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Re-evaluation of the Main Ridge Site and Adjacent Areas: Quarterly Progress Report, October 1, 2006 – December 30, 2006

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QUARTERLY REPORT

University of Nevada, Las Vegas
October 1, 2006 – December 30, 2006

Cooperative Agreement Number H8R07010001
Task Agreement Number J8R07050006
Re-evaluation of the Main Ridge Site and Adjacent Areas

Executive Summary

- Completed archival research at the following repositories: Southwest Museum, Western Archaeological Conservation Center, Nevada State Museum, the National Museum of the American Indian, the Lake Mead National Recreation Area offices of the National Park Service, the Lost City Museum, UNLV Special Collections, and UNLV Department of Anthropology.
- Completed the compilation of a digital database of all records and artifacts associated with the 1920s-1940s excavations at Lost City.
- Conducted field research at Lost City through a Fall 2006 UNLV archaeological field school
- Academic paper presented at the 30th Great Basin Anthropological Conference.

Summary of Attachments

- “Demographic Composition and Health at Pueblo Grande de Nevada”

Archival Research

Leilani Espinda, a graduate student in the UNLV Department of Anthropology, has completed all of the archival research that is possible to be completed at this time. To our knowledge, the archival records we have obtained from the following repositories represent all of the relevant records held at those repositories: Southwest Museum, Western Archaeological Conservation Center, the National Museum of the American Indian, the Lake Mead National Recreation Area offices of the National Park Service, the Lost City Museum, UNLV Special Collections at UNLV, and UNLV Department of Anthropology.

Additionally, Ms. Espinda obtained numerous records and data from the Nevada State Museum, though it is possible that repository contains additional records that we have been unable to document at this time. Similarly, it is possible that records exist at the Nevada State Historical Society. Our repeated efforts to obtain more information from

these repositories have failed, not because of an unwillingness on the part of these repositories to work with us, but because they are apparently severely understaffed and simply have not had the opportunity to organize and document all of their collections.

We have completed the documentation of the records and are in the final stages of completing the draft report and finder's guide resulting from this project, as called for in the task agreement.

Field Research

Principal Investigator Dr. Karen Harry, two graduate students, and 13 undergraduate students participated in field investigations at Main Ridge during Fall Semester 2006. Field research was conducted as a part of this field school on the following weekends: Sept. 29-Oct. 1, Oct. 13-Oct. 15, Nov. 3-5, and Nov. 17-19. Additionally, a smaller crew conducted additional field investigations on December 3-4. During this field work the following tasks were accomplished and findings uncovered:

- The field component of the mapping of Main Ridge was completed (i.e., topography and house locations entered into the Global Positioning System).
- Shovel tests were placed within most remaining "houses" or archaeological loci, to determine whether there existed any remaining intact midden deposits.
- A total of 18 test excavation units were placed in two different houses at Main Ridge. The results of these excavation units indicate that, in the vicinity of House 20 at least, intact midden deposits still exist at the site. Although the extent of these middens is somewhat limited, they appear to have been undisturbed and contain well-preserved organic remains, indicating that their research potential is high. Additionally, the test units have indicated the modern-day location of the wall alignments do not necessarily reflect the location of the actual houses in prehistory. Instead, the walls appear to have been "rebuilt" or placed in alignment sometime after the 1920s excavations and often do not reflect the original locations. These units also indicate that data from the middens is likely to provide information.

Scholarly Activity

A paper authored by Professors Jennifer Thompson, Karen G. Harry, and Debra L. Martin, all of the UNLV Anthropology Department, was presented at the 30th Great Basin Anthropological Conference held in Las Vegas in October 2006. The paper, entitled "Demographic Composition and Health at Pueblo Grande de Nevada," described the preliminary results of the Main Ridge human remains analyses (*presentation attached*).

