colton 1946; Harlan 1962; King 1949; Mc.Gregor 1936b, 1936c, 1938a; Smiley 1951

DATES:

Room 3

No Provenience

F-3286 1113p - 1169vv

F-4268 1116p - 1183r

COMMENTS:

In 1936 two publications by Mc.Gregor listed dates from Nalakihu. One of these(1936b) lists 11 dates ranging from A.D. 1156 to 1260(the site number appears incorrectly as NA 538), while the other(1936c) lists a single date at A.D. 1183. Two years later Mc.Gregor(1938a) published eight dates at A.D. 1183. Smiley(1951) reduced this to one date at A.D. 1183 because the other seven dates were found to be duplicates of the same sample. Harlan's(1962) analysis dated six samples from A.D. 1173 to 1183, but only one of his dates could be confirmed by the present study. The two dates from Nalakihu suggest it was occupied in the 12th century.

## Ridge Ruin

MAP REFERENCE: I-67

ALTERNATE NAME/NUMBER: NA 1785, NA 3673, NA 3673T, NA 3674, 3674R

LOCATION:

The Ridge Ruin is on a small cinder cone about two miles northeast of Winona and 15 miles east of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

The ruin is a masonry pueblo of at least 20 ground floor rooms which is surrounded by five masonry-lined pit houses. Sandstone slab masonry with sandstone spall and sherd chinking characterize much of the pueblo's construction, but crude basalt boulder walls are also present. The pit houses are interpreted as belonging to an earlier occupation. One-half mile northeast of the pueblo is NA 3673T, a trash mound, and 3674R, an incompletely excavated pit house.

SOURCE OF COLLECTION:

J.C. Mc.Gregor and M. Wetherill obtained tree-ring samples in 1939 during excavations by the Museum of Northern Arizona as part of a Works Progress Administration Project.

REFERENCES:

Site Description: Colton 1946; Mc.Gregor 1941

Published Dates: Colton 1946; Douglass 1947; Harlan 1962; Mc.Gregor 1941; Smiley 1951

DATES:

NA 1785, Room 6

F-4810	1049p	-	1097vv
F-4842	1052fp	-	1101++r
F-4827	1043p	-	1101+r
F-4833	1070p	-	1103vv
F-4840	1036p	-	1103++r
F-4732	1041p	-	1107+r
F-4814	1050p	-	1107+r
F-4844	1058p	-	1110vv
F-4845	1044fp	-	1111vv
F-4758	1041p	-	1112++r
F-4824	1079p	-	1115vv

NA 1785, Room 6, continued

F-4733	1048p	-	1116v
F-4809	1075p	-	1116v
F-4737	1046p	-	1116+r
F-4836	1055p	-	1123vv
F-4739	1048p	-	1124++r
F-4774	1050	-	1128r
F-4829	1085p	-	1129v
F-4730	1002p	-	1129+rB
F-4808	1065p	-	1133B
F-4770	1049p	-	1135r
F-4731	1091p	-	1135r

Ridge Ruin, continued

DATES: continued

NA 1785, Room 8

F-4778 1053p - 1137++B  
F-4727 1070p - 1150vv  
F-4754 1117p - 1155v  
F-4749 1139p - 1173vv

NA 1785, Room 11

F-4783 1058p - 1092r  
F-4856 1048p - 1107++r  
F-4725 1056fp - 1109++r  
F-4757 1031p - 1117r  
F-4790 1034p - 1128r

NA 3673T

F-4753 1042p - 1075vv  
F-4846 1048p - 1080v  
F-4874 0998p - 1080vv  
F-4850 1049p - 1080r  
F-4855 1030p - 1081r

NA 3674R

F-4860 1056p - 1081vv  
F-4861 1055p - 1082vv

COMMENTS:

The current study has increased the total number of dated samples from Ridge Ruin, but the upper limit of the range of dates has not varied from Mc.Gregor's(1941) original dating. The dates from NA 3673T have been slightly modified, and two of the previously undated samples from NA 3674R have been dated.

It appears that Room 6 at the Ridge Ruin was constructed about A.D. 1135, possibly using elements from some slightly earlier structures. Mc.Gregor(1941) considered this to be the earliest room in the site-- it is also the only completely excavated room. Room 11 is adjacent to Room 6 and has its latest cutting date at A.D. 1128. A non-cutting date of A.D. 1173 from Room 8 is the latest date, but its context in the room is uncertain and any further interpretation would be hazardous.

The dates from the trash mound at NA 3673 indicate some kind of activity around A.D. 1080-81. There are only two dates from the partially excavated pit house, NA 3674R. These might suggest a post-A.D. 1082 occupation.

Sunset Pithouse

MAP REFERENCE: I-69

ALTERNATE NAME/NUMBER: NA 1653, NA 1653A & B

LOCATION:

This site occupies the top of a small hill about two miles southwest of Sunset Crater and 14 miles northeast of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

Three pit houses were discovered here: one is superimposed on another shallower, earlier structure, and a third is a short distance from these first two. The later of the two superimposed structures is oval with a firepit, ventilator, and numerous postholes. The earlier pit house which this cuts through was nearly obliterated by construction activity. The third pit house was not completely excavated and its configuration is not known.

SOURCE OF COLLECTION:

Tree-ring samples were collected in 1930 during excavations by L.L. Hargrave for the Museum of Northern Arizona.

REFERENCES:

Site Description: Colton 1946

Published Dates: Gladwin 1943, 1944 (appears as NA 1652 following Mc.Gregor error); Mc.Gregor 1932 (typographical error printed as NA 1652B)

DATES:

No dates

COMMENTS:

The date published by Mc.Gregor(1932) under the designation NA 1652B (a typographical error) could not be confirmed in the re-analysis. There is some confusion in the literature concerning the name "Sunset Pithouse." This name has been applied to NA 1959(I-18) by Mc.Gregor (1938b) and Gladwin(1943). Douglass(1938) lists NA 1959 under the name "Sunset Crater."



