

Ethnographic Overview
And
Assessment:
Zion National Park, Utah
And
Pipe Spring National Monument,
Arizona



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**ETHNOGRAPHIC OVERVIEW AND ASSESSMENT:
ZION NATIONAL PARK, UTAH
AND
PIPE SPRING NATIONAL MONUMENT, ARIZONA**

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FOREWORD

The purpose of this foreword is to explain how to best approach this report, where its strengths are, and where the text should be read with caution. This report is the beginning of a written American Indian perspective data base that can serve as a basis for future consultations between the Southern Paiute people and two National Park Service (NPS) units. As such, one must realize that neither all Southern Paiute tribes nor all regional parks were involved in this study. Much further study is required before the federal parks of the region understand the cultural concerns of all Southern Paiute tribes. Does this mean that the study is irrelevant to the natural and cultural resource management concerns of the Southern Paiute people and the regional parks who were not involved in the study? In general terms, the study does define the types of natural and cultural resource use issues of the Southern Paiute people and how these can be translated into the resource management issues of all parks in the region. In fact, this study raises issues that have consistently been raised by other studies conducted over the past twenty years regarding the interface between Southern Paiute cultural and natural resources and federal land management practices. So, the findings from the study can be and should be extrapolated to other parks and even other federal lands found within Southern Paiute traditional territory. However, there are limitations.

The study is an ethnographic overview. As such it combines kinds of information which vary both in spatial and topical depth. Spatially, the information contained in this study varies because the areas under analysis are large and Paiute elders could be taken to only a few places. Topically, some subjects were given less attention than others. A scoping study was conducted among tribal governments and selected tribal elders in order to focus where the elder visits should occur and what topics should be discussed in the main study. Overall, an attempt was made to balance discussion between the cultural resource topics and the places where cultural resources occur.

The NPS posed the question "Are there guidelines that can be known for extrapolating Southern Paiute concerns?" In general, it is important to let an ethnographic overview study raise possible questions rather than set them aside. This is especially critical when the land managers are making a final determination as to whether or not an adverse cultural effect could occur as a result of a proposed action. Positive findings are more useful than negative findings. For example, if this ethnographic overview recorded that Southern Paiutes have used a type of plant that is involved in a proposed action, then it can be concluded that a Southern Paiute concern exists. On the other hand, if this ethnographic overview did not record the use of a type of plant, then this negative finding does not logically lead to the conclusion that no Southern Paiute concerns exist.

It is understood that a positive cultural identification means "yes there is a concern" but no recorded identification means "the topic is unknown and further study is needed." This logic derives from two facts. Indian people do not tell a federal agency everything during the first study. And this is the first study. Also, no one study can record all cultural resources of a American Indian people. The reasons why Indian people withhold information is discussed under the heading "Smart Databases" in Chapter One, but it cannot fully be explained in a report such as this. Deep mutual

understandings between the federal agency and the Southern Paiute people need to be established before all the barriers to communication are understood.

The reasons why one study will not document all cultural resources is easier to explain. Aspects of this topic are discussed under the heading "Holism" in Chapter One. Basically, knowledge in all human groups is unevenly distributed. Social scientists study this subject, so the finding is well documented. When we say that it takes up to ten interviews to fully understand the cultural significance of a type of Southern Paiute plant, this means that different people know about different aspects of the plant's use. It also clearly reflects the first fact, that Southern Paiute people rarely tell anyone everything when they are asked.

Traditional knowledge is unevenly distributed because some Indian people are specialists. Like park scientists, some Paiute people know about plants, others know about animals, still others know about archaeology sites. When the federal agency funds resource-specific studies, tribal governments can send people who specialize in these topics. Often multiple resource-specific studies are necessary because the cultural significance of a natural resource varies by where it is found or by season. For example, there are certain Paiute medicine plants which have more power because they are found near the Colorado River in the Grand Canyon. Normally, it is necessary to conduct the resource interviews where they are found so that the influence of place can be recorded as an aspect of resource significance. Seasonal resources like plants and animals can vary, so it is important to conduct interviews when a resource is traditionally used. Stories related to place vary by season, because some kinds of stories are to be told at certain times and not at other times. The point here is that resource-specific studies are essential for more fully understanding the cultural significance of Southern Paiute resources.

An ethnographic overview is designed to bring as much information about as many places as possible in a brief period. As such, it is better at providing breadth of knowledge about cultural resources than understanding them in depth. This report has tiered on previous studies to provide depth in some areas. Especially well developed are the lists of Southern Paiute plants and animals. Less well developed are the lists of places and minerals. Not at all well developed are issues like the cultural meaning of air and water.

Early European travelers recorded Southern Paiute uses of plants and animals. Later scholars studying both language and culture developed additional lists of Southern Paiute plant and animal names. Recent applied ethnographic studies have added more plant and animal understandings. Because there is an extensive information base for understanding these natural resources, the plant and animal lists are well developed. The lists have been developed for each NPS unit involved in this study, so each list can be used directly by NPS specialists concerned with plants and animals. Still, even with these well supported lists, more can be known from future studies.

Because so much is known about plants and animals, we can provide detailed guidance regarding their use. For example, the plant lists are organized in a fashion that represents the most taxonomically accurate method as of the writing of this report. These plants and animals are listed in alphabetical order on the far left hand column of the tables by their Latin genus and species and, when a category was too wide, by their common name. In some cases, the scientific

names for plants or animals have been changed (in some cases multiple times). The nomenclature changes have been noted in parentheses below the name currently being used by the National Park Service. The middle column of the table lists the most frequently encountered common names. The last column contains the Southern Paiute names found in historical and contemporary sources for the plant or animal in that row. In some cases, Southern Paiute names were only found for the genus and not the species level of plant identification. Since this was the case, the genus category on the plant tables was expanded to include all of the Southern Paiute names found that correspond with the genus regardless of whether the names refer to a specific species or the genus as a whole.

Contrast what we know about plants and how to use existing knowledge of plants with what we do not know about natural resources for whom there has never been a systematic ethnographic study. For example, there has not been a study of the cultural meaning of air or water in Southern Paiute culture. These are critical components of Southern Paiute life that were neither appreciated nor recognized by early travelers and later ethnographers. Unlike plants, the NPS does not have its own list of types of air and water against which to compare Southern Paiute nomenclature. Springs, creeks, rivers, and waterfalls each are perceived by Southern Paiutes as separate living organisms. Air too is a living organism that exists in different forms. There has never been a systematic study of the cultural meaning of either air or water among Southern Paiutes. Nonetheless such cultural resources are important to Southern Paiute people today and should be taken into consideration in land use management deliberations. Future resource-specific studies of these and similar cultural components are needed before even a beginning consultation can occur regarding potential project impacts and possible resource protection strategies.