Submitted by:



Margaret N. Rees, Project Administrator

December 31, 2006

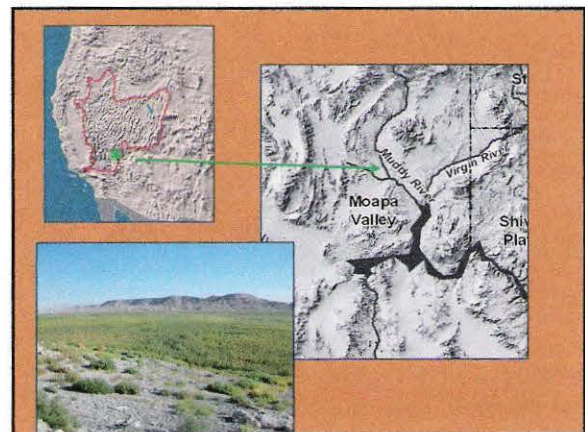
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Scholarly Presentation

Demographic Composition and Health at Pueblo Grande de Nevada

Jennifer L. Thompson
Debra L. Martin
Karen G. Harry
Department of Anthropology & Ethnic Studies
UNLV

Pueblo Grande de Nevada et Ses environs



History

Harrington at House 80

Mark Harrington, Director of Lost City Excavations

Zuni Indians, hired to promote tourism at Lost City

Horses bringing supplies to Lost City

Members of Civilian Conservation Corps, hired to excavate Lost City

PURPOSE

- Preliminary reconstruction of demography and health
- How did the Lost City Virgin Anasazi compare to other groups from other regions?

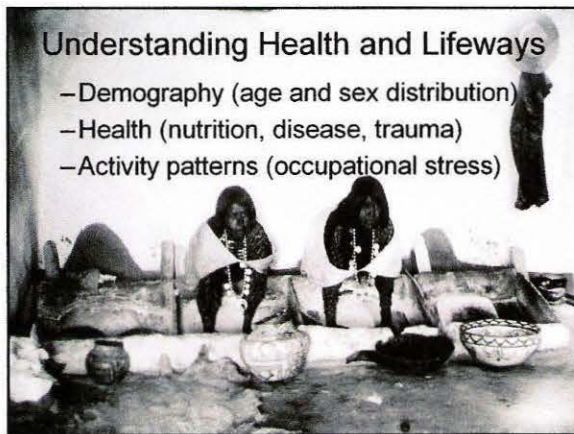
EXPEDITION OF 1970

ARCHEOLOGICAL RECONSTRUCTION

- Of the more than 200 burials that Harrington and his colleagues excavated, approximately 50 of them have been relocated.
- The 200 burials appear to date between – the Basketmaker III and late PII/early PIII times (i.e., between about AD 500 and 1250)

Understanding Subsistence

- At this time, Anasazi elsewhere were intensive agriculturalists, with diet variably supplemented by hunted and gathered resources.
- What about Lost City? Were they full-time agriculturalists? Or mainly hunter-gatherers with some agriculture?



Demography

Population	<1	1-9	10-18	>18
Lost City (n=35)	10.2	16.2	4.0	69.4
Black Mesa	10.0	24.2	14.5	50.9
Casas Grandes	10.0	22.0	14.0	54.0
Pecos Pueblo	18.7	14.0	8.0	59.0
Classic Mexico	41.3	10.3	10.6	38.6
Arikara (Plains)	31.5	24.0	9.5	45.5
Libben	18.0	22.0	14.0	46.0

Other New World groups (all agricultural except for Arikara)

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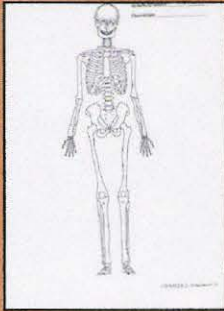
Mean Age at Death

• Lost City	26.9
• Chaco Canyon	26.5
• Black Mesa	25.4
• Point of Pines	22.9
• Houck	19.6
• Turkey Creek	19.6
• Navajo Reservoir	16.8
• Grasshopper	14.2
• Salmon Ruin	12.7

Crude Mortality Rate (CMR)

Lost City	37.17
Chaco	37.72
Black Mesa	39.57
Point of Pines	43.68
Houck	51.02
Turkey Creek	51.00
Navajo Reservoir	59.45
Grasshopper	70.57
Salmon Ruin	78.43