Turkey Hill Pueblo

MAP REFERENCE: I-70

ALTERNATE NAME/NUMBER: NA 660, Arizona I:14:1(ASM), LA 417, Clarke's  
Ruin

LOCATION:

This pueblo is just north of the base of Turkey Hill one-quarter mile south of old Highway 66 and eight miles northeast of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

The large masonry pueblo contains 22 ground floor rooms which originally supported second story rooms in several sections. A court area to the east of the main unit contains a rectangular chamber or "Padre phase pit house." An earlier series of single story structures is located to the north and east of the court.

SOURCE OF COLLECTION:

The pueblo was excavated in 1927 and 1928 by Byron Cummings for the University of Arizona. Tree-ring samples presumably were collected during or shortly after these excavations.

REFERENCES:

Site Description: Colton 1946; Cummings 1930

Published Dates: Colton 1946; Douglass 1929, 1935, 1938, 1947;  
Harlan 1962; Smiley 1951

DATES:

No Provenience

THP-10	0950p	- 0997+vv	THP-1-1	1223p	- 1277vv
THP-9	1123p	- 1168r	THP-1-2	1232p	- 1278vv

COMMENTS:

Although the total number of dated samples has been reduced by the present analysis, the latest dated sample remains at A.D. 1278 as originally published by Douglass(1935). A non-cutting date of A.D. 997 pushes back the earlier end of the range of dates. Lack of provenience data does not allow finer interpretation of the site's chronological parameters.

## Walnut Canyon Group

MAP REFERENCE: I-71

ALTERNATE NAME/NUMBER: NA 310, NA 323, NA 333, NA 334, NA 334C,  
NA 730, NA 739, NA 739A & B, NA 5607

LOCATION:

This group of sites is in Walnut Canyon National Monument 10 miles southeast of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a series of long undercut ledges in the Kaibab Limestone which were walled with limestone masonry and partitioned into rooms. The sites range in size from one to 16 rooms.

SOURCE OF COLLECTION:

L.L. Hargrave collected tree-ring samples from NA 739 for the Museum of Northern Arizona in 1932. Additional samples have been collected at various times since 1932.

REFERENCES:

Site Description: Colton 1932a, 1932b, 1946; Euler and Olson 1965; Olson 1966

Published Dates: Colton 1946; Douglass 1947; Harlan 1962; Mc.Gregor 1932, 1936b, 1938a; Schulman 1950; Smiley 1951

DATES:

NA 310			NA 730		
F-2353	0791	-	0935vv	WAL-3	1170fp - 1210vv
NA 323			NA 739		
F-1611	1112fp	-	1206rL	WAL-5	1112fp - 1152vv
				AIM-10	1071fp - 1255vv
NA 333			NA 739A		
F-3683	1010fp	-	1188+vv	F-2385	1029fp - 1070vv
NA 334C				F-2386	1063fp - 1092vv
WAL-4	0981fp	-	1184vv		

Walnut Canyon Group, continued

COMMENTS:

The three dates in the 1200s, one a cutting date, confirm occupation into the middle 13th century. The non-cutting dates ranging from the late 11th to late 12th centuries suggest possible occupation at that time also. The scarcity and nature of the dates prohibits further interpretation of the chronological parameters of these sites.

## Flagstaff Interstate East Group

MAP REFERENCE: I-72

ALTERNATE NAME/NUMBER: NA 8507, NA 8527, NA 8529, NA 8717, NA 8717A,  
NA 8722, NA 8723, NA 8725, NA 8727, NA 8735,  
NA 8736, NA 8737

LOCATION:

These sites are in the Interstate 40 right-of-way between the Flagstaff city limits and Winona in Coconino County, Arizona.

DESCRIPTION:

The group contains eight small prehistoric sites consisting of several-room pueblo units or pit houses, one lithic scatter associated with an area of charcoal, and two historic one-room log cabins.

SOURCE OF COLLECTION:

The Museum of Northern Arizona obtained tree-ring samples during excavation of these sites in 1965.

REFERENCES:

Site Description: Skinner 1967

Published Dates: Skinner 1967

DATES:

NA 8507			NA 8717A, Room 1, <u>continued</u>
FLG-9	0703±	- 1009++vv	FLC-16 1863p - 1881r
			FLC-12 1770p - 1881rB
NA 8717A, Room 1			NA 8723, Pithouse 2
FLC-6	1698p	- 1745vv	FLG-25 0939 - 0987vv
FLC-4	1764p	- 1815vv	FLG-29 1036p - 1083vv
FLC-21	1715p	- 1834++rB	FLG-28 1046p - 1084vv
FLC-17	1753p	- 1857++r	
FLC-15	1837p	- 1879+v	NA 8723, Pithouse 3
FLC-8	1814	- 1880v	FLG-30 0835p - 0893vv
FLC-7	1829	- 1880+B	
FLC-14	1842p	- 1880+B	NA 8735, Pithouse 1
FLC-29	1843p	- 1880+B	FLG-51 0962p - 1001vv
FLC-5	1754p	- 1881+vv	FLG-48 0943p - 1012vv
FLC-25	1665	- 1881v	
FLC-13	1835p	- 1881v	
FLC-19	1844p	- 1881v	

Flagstaff Interstate East Group, continued

DATES: continued

NA 8736

NA 8737, Pithouse 1

FLC-1 1800p - 1882rL

FLG-70 0859 - 1004vv

COMMENTS:

The dates from the prehistoric sites (NA 8507, 8723, 8735, and 8737) are all non-cutting dates and allow no further interpretation. One of the historic log cabins yielded a cluster of cutting dates at A.D. 1881 indicating construction in 1881 or 1882. The log cabin at NA 8736 was probably constructed in 1882.



Wilson Pueblo

MAP REFERENCE: I-73

ALTERNATE NAME/NUMBER: NA 1139

LOCATION:

Wilson Pueblo is 26 miles east of Flagstaff and one-half mile north of U.S. Highway 66 in Coconino County, Arizona.