A final use of this report is to understand cultural affiliation with these two NPS units. During various reviews of this manuscript, the NPS asked questions about who are the Paiutes? Where did they come from? What is their relationship with the Anasazi? Are they the Fremont? While these are valid questions, they are much beyond the scope of this study. The questions are important for both the NPS units and the Southern Paiute people to resolve to their own satisfaction. The message of this study is that most Southern Paiute people believe they were created in this land and all the evidence of Indian use of the land reflects the activities of their ancestors. It is also important that the Indian Claims commission define the Southern Paiute people as the aboriginal owners of this land.

The Southern Paiute position is disputed by some archaeologists and by some other American Indian ethnic groups. A key problem in cultural affiliation is that "labels" have been attached to contemporary people and to prehistoric archaeology types. Because of these labels, contemporary Indian people are often excluded from discussing their cultural affiliation with types of prehistoric archaeological remains. So for the area under study in this report, people called today the Western Shoshone claim cultural affiliation with an prehistoric archaeology type called the Fremont. Both the people called the Navajo and the Hopi claim cultural affiliation with the prehistoric archaeology type called the Anasazi. Historically, people called the Utes were known to visit these lands and leave archaeological evidence which is usually called Paiute. Unraveling the multiple ethnic affiliations with cultural resources of these two NPS parks and the region in general is a task for future studies, but one that should be addressed.

The NPS chose to consult only with the Southern Paiute people during this study, so this study can only convey what the Southern Paiute people believe.

The best answer to the question "How should I use this report?" is "As a beginning of a long term consultation with all the Southern Paiute people." Most natural resources on federal lands are studied continuously. It is assumed that the biotic and abiotic components of the land are extremely diverse and that many studies are needed to fully understand how this diversity exists across the land. It is also assumed that however complete the NPS information base on a resource, when an action is being proposed, on site visits are required before an action is fully evaluated. Ongoing studies are required because the biotic and abiotic components of the land change over time. These are good assumptions to hold about American Indian cultural resources.

CHAPTER ONE STUDY OVERVIEW

This is an applied ethnographic study of Southern Paiute cultural resources and how these are related to the natural ecosystems (Figure 1) that surround and incorporate Zion National Park in southern Utah and Pipe Spring National Monument in northern Arizona (Figure 2). This study is special in two ways. Unlike most other studies of American Indian cultural resources found within National Parks, this study moves beyond the formal boundaries of these NPS units in an effort to understand them as components of a broader natural ecosystem. As such, this study is part of a new tradition which seeks to establish a scientific and social framework for ecologically based stewardship of Federal lands and waters (Ecological Stewardship Workshop 1995). Unlike most studies of American Indian cultural resources which do not involve Indian tribes in the design and conduct of research, this study was preceded by the signing of a Memorandum of Agreement between the involved parks and culturally affiliated Indian tribal governments. As partners in the research process, these tribes have had a voice in how their cultural resource issues would be studied and presented to the NPS.

The purpose of this chapter is to provide an overview of this applied ethnographic study by highlighting some of its special findings. In addition, the chapter provides a conceptual context for understanding both the NPS's interest in ecosystem management and how Southern Paiute people view space, time, and cultural resources. This chapter is viewed as containing essential information for understanding the much more technical and detailed discussions that occur in the following chapters.

1.1 Ecological Stewardship

The NPS, along with other Federal land management agencies, is seeking new ways to view, study, and manage the human, biological, and physical resources for which they are responsible. The current ecological stewardship movement is based on principles (both established and yet to be established) of ecosystem management.

Today, there are major efforts completed and underway to more clearly define what is involved with ecosystem management, how to collect new data to inform land use managers, and help define a process for implementing new management practices. Perhaps the most recent and broadly applicable of these efforts has been released by the Interagency Ecosystem Management Task Force (1995) as a three-volume report entitled *The Ecosystem Approach: Healthy Ecosystems and Sustainable Economies*. This report is designed to provide clear direction to Federal agencies in their efforts to adopt a proactive approach to ensuring a sustainable economy and a sustainable environment. The Task Force report (1995:3) provides the following key definitions:

The ecosystem approach is a method for sustaining or restoring natural systems and their functions and values. It is goal driven, and it is based on a collaboratively developed vision of desired future conditions that integrates ecological, economic, and social factors. It is applied within a geographic framework defined primarily by ecological boundaries.

The goal of the ecosystem approach is to restore and sustain the health, productivity, and biological diversity of ecosystems and to restore and sustain the overall quality of life through a natural resource management approach that is fully integrated with social and economic goals. This is essential to maintain the air we breathe, the water we drink, the food we eat, and to sustain natural resources for future populations.

This applied ethnographic study specifically addresses components of these definitions in the following ways:

**The components of an ecosystem are integrated and these relationships can only be understood through interdisciplinary and holistic analysis.*

This study looks at many aspects of Southern Paiute culture associated with these ecosystems including myths, land use values, plants, and animals.

**The ecosystem approach emphasizes the use of information from both science and the knowledge of people in local communities.*

This study presents the cultural perceptions and knowledge of Southern Paiutes about these ecosystems, and places this indigenous knowledge into context through the use of social science findings and historic documents.