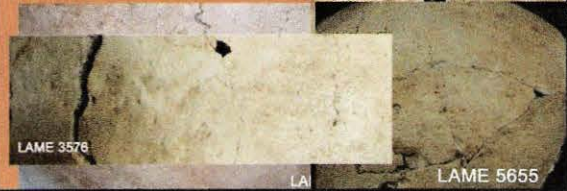
Health & Activity Patterns



- Illustrate some important findings and to suggest future directions for this study

DISEASE

- Porotic Hyperostosis
 - Appears as discrete pitting on the cranium
 - Evidence of low grade, endemic anemia
 - Likely due to iron deficiency in diet
 - Both sexes from Lost City exhibit this



DISEASE

- Periosteal Reaction on long bones (raised, irregular pitting)
- Response to non-specific infection
- Often related to increasing population density associated with agricultural communities

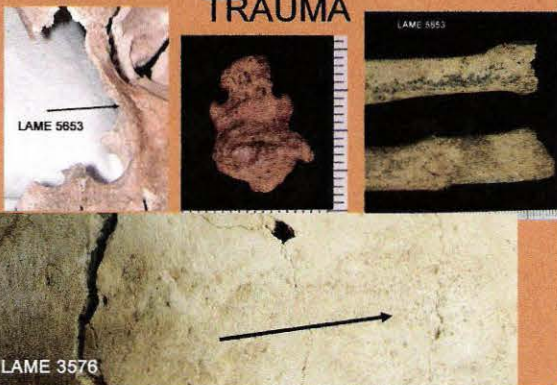


Dental Pathologies/Wear

- Heavy dental wear, caries, abscesses, and pre-mortem tooth loss are consistent with reliance on maize



TRAUMA



Occupational Stress Markers



OCCUPATIONAL STRESS

- Several individuals of both sexes with osteoporosis and/or arthritis on joint surfaces
- Indicative of heavy work loads



OCCUPATIONAL STRESS

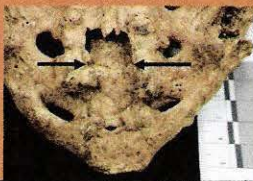
- Occupational stress markers
- Also indicate heavy work loads



Morbidity Burden

- One adult female – partial Spina Bifida
 - Lower back pain
- Other health issues- arthritis, porotic hyperostosis, and healed fractures
- i.e. pathologies co-occur in single individuals

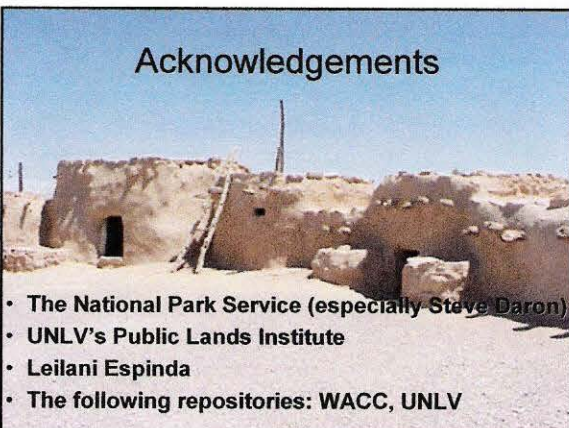
Spina Bifida
Failure of neural arches to fuse
Exposing soft tissue, causing pain and disability



Conclusions

- Mortality profiles suggest relatively good lifespan
- Pathologies indicate
 - Both sexes exhibit endemic, but low level, nutritional anemia
 - Dental wear- seems typical of agriculturalists
 - Arthritis is ubiquitous as indicative of a strenuous lifestyle
 - Occupational stress markers- heavy workloads
- Provide baseline data for health in this region
- Complete analysis will clarify the patterns reported here

Acknowledgements



- The National Park Service (especially Steve Daron)
- UNLV's Public Lands Institute
- Leilani Espinda
- The following repositories: WACC, UNLV