DESCRIPTION:

This is a north-south aligned five-room masonry pueblo with wing walls at each end. Its central room may have supported a second story. Beneath the pueblo were the remains of an earlier structure with an oval clay floor and two firepits.

SOURCE OF COLLECTION:

L.L. Hargrave obtained tree-ring samples for the Museum of Northern Arizona during excavations by the Museum and Arizona State Teachers College in 1929 and 1930.

REFERENCES:

Site Description: Colton 1946

Published Dates: Harlan 1962

DATES:

No Provenience

F-4167 1145fp - 1178vv  
F-4168 1145fp - 1178vv

F-4170 1148fp - 1178rL  
F-2945 1180p - 1276vv

COMMENTS:

Of the five samples dated by Harlan(1962), the re-analysis failed to confirm one and modified two others. The range of dates has not changed significantly. Proveniences of the samples are not known, but the site appears to have been occupied between about A.D. 1180 and the end of the 1200s.

## Piper's Crater Fort

MAP REFERENCE: I-74

ALTERNATE NAME/NUMBER: NA 534, Small Site

LOCATION:

The site is on the west end of a volcanic cone remnant just northeast of the Piper Ranch and 18 miles east of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a double coursed basalt masonry pueblo of eight rooms constructed in two parallel blocks on different levels of the slope of the cone. A low wall defines a work or activity area along the north side of the roomblocks.

SOURCE OF COLLECTION:

In 1933 H.S. Colton of the Museum of Northern Arizona obtained tree-ring samples from the backdirt of pothunter holes.

REFERENCES:

Site Description: Colton 1932a

Published Dates: Douglass 1947; Harlan 1962; Mc.Gregor 1938a;  
Smiley 1951

DATES:

No Provenience

F-2648 1149 - 1246v

COMMENTS:

The previously published dates for this sample do not differ significantly from that of the re-analysis. The date would tentatively suggest a 13th century occupation.

## Winona Village

MAP REFERENCE: I-75

ALTERNATE NAME/NUMBER: NA 2131, NA 2132, NA 2133, NA 2134, NA 2135,  
NA 3644, LA 2080, Arizona I:15:1(ASM)

LOCATION:

This site cluster is in a level area south of Cinder Mountain(Turkey Tank Mountain), one quarter mile northeast of Winona, and 14 miles east of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

Winona Village is a cluster of six small sites. NA 2131 is a three-room masonry pueblo with a masonry-lined rectangular pit house. NA 2132 is a "Casa Grande" type ball court. The remaining four sites are pit house clusters. The pit houses range from oval to subrectangular in shape and are either timber or masonry lined.

SOURCE OF COLLECTION:

Tree-ring samples were collected at Winona Village during excavations undertaken between 1936 and 1939. The 1936-37 investigations were directed by J.C. Mc.Gregor for the Museum of Northern Arizona and Arizona State Teachers College. In 1938-39 excavations were continued by the Museum of Northern Arizona under the Works Progress Administration and directed by J.C. Mc.Gregor and M. Wetherill.

REFERENCES:

Site Description: Colton 1946; Mc.Gregor 1937, 1941.

Published Dates: Colton 1946; Douglass 1947; Harlan 1962; Mc.Gregor 1938a, 1941; Smiley 1951

DATES:

NA 2133

F-4398 1020p - 1105vv

NA 2133, Pit House A

F-4524 1033p - 1064vv

F-4531 1050p - 1073vv

F-4498 0942p - 1074vv

F-4545 1040p - 1074vv

F-4526 0916p - 1075vv

F-4509 0862±p - 1076vv

F-4544 1043p - 1076vv

NA 2133, Pit House A, continued

F-4510 0880±p - 1077vv

F-4556 1042p - 1079vv

F-4532 1031p - 1080vv

F-4518 1046p - 1080vv

F-4491 1012p - 1082vv

F-4574 1048p - 1082vv

F-4584 1029p - 1083v

F-4555 1040p - 1084vv

F-4505 0935p - 1084±v

F-4552 1041p - 1084v

F-4532 1048 - 1084v

Winona Village, continued

DATES: continued

NA 2133, Pit House A, continued

F-4589 1034p - 1085v  
 F-4579 1061p - 1085v  
 F-4569 0969p - 1085r  
 F-4535 1054p - 1086vv  
 F-4550 1055p - 1086vv  
 F-4520 1034p - 1086v  
 F-4566 1055p - 1086v  
 F-4541 1020p - 1086+r  
 F-4506 0960p - 1086r  
 F-4487 1029p - 1086r  
 F-4716 1057p - 1086r  
 F-4502 0927±fp - 1086rB  
 F-4549 1011±p - 1086rB  
 F-4561 1046p - 1087vv  
 F-4513 1041p - 1088vv  
 F-4517 1046p - 1095vv

NA 2133, Pit House B

F-4402 1043fp - 1082vv

NA 2133, Pit House D

F-4412 1014p - 1071vv  
 F-4416 1012p - 1071v  
 F-4428 1032p - 1073vv  
 F-4457 1041p - 1076vv  
 F-4419 1040p - 1077vv  
 F-4425 1038p - 1085+vv  
 F-4440 1037p - 1093vv  
 F-4448 1039p - 1095vv  
 F-4426 1045p - 1098vv  
 F-4435 1047p - 1100vv  
 F-4451 1042p - 1101vv

NA 2133, Pit House G

F-4677 0996p - 1068vv  
 F-4682 1003p - 1082vv

NA 2134, Pit House A

F-3674-2 0924 - 1020+vv  
 F-3676 0947±p - 1033vv  
 F-3677 0927p - 1039++vv  
 F-3671 1059fp - 1089vv