**A goal of the ecosystem approach to management is to restore the functions and values of natural systems.*

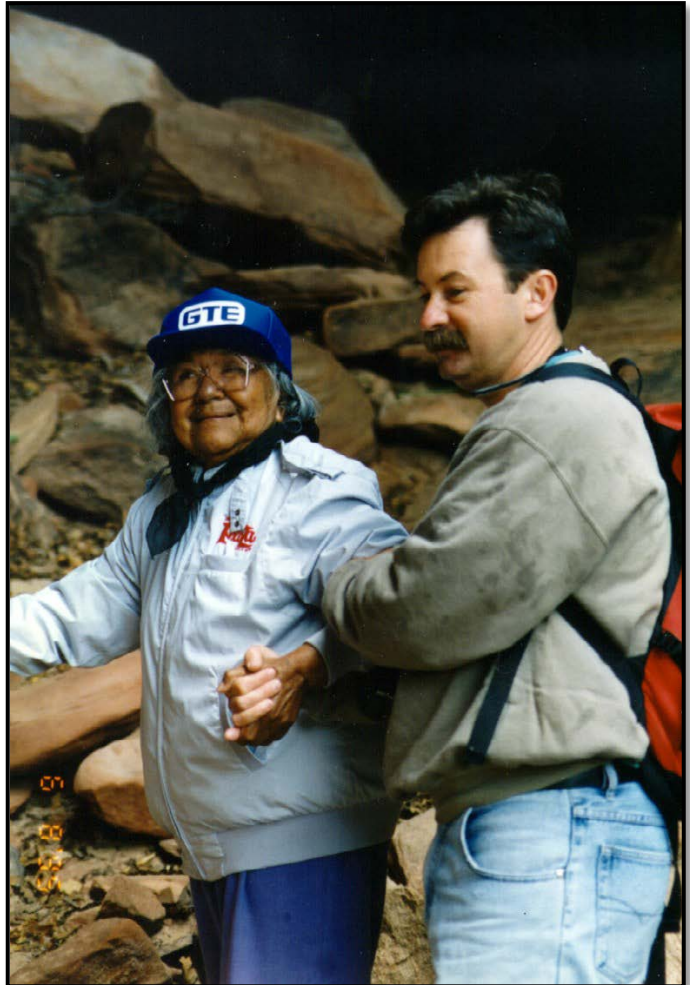


Figure 1.1 Southern Paiute Elder and Zion National Park Employee

This study identifies Southern Paiute ecosystem values and recommends ways that the ecosystems can be physically and spiritually restored.

- * *Ecosystem management involves identifying a shared vision of desired future ecosystem conditions that integrate ecological, economic, and social factors.*

Southern Paiute people have shared in this study their vision of what these ecosystems were under traditional Paiute management, what occurred to the natural resources and the Paiute people after encroachment, and how to begin to reassemble and restore the components of the ecosystems, including reintegrating Paiute people.

- * *Ecosystem management seeks common solutions by forming partnerships between Federal, state, and local governments, Indian tribes, landowners and other stakeholders.*

Before this study began, a partnership between the two parks and the six Southern Paiute tribes was established by a government-to-government agreement. This study contains tribal government recommendations for continuing this NPS partnership and further involving private landowners, state agencies, and other Federal agencies. Therefore, this applied ethnography study had the advantage of beginning with a study design that contained many of these essential components of ecosystem management. Once the study began, however, it was the responsibility of the applied ethnographers to use and hopefully build upon past scientific findings and theories from studies of the human-ecosystem interface.

1.2 Science of the Human-Ecosystem Interface

People are the newest and certainly the most difficult component to incorporate in the ecosystem approach. This situation probably occurs because Federal land management agencies have more experience managing the resources than understanding and managing the resource users. This legacy has left many Federal agencies with a gap in both information about kinds of people and experience working with communities, organizations, and American Indian tribes. Nonetheless, filling this gap is essential if the new ecosystem approach is to succeed.

Everywhere, park rangers and other natural resource scientists are grappling with what they call the human dimension of ecosystem management. According to a recent ecosystem management report by the Forest Service (Forest Service 1995:7), the term *human dimension* refers to:

An integral component of Ecosystem Management that recognizes that people are part of ecosystems, that people's pursuits of past, present, and future desires, needs and values (including perceptions, beliefs, attitudes and behaviors) have and will continue to influence ecosystems and that ecosystem management must include consideration of the physical, emotional, mental, spiritual, social,

cultural, and economic well-being of people and communities. This definition is especially rich in details about what human variables should be considered and how significant people are in the new ecosystem approach. However, there are few clear guidelines for foresters, park rangers, and other natural resource managers who now want timely and credible information about people and their ecosystem interactions.