NA 2134, Pit House A, continued

F-4277 1063fp - 1100vv  
 F-3611 1075p - 1102+vv  
 F-3673 1070p - 1111vv  
 F-3674-1 1078fp - 1111vv  
 F-3623 1078fp - 1116vv  
 F-3603 1060fp - 1121+vv  
 F-3622 1100fp - 1124vv  
 F-3608 1063p - 1126vv  
 F-3601 1066p - 1128vv  
 F-3599 1093p - 1128vv  
 F-3659 1079fp - 1130vv  
 F-3618 1059p - 1133vv  
 F-3621 1101fp - 1140vv

NA 2134, Pit House B

F-4858 0997 - 1088v  
 F-4859 1019fp - 1090+v

NA 2134, Pit House E.1

F-4472 1010p - 1057vv  
 F-4470 0985p - 1086vv

NA 2134, Trash

F-4877 0874fp - 0968vv  
 F-4875 0971fp - 1032vv  
 F-3514 0956fp - 1061vv  
 F-4594 0876p - 1076vv

NA 2135, Pit House C

F-4692 0959p - 1046vv  
 F-4686 0851p - 1061vv  
 F-4699 1022p - 1082vv  
 F-4695 1017p - 1087r  
 F-4694 1036p - 1087r  
 F-4689 1048p - 1095vv  
 F-4687 1029p - 1096vv  
 F-4700 1072fp - 1096v

NA 3644, Pit House A.1

F-4718 0869fp - 0976vv



Winona Village, continued

DATES: continued

NA 3644, Pit House C

F-4475 0988 - 1054vv  
F-4474 1003fp - 1099vv  
F-4476 1068p - 1117vv  
F-4482 0994 - 1120+r

NA 3644, Pit House J

F-4640 0945 - 1018vv  
F-4638 0959p - 1061vv  
F-4637 1010fp - 1093vv

NA 3644, Pit House K

F-4645 0837p - 1076r

NA 3644, Pit House M

F-4622 0916 - 1071vv  
F-4633 1040p - 1088vv  
F-4617 0964p - 1096vv  
F-4615 1057fp - 1097r  
F-4616 1034p - 1104r

NA 3644, Pit House P

F-4614 1017fp - 1099vv  
F-4613 1038 - 1107vv  
F-4610 1077fp - 1107r

NA 3644, Pit House Q

F-4662 0962p - 1063vv  
F-4659 1007p - 1070vv

COMMENTS:

Re-analysis of all available samples has resulted in some additional dates and the extension and deletion of some of the other previously published dates. However, the general range of the dates for these sites has not been altered significantly from those previously published. Apparently no samples were ever collected from the surface masonry site(NA 2131) and consequently it remains undated. The four remaining sites comprising Winona Village have a total of 101 dated samples ranging from A.D. 976 to 1140.

There are 49 dates ranging from A.D. 1064 to 1105 from four pit houses at NA 2133. Pit House A is a subrectangular timber structure and is the best dated structure on this site. It has a strong cluster of dates between A.D. 1085 and 1087 indicating construction at that time. The dates from the other three pit houses are all non-cutting dates ranging from A.D. 1068 to 1101 and are probably contemporary with Pit House A. They all appear to have been occupied in the middle to late 11th and early 12th centuries.

NA 2134 has 25 dated samples ranging from A.D. 968 to 1140 from three pit houses and a trash mound. All of these are non-cutting dates and no distinct clusters are present. Pit House A probably dates to the early to middle 1100s. Pit House E.1 reveals two inconclusive non-cutting dates in the late 1000s. The remaining dates are from the trash mound and have little interpretative value.



Winona Village, continued

COMMENTS: continued

↓  
Eight dates from Pit House C at NA 2135 range from A.D. 1046 to 1096. These are not precisely the same eight dates published by Harlan(1962). Three of Harlan's dates could not be confirmed in the re-analysis and one was extended to a later date. Three previously undated samples were dated and added to the inventory. The two cutting dates at A.D. 1087 do not conclusively date the construction of this pit house as there are three later non-cutting dates in the 1090s. The structure probably dates to the late 1090s or early 1100s.

Seven structures at NA 3644 have been dated by the current analysis, of which Pit Houses A.I, M, and Q were previously undated. The dates range from A.D. 976 to A.D. 1120. Two cutting dates in Pit House M would favor a construction date at the beginning of the 12th century, and the two dates of 1107 from Pit House P also suggest the same interpretation. As a group the structures appear to date to the late 11th and early 12th century. There are too few dates from the other structures to allow further interpretation.

Wupatki

MAP REFERENCE: I-77

ALTERNATE NAME/NUMBER: NA 405, LA 689, Arizona I:7:1(ASM), Ruin A of Group B(Fewkes), Wukoki(Fewkes), Long House

LOCATION:

This site is on a narrow sandstone ridge at the foot of the north side of Woodhouse Mesa in Wupatki National Monument. It is 28 miles north of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

Wupatki is one of the largest and best-known pueblo ruins in the Flagstaff region. It is a sandstone masonry pueblo constructed along about 100 yards of a narrow sandstone ridge. Approximately 70 ground floor rooms are in two multistoried clusters connected by rows of small single storied rooms. A circular kiva or dance plaza is just east of the north room cluster and a masonry ball court is located to the north of the pueblo.

SOURCE OF COLLECTION:

The earliest collections of tree-ring material were made by A.E. Douglass in 1926 and 1927 for the Laboratory of Tree-Ring Research. L.L. Hargrave's excavations in 1933 for the Museum of Northern Arizona recovered additional samples. Samples were also collected during stabilization work directed by Roland Richert of the National Park Service in the early 1950s.

REFERENCES:

Site Description: Colton 1932, 1933, 1946; Fewkes 1900, 1904a, 1904b; Gladwin 1943

Published Dates: Colton 1946; Douglass 1929, 1935, 1938, 1947; Gladwin 1943; Harlan 1962; Mc.Gregor 1932, 1938a, 1942a; Smiley 1951

DATES:

Room 1			Room 7
F-3747	1138p	- 1160r	F-3669 1148p - 1168r
Room 3			Room 9
F-3705	1023p	- 1106r	WPT-13 1014p - 1128+vv
F-3703	1120p	- 1161r	
F-3704	1162p	- 1192r	

Wupatki, continued

DATES: continued

Room 25

WPT-261 1096p - 1140vv

Room 30

WPT-133 0986p - 1118+rB

Room 35

F-2947 0936fp - 1103vv  
 F-3216 1113p - 1138c  
 F-2964 1110p - 1153v  
 F-2973 1120p - 1158vv  
 F-3213 1135p - 1160c  
 F-2948 1086p - 1160c  
 F-3215 1135p - 1161cL

Room 35, Roof B

F-3017 1012p - 1125vv  
 F-3022 1049p - 1148vv  
 F-3010 1069p - 1152r  
 F-3007 1134p - 1160c  
 F-3009 1131p - 1161c  
 F-3016 1149p - 1215v

Room 36, Roof C

F-3048 1051p - 1130vv  
 F-3030 1097p - 1137r

Room 38

WPT-136 1090p - 1143vv  
 WPT-138 1123p - 1194vv

Room 41

F-3923 1115p - 1167vv  
 F-3781 1118p - 1168vv  
 F-3749-2 1098p - 1171vv  
 F-3746 1137p - 1174vv  
 F-3709 1109p - 1174r

Room 44

WPT-145 1102p - 1138r  
 WPT-155 1110p - 1138r  
 WPT-144 1114p - 1149r  
 WPT-147 1119p - 1150r

Room 44, continued

WPT-148 1098p - 1151vv  
 WPT-143 1102p - 1167v  
 WPT-154 1135p - 1175r  
 WPT-158 1135p - 1194v

Room 45, Roof A

F-2982 1089p - 1144vv  
 F-2985 1071p - 1160vv  
 F-2984 1149p - 1209vv

Room 45, Roof B

F-2980 1056p - 1131rB

Room 46

WPT-162 1012p - 1111vv  
 WPT-161 1154p - 1203vv

Room 46, Roof B

F-2993 1119p - 1149vv  
 F-2995 1105p - 1157vv  
 F-3002 1092p - 1160rL  
 F-2996 1128p - 1178v

Room 58

WPT-228 1162p - 1197r

Room 61A

F-4202 1155p - 1184r

Room 73

F-3708 1063p - 1145r  
 F-3702 1100p - 1145r  
 WPT-240 1113p - 1146v  
 F-3706 1120p - 1160r  
 F-3707 1141p - 1160r

Room 80

WPT-253-1 1106fp - 1128vv  
 WPT-253-3 1112fp - 1145v  
 WPT-251 1115p - 1147r  
 WPT-253-4 1129fp - 1148v

Wupatki, continued

DATES: continued

Room 80, continued

WPT-255 1148p - 1168cL  
 WPT-252 1141p - 1173r

Room A

WPT-19 0998p - 1144r  
 WPT-21-1 1099p - 1145v  
 WPT-27 1109p - 1153r  
 WPT-30 1138p - 1155cB  
 WPT-18 1160p - 1183r  
 WPT-15 1129p - 1183c  
 WPT-31 1122p - 1192+r  
 WPT-33 1149p - 1212r

Room B

WPT-46 1122p - 1172vv

Room F

WPT-90-2 1078p - 1137r  
 WPT-100 1151p - 1183r

AB Talus

WPT-75 1153p - 1183vv  
 WPT-54 1157p - 1190vv  
 WPT-65 1174p - 1201vv

Section 2

F-3902 1128p - 1160r

Section 3

F-3792 1094fp - 1151+vv  
 F-3758 1131p - 1167vv  
 F-3766 1131fp - 1186r

Section 4

F-3729 1063fp - 1120vv  
 F-3725 1070fp - 1120vv  
 F-3905 1104p - 1136vv  
 F-3859 1110p - 1146rB  
 F-3871 1128p - 1155rL  
 F-3891-1 1123p - 1159vv  
 F-3868 1108p - 1160r  
 F-3748 1138p - 1167v

Section 4, continued

F-3862 1124p - 1170vv  
 F-3903 1140p - 1173vv  
 F-3895 1101p - 1190vv  
 F-3884 1155p - 1190r  
 F-3736 1165p - 1192r  
 F-3858 1160p - 1194r  
 F-3713 1129fp - 1197r  
 F-3778 1156fp - 1207v  
 F-3875 1154p - 1211r

Miscellaneous Proveniences

F-3834 1022p - 1126+vv  
 F-4210 1042fp - 1132vv  
 F-3853 1024p - 1135v  
 F-3836 1101p - 1139v  
 F-3829 1118fp - 1153vv  
 F-3822 1145p - 1162r  
 F-3832 1125fp - 1163vv  
 F-2990 1114p - 1170c  
 F-5455 1130fp - 1172vv  
 F-3807 1109p - 1174vv  
 WPT-24 1110p - 1179vv  
 F-3847 1158p - 1190r

No Provenience

WPT-343 1017p - 1087vv  
 WPT-331 1049fp - 1090vv  
 F-3755-1 1016p - 1110+vv  
 F-2351 1025fp - 1125vv  
 F-3761 1039p - 1128vv  
 F-2587 1083fp - 1129vv  
 F-2519 1077p - 1130vv  
 WPT-67 1078p - 1130vv  
 F-2524 1010p - 1131+v  
 F-2538 1090p - 1131r  
 F-1613 1111fp - 1136+rB  
 WPT-104 1082p - 1137v  
 WPT-2525 1012p - 1137r  
 WPT-341 1118p - 1137r  
 F-2234 1092p - 1137r  
 WPT-81 1057p - 1137c  
 WPT-345 1110p - 1137rB  
 WPT-239 1077p - 1138+vv  
 F-2536 1058p - 1141+vv  
 F-2235 1052p - 1143+vv  
 WPT-132 1002p - 1143vv  
 WPT-322 1080p - 1145r