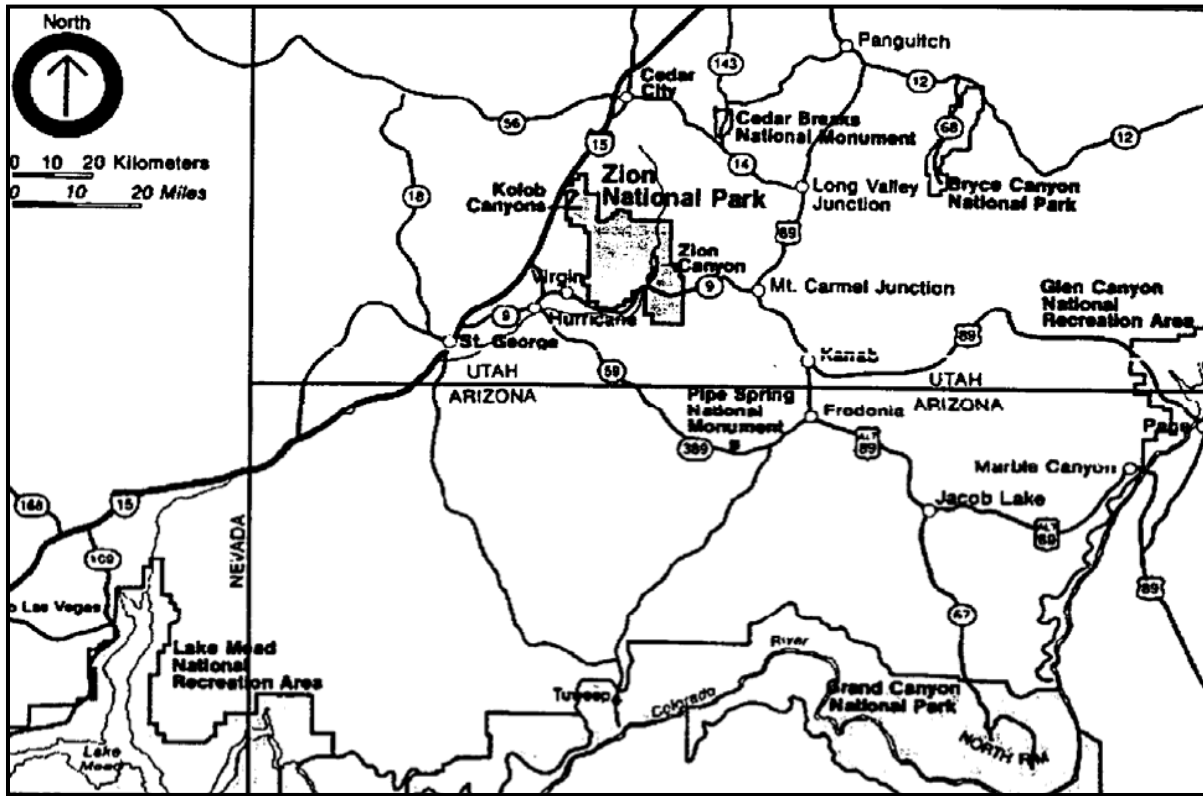


Figure 1.2 Location of Zion National Park

While most Federal agency personnel have little experience systematically consulting with many types of people and generating problem-specific information about how these people use ecosystems, many professionally trained social scientists are familiar with both of these issues. A few agencies have social scientists on staff, such as the Applied Ethnography Program of the NPS. Where agency social scientists are not available, land managers will be expected to personally begin interacting with non-agency social scientists for the first time. Thus, it is useful to briefly review social science studies of the human-ecosystem interactions so that natural resource managers will have some perspective on what to expect from social scientists and which social scientists are professionally trained to provide the research to answer ecosystem management questions.

Journals like *Human Ecology* and *Society and Natural Resources* are exclusively devoted to publishing scientific research on these issues. Most other major social science journals like *Human Organization* and *Rural Sociology* regularly feature articles that can be called social ecology, political ecology, or cultural ecology. The *Journal of Political Ecology* is an electronic journal at the University of Arizona devoted to the interdisciplinary study of these

issues.

Books and chapters summarize current findings as well as integrate these findings into models that are tested by future research. Often these are the published results of a major symposium like *Mans' Role in Changing the Face of the Earth* (Thomas 1956) or "The Impact of Human Activities on the Physical and Social Environments: New Directions in Anthropological Ecology" (Montgomery, Bennett, and Scudder 1973), or *The Ecosystem Approach in Anthropology: From Concept to Practice* (Moran 1990) or *Population - Environment Dynamics* (Ness, Drake, Brechin 1993). Other research findings are produced when one agency attempts to address these issues from its own perspective, such as *Social Aspects of New Perspectives in Forestry* (Stankey and Clark 1992) and *Institutional Barriers and Incentives for Ecosystem Management* (Cortner et al. 1995).

Although the science of biological ecology (Egerton 1985) preceded its socio-cultural sister sciences, the latter were well established as legitimate fields of study by the late 1800s through the research of a diverse set of international scholars like the American George Marsh, the Russian Alexander Woeikof, and the Frenchman Elisee Reclus (Thomas 1956: xxviii - xxxvii). Egerton (1985:103) even suggests that when pure ecology became more generally applicable to human problems it too began to consider social variables, because "the goal of applied science is to achieve an understanding of nature in relation to human endeavor." Although biological ecology and human ecology may have taken different approaches, they both seek to better understand the human-environment interface and they both have worked on this issue for more than one hundred years.

The point here is that there are well established fields of study in social science which can contribute to questions about the human dimension of ecosystem management. If land management agencies currently know more about natural resources than human resource users, it is because the former have received more attention due to their central importance in past natural resource management practices. The new ecosystem approach to land management recognizes the critical role humans have in the ecosystem and the general lack of available information on these human activities. Thus, there is a dual crisis facing most land use managers -- to decide how to study humans and to select appropriate scientists to conduct these studies. Needless to say, if social scientists were asked to design studies of wildlife or forests they would be at a great disadvantage. Likewise, when fishery biologists are asked to design a Native American ecosystem study they may be both perplexed and worried over the effectiveness of their labors.

1.3 Creating Useful Ecosystem Social Science

Ecosystem management has created a demand for applied social science studies, but how do agencies assure that useful studies are being funded? It should not be assumed that by funding social science studies, managers will know exactly what they need in order to work effectively with natural resource users and to form policies that create better human-ecosystem interactions. As Federal agencies rush to use social scientists, they need professional advice. There is an obvious need for advice from agency-based social scientists, and the demand on their time is expected to drastically increase with a shift to the ecosystem approach to

management. Agencies can also draw upon university-based social scientists for advice and labor. Over time, as more and more ecosystem social science studies are funded, agencies will develop an understanding of what human variables are most critical, what findings are persuasive in the formulation of public policy, and which types of social scientists are useful for certain types of studies (Van Willigen, Rylko-Bauer and McElroy 1989; Wulff and Fiske 1987).

Past lessons can be useful in the creation of effective ecosystem social science. Two major types of problems emerged during past efforts to make human knowledge useful to natural resource managers; these are termed here (1) working together and (2) short-fall studies.

1.4 Working Together

There are studies jointly conducted by social scientists and natural resource managers that address the issue of how to make social science findings useful for managers. The Great Lakes Fishery Commission, for example, funded a two year-long study called Social Assessment of Fisheries Research, which involved more than 50 managers and social scientists who worked together to bridge the gaps between the needs of fishery managers for findings on human fishery uses and the desire of social scientists to conduct studies that resolve theoretical questions. The findings of these efforts were published as a special issue of the *Journal of Fishery Science* (Talhelm and Libby 1987).

The Great Lakes fishery management project for working together is virtually identical to the one that cumulated in the recent Ecological Stewardship Workshop (1995) which was sponsored by dozens of Federal agencies, private foundations, and natural resource interest groups. This workshop paired teams of scientists and natural resource managers for two weeks in an effort to have them jointly produce interactive essays about ecosystem management. These essays are expected to be useful to both scientists and managers and, when published in 1996, serve as a practical guide for participants in the ecological stewardship movement.

Working together is essential for ecosystem management so that scientists and natural resource managers can begin to develop a common understanding of what research findings are needed to formulate, implement, and monitor natural policy. Without the time and opportunity to establish a common ground, short-fall studies may occur. Needless to say, working together is critical as a way for managers to understand user groups as well as they understand components of the natural ecosystem.

1.5 Short-Fall Studies

Significant social science studies that are useful to land managers may not be forthcoming, even when the appropriate researchers are working with knowledgeable managers who have provided sufficient funds to conduct the research. The possible short-comings of what are called *short-fall* studies, can derive from the following factors: (1) scale - problems with larger than normal analytical units, (2) holism - need for new variables and interdisciplinary methodologies, and (3) smart databases - which must be accumulated, modeled, and updated to meet changing ecosystem conditions.