Wupatki, continued

DATES: continued

No Provenience, continued

WPT-229	1102p	- 1146r
WPT-32	1105p	- 1146rB
WPT-87	1044p	- 1148++r
WPT-51	1110p	- 1153vv
WPT-29	1140p	- 1155r
WPT-109	1113p	- 1158vv
F-2522	1113p	- 1160vv
F-3737	1136fp	- 1160r
WPT-4	1105p	- 1163r
WPT-44-2	1125p	- 1164r
WPT-128	1130p	- 1167v
WPT-129	1123p	- 1168vv
F-2535	1093p	- 1168v

No Provenience, continued

WPT-127	1135p	- 1168r
WPT-107	1145p	- 1171vv
F-2535	1121p	- 1172vv
F-3813	1145p	- 1174vv
WPT-2	1161p	- 1183c
WPT-163	1163p	- 1185vv
WPT-3	1132p	- 1190r
F-2540	1145p	- 1191v
F-2547	1151p	- 1192vv
F-1614	1155p	- 1200vv
WPT-1	1162p	- 1205r
F-3815	1156p	- 1213+vv

COMMENTS:

The dates from the re-analysis reveal no significant change in the range of dates from those previously published by Douglass, Mc.Gregor, and Smiley. The Douglass and Mc.Gregor dates came from samples which were collected, dated, and published independently by those two individuals, and Smiley's dates merely combined the dates from both of those collections. The present study re-examined all of the Douglass and Mc.Gregor samples, whether dated or undated, with the exception of some samples which could not be located. Additional material collected in the early 1950s was also included in this analysis. This allowed the elimination of duplicates, the deletion of dates which could not be confirmed or relocated, and the addition of some new dates from previously undated material.

There are 155 dated samples from Wupatki making it the best dated ruin in the Flagstaff area. The dates all range within a 127-year period between A.D. 1087 and A.D. 1213. The earliest definite evidence of construction activity at Wupatki is a single cutting date of A.D. 1106. There are two earlier dates at A.D. 1087 and A.D. 1090, but these are non-cutting dates and may be several decades away from their true outside. Several scattered cutting and non-cutting dates in the early 1200s reveal the latest activity, but occupation may have continued to the middle of the 13th century.

Distinct clusters of cutting dates occur at A.D. 1137-38, A.D. 1160-61, and A.D. 1190-94, which suggest periods of construction, or at least beam cutting activity. Dates from individual rooms are difficult to interpret as they sometimes have considerable range either as a result of mixing of material during collapse, reuse of material prehistorically, or contemporary clerical confusion. A terminal date cluster at



Wupatki, continued

COMMENTS: continued

A.D. 1160-61 provides a probable construction of at least one of the roofs in Room 35. Room 73 has cutting dates at A.D. 1145 and A.D. 1160 suggesting either repair or beam reuse. Room 41 may have been constructed about 1174.

In summary, the tree-ring dates from Wupatki indicate that its construction and occupation began in the early 1100s and continued for about 100 years growing continually during its occupation. The latest date is a non-cutting date suggesting abandonment of the site sometime before the middle 1200s. The interpretation of dates from individual rooms is tenuous because of the sometimes considerable range of cutting dates which may be indicative of extensive beam reuse, room repair and modification, or mixing of material from room and wall collapse.

## Two Kivas Pueblo

MAP REFERENCE: I-79

ALTERNATE NAME/NUMBER: NA 700

LOCATION:

The site is just northwest of Cinder Mountain (Turkey Tank Mountain) overlooking Walnut Creek two and one-half miles north of Winona and 14 miles east of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

This is a rectangular masonry pueblo of 15 rooms with two kivas along its east side. Six of the rooms probably had a second story.

SOURCE OF COLLECTION:

Tree-ring samples were collected during excavations directed by John C. Mc.Gregor in 1962 and 1964. This work was undertaken by the University of Illinois Summer Field Session in Anthropology and supported by the Museum of Northern Arizona.

REFERENCES:

Site Description: Colton 1932a

Published Dates: None

DATES:

Room C

TKP-21	1125	-	1167vv
TKP-207	1140	-	1171vv
TKP-205	1134	-	1173vv
TKP-208	1146	-	1177vv
TKP-204	1139	-	1178v
TKP-20	1143	-	1184v
TKP-206	1146	-	1185vv
TKP-22	1124	-	1186v
TKP-18	1156	-	1188vv
TKP-209	1134p	-	1188c
TKP-16	1158	-	1193vv
TKP-17	1152	-	1198r

Room D

TKP-177	1136p	-	1167vv
TKP-157	1137	-	1174vv
TKP-169	1150p	-	1178vv
TKP-140	1126	-	1182v

Room D, continued

TKP-11	1152	-	1184vv
TKP-161	1160p	-	1188vv
TKP-188	1159p	-	1191c
TKP-180	1167p	-	1191c
TKP-171	1142p	-	1192vv
TKP-176	1157	-	1192vv
TKP-186	1157p	-	1192vv
TKP-184	1169	-	1192v
TKP-7	1147p	-	1192c
TKP-168	1136p	-	1193vv
TKP-164	1146	-	1193vv
TKP-160	1146	-	1193vv
TKP-143	1147	-	1193vv
TKP-127	1145	-	1193v
TKP-178	1156p	-	1193v
TKP-159	1152p	-	1194vv
TKP-4	1153p	-	1194vv
TKP-167	1138p	-	1194v
TKP-170	1144	-	1194v

Two Kivas Pueblo, continued

DATES: continued

Room D, continued

TKP-9 1153p - 1194v  
 TKP-8 1158 - 1194v  
 TKP-130 1160p - 1194v  
 TKP-153 1160p - 1194v  
 TKP-132 1138p - 1194r  
 TKP-175 1149p - 1194r  
 TKP-154 1156p - 1194r  
 TKP-134 1157p - 1194r  
 TKP-144 1163 - 1194r  
 TKP-173 1163p - 1194r  
 TKP-12 1152 - 1195vv  
 TKP-122 1152 - 1195r  
 TKP-156 1152p - 1197v