Scale

Agencies must consider the broad-scale, long-term ecological consequences of their actions. (Interagency Ecosystem Management Task Force 1995:17-18)

Ecosystem research involves new sizes of analytical units. Previously funded agency research has focused on and usually has been geographically limited to lands specifically managed by the agency. From a practical standpoint, even though natural and cultural resources obviously extend beyond the park, forest, or whatever lands the agency manages, the scientists have been restricted from conducting studies beyond the Federal administrative unit. As research is less geographically bounded by the administrative unit itself, new questions arise about what is the scale of appropriate ecosystem studies. Once we start expanding, where do we end? How do we come to agree upon common criteria so that all of the new ecosystem studies correspond geographically?

Time is another type of scale issue that must be addressed by the new ecosystem research. Previous studies have been designed to answer immediate management questions, often to the exclusion of temporally broader questions about the formation and dynamics of the ecosystem. In general, each science will have a preferred time-frame for best understanding its research questions. Usually, the greater the time depth under consideration the more information is required to provide an answer to a research question.

Longer analysis time-frames will combine with geographically broader study units to produce new kinds of studies -- often studies that have never been conducted by either scientists nor agencies. These new scales of analysis will make it even more important that all scientists conducting ecosystem research use similar analysis frames.

Holism

Under the ecosystem approach, management is oriented towards interacting systems, and addressed ecological, economic, and social concerns. (Interagency Ecosystem Management Task Force 1995:19)

Traditional resource management tends to be oriented towards one or a few resources, such as timber, minerals, single wildlife species, water, or cultural resources, with less attention paid to other resources or to the interdependent relationship between these resources. New ecosystem studies must look at many aspects of the ecosystem and their interrelationship to one another. This requires multivariable models that probably have not been developed because either the funding or the expressed policy need for them had not previously existed.

Holistic social science studies not only include the widest appropriate array of social and cultural variables, but also include all appropriate kinds of people. The term **cultural affiliation** is used to specify American Indian ethnic groups and tribes who have cultural ties to parks and other Federal lands. Other types of people also have social or cultural ties to Federal land management units and these people should also be included if all the human dimensions of the ecosystem are to be understood.

Holistic studies tend to require interdisciplinary teams. Botanists work with cultural anthropologists to assure that American Indian ethnobotanical interviews are scientifically referenced. Climatologists work with social scientists to triangulate archaeological findings about shifts in agriculture over millennium. Even different types of social scientists must work together so they produce comparable findings about different types of culturally affiliated peoples.

Smart Databases

Under the ecosystem approach, resource management plans are based on a collaborative vision for the ecosystem, considering the mandates, needs, interests, and goals of all stakeholders. Management plans and actions are modified as necessary, based upon changes in our knowledge of the ecosystem, new information, availability of new methods and approaches, and assessments of progress towards goals (Interagency Ecosystem Management Task Force 1995:19).

Ecosystem management needs to be smart. It needs to be built upon interactive databases that are constantly updated by new studies. Unlike static databases of the past which were successful when they provided simple inventories of natural resources, open-ended databases are needed to match the perspective of ecosystems as constantly changing. Open-ended databases need to be able to answer questions that are not even conceived of when natural resource studies are designed and conducted. In other words, smart databases are designed to be open-ended, cumulative, and oriented to future problems.

Social science studies require smart-type databases inasmuch as human societies and cultures are constantly changing. In human societies the most rapid changes tend to occur in what are called **opinions**. As a result, opinion polls are conducted as often as necessary. More basic to humans are **values** which tend to persist throughout the life of the individual and even to characterize the individuals' ethnic group over generations. Value-based data are a more fundamental type of social science data for building land use policies (Stoffle, Jensen, and Rasch 1987). A collaborative vision for an ecosystem should be developed from shared values, not from the more ephemeral types of social data such as opinions. Thus, it is essential for natural resource managers to know about and to specify exactly the kind of social science data they need.

Once the appropriate type of human dimension data is incorporated into a smart database, then appropriate monitoring is necessary. *Social indicators* are ways to easily sample different human populations to determine if significant changes have occurred to warrant a reconsideration of existing land use policies. Social indicators, however, can only point out when new studies must be conducted; they do not replace the continual collection of primary information that is then incorporated in the smart databases.

This applied ethnography study has confronted the problems of making its findings useful to the managers of Zion National Park and Pipe Spring National Monument. The study has confronted each of these problems and to some extent resolved them in an effort to understand the interface between Southern Paiutes and the ecosystems of the northern Colorado Plateau.

1.6 The Northern Colorado Plateau Ecoregion

Zion National Park and Pipe Spring National Monument are located on the northern portion of the Colorado Plateau. These parks are located in two of the major watersheds on the Colorado Plateau which drain from the north to south into the Colorado River as it passes through the Grand Canyon. This applied ethnography report contributes to the growing scientific literature funded by the NPS to better understand the relationship between parks and people. More specifically, this study addresses (1) the interface between Southern Paiute cultural resources and these two NPS units, and (2) the extent to which Southern Paiute cultural resources can be understood as components of ecosystems that surround Zion and Pipe Spring.

Given this is one of the first applied ethnography studies that attempts to address the role of American Indian cultural resources from an ecosystem perspective, it is important to describe this study as it was designed and as it has emerged over a period of almost two years within the language of ecosystem management. Especially important are issues of scale, holism, and smart databases.

1.6.1 Scale

There are four scales of analysis contained within this study. Three of these are illustrated in Figure 3. The most general level is the ecoregion. The next level is the ecosystem, then the park, and places within either the park or elsewhere in the ecoregion. Different types of Southern Paiute cultural resource information are used to interpret cultural meanings that exist at each of these scales of analysis.

Ecoregion

The relevant ecoregion for this study is defined as the lands of the Colorado Plateau located north of the Colorado River where it passes through the Grand Canyon until the watershed reaches the geophysical boundary of the Great Basin. This ecoregion contains a series of watersheds that drain from the boundary with the Great Basin to the Colorado River. Like most ecoregions, this one contains relatively unique ecosystems which are defined by major water catchment systems.