Room G

TKP-99 1138p - 1176vv  
 TKP-87 1142p - 1178vv  
 TKP-94 1144 - 1182vv  
 TKP-115 1156 - 1183vv  
 TKP-81 1142 - 1184vv  
 TKP-104 1144p - 1184vv  
 TKP-101 1156 - 1185vv  
 TKP-112 1134 - 1186vv  
 TKP-83 1147 - 1186vv  
 TKP-100 1148p - 1187vv  
 TKP-92 1151 - 1187vv  
 TKP-96 1137p - 1187v  
 TKP-118 1148 - 1187v  
 TKP-120 1155p - 1187v  
 TKP-86 1151p - 1187r  
 TKP-88 1138p - 1187c  
 TKP-109 1151p - 1188vv  
 TKP-103 1162p - 1188vv  
 TKP-116 1118 - 1190vv  
 TKP-117 1155p - 1192v  
 TKP-111 1159 - 1192r  
 TKP-107 1131p - 1193v  
 TKP-102 1137p - 1193v  
 TKP-108 1153 - 1193r

Room L

TKP-226 1129 - 1168vv  
 TKP-214 1145p - 1170r  
 TKP-215 1146p - 1170r

Room L, continued

TKP-217 1141p - 1170r  
 TKP-234 1154 - 1192vv  
 TKP-233 1171p - 1194vv  
 TKP-229 1162p - 1194r  
 TKP-219 1167p - 1194r  
 TKP-222 1169p - 1194r  
 TKP-230 1173p - 1195vv  
 TKP-220 1157p - 1195r

Room M-1

TKP-238 1137 - 1172+vv

Room N

TKP-259 1056p - 1117vv  
 TKP-240 1136p - 1169r  
 TKP-255 1131 - 1177r  
 TKP-251 1149p - 1184r  
 TKP-245 1162p - 1184r  
 TKP-249 1155p - 1185vv  
 TKP-264 1150p - 1186vv  
 TKP-250 1139 - 1186r  
 TKP-258 1159p - 1187v  
 TKP-263 1155p - 1187r  
 TKP-262 1157p - 1187r  
 TKP-248 1140p - 1188r  
 TKP-241 1159 - 1188r  
 TKP-265 1165p - 1188r  
 TKP-256 1151p - 1191r  
 TKP-252 1154p - 1192vv  
 TKP-243 1145p - 1192v  
 TKP-254 1156p - 1193vv  
 TKP-246 1163p - 1195v

Room V

TKP-281 1077 - 1147+vv  
 TKP-289 1071 - 1150vv  
 TKP-290 1135 - 1168B  
 TKP-288 1130p - 1174B

Room W

TKP-323 1139 - 1162v  
 TKP-295 1130p - 1167r

Two Kivas Pueblo, continued

DATES: continued

Room W, continued

TKP-308 1136p - 1168r  
 TKP-319 1111p - 1169vv  
 TKP-316 1116p - 1169r  
 TKP-324 1130p - 1169r  
 TKP-321 1134p - 1169r  
 TKP-301 1136p - 1169r  
 TKP-296 1133p - 1170vv  
 TKP-299 1145p - 1170r  
 TKP-320 1135p - 1170r  
 TKP-317 1136p - 1170r  
 TKP-302 1142p - 1172vv  
 TKP-312 1142 - 1172vv  
 TKP-314 1137p - 1173vv  
 TKP-298 1141p - 1173r  
 TKP-294 1155p - 1191vv  
 TKP-311 1148p - 1195vv  
 TKP-309 1160p - 1242vv

Room X

TKP-353 1153p - 1183vv  
 TKP-352 1146p - 1186v  
 TKP-336 1131p - 1186r  
 TKP-343 1141p - 1188+vv  
 TKP-292 1139p - 1188r  
 TKP-310 1153p - 1188r  
 TKP-338 1148p - 1189+tr  
 TKP-354 1150p - 1192r  
 TKP-342 1152p - 1193r  
 TKP-328 1153p - 1193v  
 TKP-335 1150p - 1193r  
 TKP-325 1156p - 1193r  
 TKP-331 1157p - 1193r

Room X, continued

TKP-330 1158p - 1193r  
 TKP-339 1158p - 1193r  
 TKP-345 1158p - 1193r  
 TKP-337 1159p - 1193r  
 TKP-334 1164p - 1193r  
 TKP-347 1164p - 1193r  
 TKP-333 1165p - 1193r

Structure A

TKP-38 1168p - 1199vv  
 TKP-75 1167p - 1201vv  
 TKP-44 1163p - 1201v  
 TKP-26 1142p - 1201B  
 TKP-64 1171 - 1201B  
 TKP-62 1165p - 1204vv  
 TKP-54 1162p - 1204r  
 TKP-58 1169 - 1204r  
 TKP-80 1174p - 1204B  
 TKP-77 1178 - 1204B  
 TKP-74 1152 - 1206c  
 TKP-67 1163p - 1207c  
 TKP-61 1151 - 1207B  
 TKP-47 1165p - 1208vv

Structure C

TKP-203 1138 - 1184vv

Miscellaneous

TKP-201 1138 - 1195vv

COMMENTS:

The dates from most of the rooms provide good evidence for their construction in the early to middle 1190s. Most notable are Room X, roofed in A.D. 1193, and Room D, roofed in A.D. 1194. Room V may be the earliest room in the site with its latest cutting date of A.D. 1174. Other early dates ranging from 1160 to 1180 occur in most of the rooms and indicate beam reuse. Structure A contains a series of dates ranging from A.D. 1201 to 1208 with a cluster of dates at A.D. 1204. These would suggest its construction in the first decade of the 12th century. The latest date in the site is a non-cutting date of A.D. 1242 from Room W. The rest of the dates from this room cluster around A.D. 1169-70, so this mid-13th century date may represent firewood from continuing occupation.