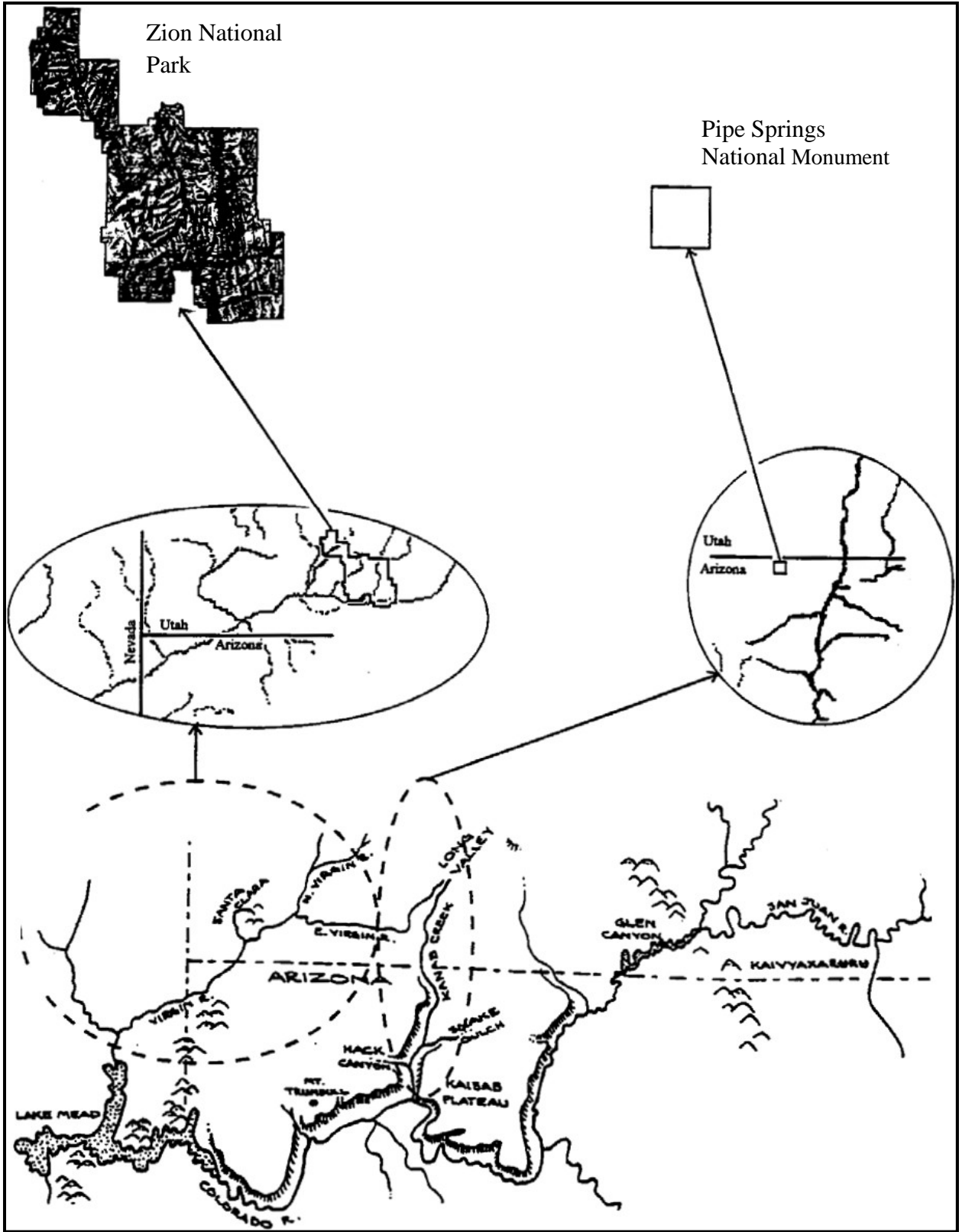


Figure 1.3 Zion National Park and Pipe Springs National Monument

Ecosystems

Two major watersheds drain southward from the divide between the Colorado Plateau and the Great Basin towards the Colorado River. Kanab Creek drains the more eastern of these two watersheds and the Virgin River drains the one in the west. For purposes of this study each of these is being treated as a separate ecosystem. Taken together these two ecosystems incorporate most, but certainly not all, of the significant hydrological drainages within the ecoregion.

Parks

Zion National Park and Pipe Spring National Monument are the Federal land management units that receive special analysis in this study. The NPS selected these two units to begin the analysis of Southern Paiute cultural resources issues. Through a process technically known as **tiering**, the study builds on previous applied ethnography studies conducted in northern portions of the Grand Canyon and below Glen Canyon Dam. Other Federal parks in the ecoregion which have not been the subject of Southern Paiute cultural resource studies are Cedar Breaks and the portion of Glen Canyon National Recreation Area located above the dam.

Places

There are many places that are special within this ecoregion. These tend to have obvious and often spectacular geological and biological characteristics: the dramatic cliffs of Zion Canyon, the narrows in the Virgin River, the natural gravity spring at Pipe Spring, the hot mineral spring where the Virgin River breaks through the Hurricane Cliffs, multicolored sandstone near Kanab Creek, and the black volcanic center cones next to hot pink sand dunes near Quail Creek. Often physical and biological features of the ecosystem are combined with places of historic or traditional cultural significance to create places that are special in many related ways.

1.6.2 Holism

This applied ethnographic study is holistic to the extent that it includes the widest range of cultural resources as possible within the constraints of the contract. Special efforts were made to identify and provide a Southern Paiute cultural evaluation of (1) plants, (2) animals, (3) minerals, (4) archaeology sites, and (5) petroglyphs and pictographs. While this approach may seem to include an extensive variety of cultural resources, this applied ethnography study fails to be as holistic as Southern Paiute people would like. Often it takes a few years of tribe-park consultation before a clear list of management and natural resource issues emerges. For example, after almost ten years of consultation, the 17 tribes and Indian organizations with cultural ties to the Nevada Test Site provided the following holistic list of studies that should be conducted for a complete Native American assessment of cultural resources (American Indian Writers Subgroup 1995:16):

- (1) **Ethnoarchaeology**: -the interpretation of the physical artifacts produced by our Indian ancestors;
- (2) **Ethnobotany**: the identification and interpretation of the plants used by our Indian people;
- (3) **Ethnozoology**: the identification and interpretation of the animals used by Indian people;
- (4) **Rock Art**: the identification and interpretation of traditional Indian paintings and rock peckings;
- (5) **TCP**: the identification and interpretation of places of central cultural importance to a people, called Traditional Cultural Properties (TCPs), often Indian people refer to these as power places;
- (6) **Ethnogeography**: the identification and interpretation of soil, rocks, water, and air; and
- (7) **Cultural landscapes**: the identification and interpretation of spacial units that are culturally and geographically unique areas for Indian people.

If the American Indian Writers Subgroup, which is composed of Southern Paiutes, Western Shoshone, and Owens Valley Paiutes sets the standard for a holistic analysis of Indian cultural resources, then it is clear more types of cultural resource studies need to be undertaken by Zion N.P. and Pipe Spring N.M. Nonetheless, this applied ethnography study does attempt to assess many of these cultural resources.

1.6.3 Smart Databases

When American Indian people are trying to explain or teach someone about a subject of great cultural importance, they do not tell everything at once. Knowledge is important, sacred, and critical to survival, so Indian people restrict what they share about something at one time. After information is shared, Indian people wait to see what the person who received the information does with the information. If they treat the information in a culturally correct manner, then next time the Indian people will share more information.

Indian people treat Federal land management agencies who desire information about cultural resources like they would any other person asking about these culturally important issues. Given this traditional process for sharing information, it behooves Federal agencies to structure the scientific study of Southern Paiute cultural resources in stages. This permits American Indian people to share what they wish at one time and to then have the time to see what the Federal agency does with the information. Later studies will involve more sharing if the American Indian people are convinced that by sharing information they have increased the protection or preservation of the cultural resources held by the Federal agency (Stoffle and Evans 1990: 96).

Knowledge builds upon knowledge to make more complex understandings. It is critical for Zion N.P. and Pipe Spring N.M. to develop smart databases which can take each new piece of information that is provided by Southern Paiute elders and preserve it until a more holistic picture of cultural resources is achieved. Smart databases also are interactive, so when an elder is talking about hunting, he also may be sharing something about a petroglyph panel that contains hunting scenes.

Similarly, when a female elder is talking about making a basket, she also may be sharing something about how to manage wet ecosystems containing willows. A smart database should have the ability to integrate Southern Paiute plant, animal, and mineral information with their epistemological understanding of the universe and the role of spiritual behavior in maintaining that universe. Perhaps this is too much to ask of a database, even a smart one, but interactive and multimedia databases are now easily available with new software like Asymetrix's *Multimedia Toolbook*. Such databases can serve to begin to record and make more useful information about the Southern Paiute cultural resource perspectives on these parks and their ecosystems.

1.7 Southern Paiute Ecoscape Views

Both the NPS and the Southern Paiute people perceive Zion N.P. and Pipe Spring N.M. as places whose significance derives from larger cultural and ecological landscapes. Southern Paiute people view both parks as being parts of riverine ecosystems. Zion N.P. is a place along the Virgin River, and Pipe Spring N.M. is a place along Kanab Creek. The current boundaries of both parks are largely irrelevant for understanding the lives of birds who fly along the river, of deer who seasonally migrate up and down the river, and of fish who swim in the river. Paiute people, whose's ancestors lived along these riverine ecosystems for a thousand years or more, recognize that the plants they gathered, the animals they hunted, and the lives they lived are unrelated to the current boundaries of these two parks. As a result, the NPS and the Southern Paiutes arrived at the same conclusion: that is, to understand the cultural and natural significance of these parks requires a knowledge of their relationships with other places. Thus it is both administratively and culturally appropriate for this applied ethnographic study to follow an ecosystem approach.

The remaining portions of this chapter present an overview of Southern Paiute perceptions of Zion N.P. and Pipe Spring N.M. and the riverine ecosystems in which they are found. Naturally, not all issues can be summarized here, so three themes have been selected: (1) cultural ecoscapes; (2) time dimensions; and (3) critical cultural themes.

1.7.1 Cultural Ecoscapes

Ecosystem is a term that emerges from biological ecology. It is important to introduce other terms that refer to the human dimension of ecosystems. A full accounting of these terms is presented in Chapter Four of this report. One term, however, must be introduced here. The term *ecoscape* is used here to refer to both the Virgin River and Kanab Creek riverine ecosystems. A *cultural ecoscape* is defined as being both culturally and naturally unique. There must be something special about drainages of both the Virgin River and Kanab Creek if they are to be considered cultural ecoscapes.

Kanab Creek Cultural Ecoscape: Main Stream

The Kanab Creek cultural ecoscape shares much of its western watershed boundary with the Virgin River cultural ecoscape. The Kanab Creek cultural ecoscape begins on the southern flank of the Paunsaugunt Plateau. From here water flows south along two major drainages: Kanab

Creek and Johnson Wash. Additional water flows from the east into Kanab Creek from the western flank of the Kaibab Plateau, especially through Snake Gulch and Jumpup Canyon. From the west, water flows into Kanab Creek from Antelope Valley, especially through Bulrush Wash and from the Kanab Plateau, especially through Hack and Grama Canyons. The Kanab Creek cultural ecoscape ends when Kanab Creek flows into the Colorado River.

The streams and washes which flow down side canyons into main stream canyons and valleys all contribute to the overall cultural meaning of the Virgin River and Kanab Creek cultural ecosystems. These tributaries of the main stream are discussed in later chapters.

1.7.2 Time Dimensions

The Southern Paiute cultural landscape has been somewhat dynamic, especially since European and Euroamerican contact. Southern Paiutes adopted many aspects of Euroamerican culture, such as clothing styles and new modes of transportation, while retaining most of their traditional culture. For example, as they took employment in the Euroamerican economic sector, they continued to practice their traditional pattern of seasonal harvesting of wild food resources. They continued to use extensive territories and to define their territories in much the same way as they had for generations. They continued to use traditional medicinal plants and practices, and many continued to speak their traditional language. Such practices continue today. Southern Paiutes have generally synthesized their traditional culture with Euroamerican culture, and they function in two overlapping cultural worlds. Yet, due particularly to interactions with Euroamericans and other Native American groups who were themselves responding to the Euroamerican influence, regions of the cultural landscape took on special significance at certain times. Therefore, this section provides information about significant time periods in Southern Paiute history.