Harbison Cave

MAP REFERENCE: I-133

ALTERNATE NAME/NUMBER: NA 9528, Arizona I:1:9(MNA)

LOCATION:

Harbison Cave is on the south bank of Red Horse Wash on the Coconino Plateau about 15 miles south of the Grand Canyon and 9.5 miles east southeast of Red Butte in Coconino County, Arizona.

DESCRIPTION:

The cave is five meters wide at the mouth and extends back nine meters into the bedrock. Well developed midden is present in front of the cave and has a depth of one and one-half meters. The fill in the entrance is one meter deep.

SOURCE OF COLLECTION:

Tree-ring samples were collected by C.H. Jennings during excavations by the Museum of Northern Arizona in 1967.

REFERENCES:

Site Description: None

Published Dates: None

DATES:

Miscellaneous

HBC-4	1615p	- 1697vv
HBC-1	1527	- 1779++vv

COMMENTS:

These dates derive from material probably used as firewood during the historic period.



NA 11,142

MAP REFERENCE: I-136

ALTERNATE NAME/NUMBER: None known

LOCATION:

This site is in the Lockwood Canyon drainage approximately seven miles north of Red Mountain, five miles northeast of U.S. Highway 180, and 32 miles northwest of Flagstaff in Coconino County, Arizona.

DESCRIPTION:

NA 11,142 is a Navajo site consisting of a sweatlodge and windbreak.

SOURCE OF COLLECTION:

D.C. Fiero of the Museum of Northern Arizona obtained samples in 1971.

REFERENCES:

Site Description: None

Published Dates: None

DATES:

Sweatlodge

APS-13	1617p	- 1831++G
APS-12	1617p	- 1843++rB

COMMENTS:

Both of these dates involve substantial ring counts toward the outside--thus the true death dates of these samples might well be 10 to 20 years later than listed. Therefore, this is not unequivocal evidence for pre-Bosque Redondo occupation of this area. In addition it is known that Navajos often use dead wood in the construction of sweatlodges.

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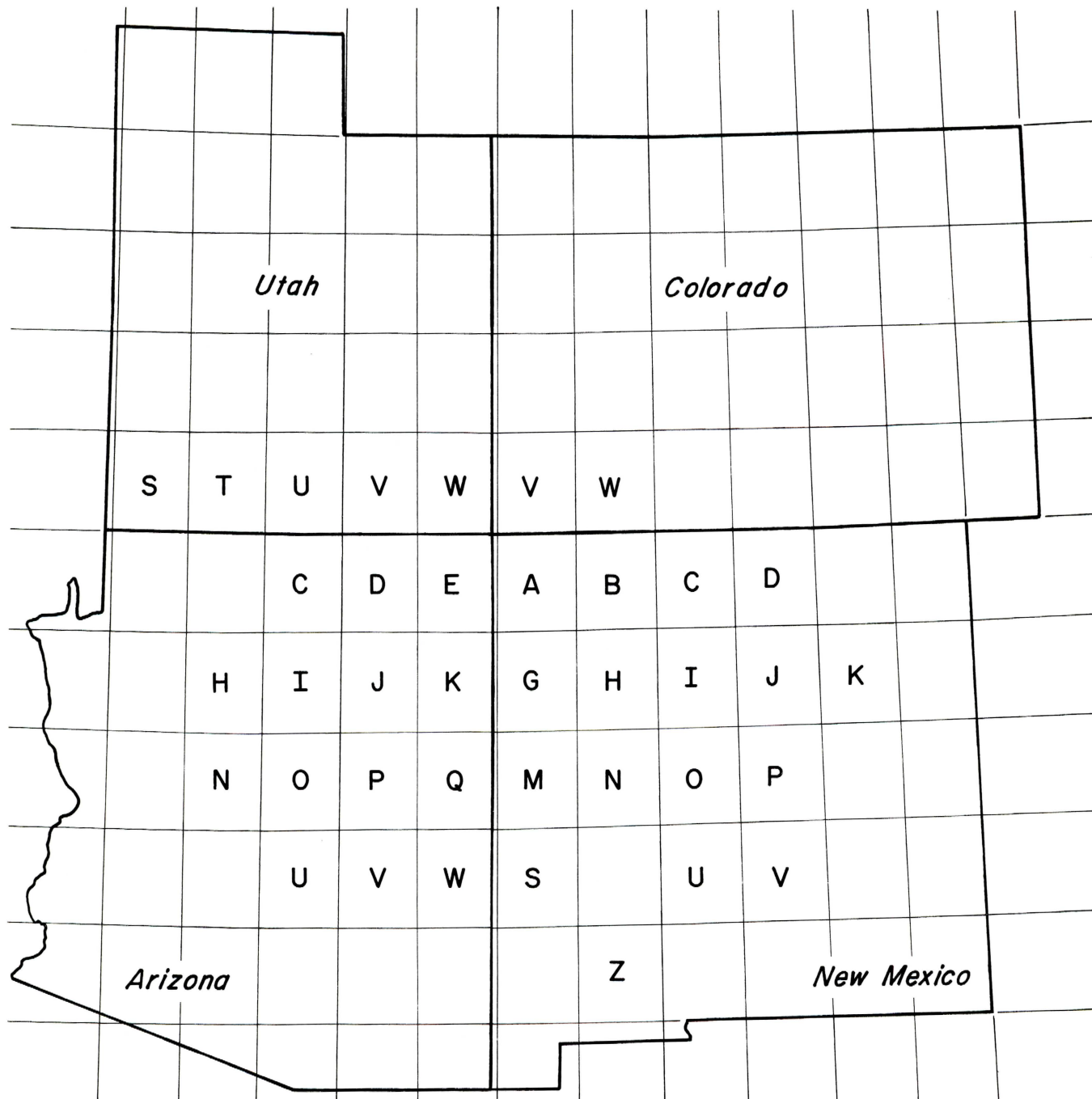
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