Information about Southern Paiute culture is collected through direct interviews with living people, reviews of documents written during other efforts to collect such information, and reviews of documents that were written for other purposes, such as travelers' diaries that describe Southern Paiute lifeways. Like many Native American groups, Southern Paiutes experienced extensive depopulation after European contact. Therefore, the Southern Paiute people with whom the Euroamericans interacted had already experienced significant cultural stress and change by the time much of the information about them was being written down. Table 1.1 provides a brief chronology of the Southern Paiute ethnohistory pertinent to southwestern Utah and northern Arizona. The time periods generally reflect what Southern Paiute people said during discussions held during the scoping period of this applied ethnographic study. The time periods are not hard and fast, however, and are subject to change based on new recommendations. Time period descriptions come from scoping discussions and published materials on Southern Paiute history and culture.

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Mythic Times (World Origin to human time)

There was a time between the creation of the world and when humans were created. During this mythic time, various beings lived. The existence and behavior of these beings was revealed to humans, thus accounting for the presence of mythic-time stories today.

Creation Times (Beginning of human time to 1776)

Southern Paiutes care about all times when they have occupied the ecoscapes under study. These times began when Southern Paiute people were created and given the right to use and the obligation to protect these lands and resources. The time between creation and the coming of Europeans

(approximately 1776) is largely considered one time. There were movements of new Indian people around the boundaries of Southern Paiute territory, but conflicts and agreements with these new Indian peoples are viewed as primarily important to local Paiutes. There are general stories about relationships with Hopi in the east, Utes in the north, Goshutes in the northwest, Shoshone in the west, Mohave in the southeast, and Hualapai and Havasupai in the south across the Colorado River.



Figure 1.4 Southern Paiute Elder Gazes at Rock Art Panel with UofA Ethnographer

During the creation times Paiutes lived in many places and built many kinds of structures. It is at this point that their interpretation of this prehistoric period departs from some western scientists. Most Southern Paiutes believe they were the people or are related by marriage to the people the archaeologists call the Virgin River Anasazi, and, through these early ties and through more recent ties, they believe they are directly related to some Hopi clans. Native American ties to cultural resources can be established by archaeological and ethnographic investigations; however, anthropological debates about the relationship between archaeological classifications and living peoples are ongoing. One such debate that has been occurring since the 1940s involves the ecoregion that includes Zion N.P. and Pipe Spring N.M.. Defining culture groups by the artifacts they left behind is problematic, and there are several competing theories about the origins and nature of the people who lived in the region. Some archaeologists have not made the connection between Southern Paiutes and earlier culture groups and have argued that Paiutes came out of the Great Basin when the Virgin Anasazi abandoned the area (Schwartz 1988: 13-14). Recent science interpretations, however, argue that Southern Paiutes were in contact with the people identified by archaeologists as the Virgin Anasazi and the Sevier Fremont (Fowler, Madsen, and Hattori 1973). Swarthout (1981) proposed using Southern Paiute settlement-subsistence strategies to model Anasazi settlement distributions in the western Grand Canyon and lower Virgin River region including the Arizona strip. Wikle (1979:370) notes that "(a) few archaeologists argue that the Southern Paiutes were actually post-agricultural Anasazi using a hunting and gathering strategy to cope with the recurring environmental crisis" (see also Gunnerson 1962, 1969). Fairley's (1989:85-152) extensive review of this issue places Paiutes in and around the Virgin Anasazi but concludes that existing evidence fails to answer the question of whether the Paiute pushed the Anasazi out of this area in the early 1100 AD or joined them to become a common people.

Table 1.1. A Brief Chronology of Southern Paiute Ethnohistory in Southwestern Utah and Northern Arizona

Time Period	European and Euroamerican Activities	Southern Paiute Response
<i>Mythic Creation</i>		
Pre-1520	None recorded	Aboriginal period; Southern Paiutes organized as Southern Paiute Nation.
1520-1750+	The Columbian Exchange brings Europeans and their diseases into contact with Southern Paiutes via Native American traders.	Scale of depopulation up to 90% for local groups, with new diseases occurring with unknown frequency.

Time Period	European and Euroamerican Activities	Southern Paiute Response
<i>Encroachment</i>		
1750+ - 1855+	Spanish-Mexican demand for Native American slaves and servants stimulated Ute mounted slave raids.	Raids and epidemic diseases heighten Southern Paiute fear of sorcery. Raiding for children compounds selective mortality during contagious disease epidemics and accelerates depopulation.
1826 - 1846	Trappers and traders travel through Southern Paiute territory, especially along the Virgin River.	Southern Paiutes are driven away from key rivers and crucial springs. Native American intergroup trade and transmission of disease continues. Slave raiding by Utes and New Mexicans peaks.
1847 - 1862	Members of the Church of Jesus Christ of Latter Day Saints (Mormons) colonize the area and occupy environmentally key irrigable lands and domestic waters.	Many new diseases are transmitted directly to Southern Paiutes and their neighbors and cause up to 75 percent loss in local populations. Southern Paiutes experience major cultural, social, and economic disruption.
1863 - 1873	Mountain miners colonize remaining spring oases.	Southern Paiutes form labor gangs and depend on employment at mine towns, farms, ranches, and ferries. Southern Paiute political organization breaks down as Euroamericans interact with labor gangs and treat labor contractors as "chief." Southern Paiutes adopt Euroamerican clothing and foods.
<i>Lost Time</i>		
1874 - 1900	Euroamericans gain political power.	Southern Paiutes are left out of reservation system. A generation matures working in labor gangs with little or no formal education in either U.S. schools or Southern Paiute traditions. Northern labor gangs migrate to low-altitude river systems.

Time Period	European and Euroamerican Activities	Southern Paiute Response
<i>Early Reservation</i>		
1901 - 1932	Railroads, highways, and automobiles bring more Euroamericans into the area. Zion National Park and Pipe Spring National Monument are established. Reservations are established for some Southern Paiute Tribes.	Southern Paiutes become highly mobile wage laborers. Extended family remains the typical consumption/labor unit.
1933 - 1953	Federal assistance to region is extensive.	Southern Paiute children receive formal education in U.S. schools. Adults join CCC Indian camps and work on the Kaibab Paiute Reservation near Pipe Spring and on the highways near Zion. Nearly all Southern Paiutes survive by wage labor.
<i>Modern Reservation</i>		
1954 - 1963	Congress adopted the policy of termination. The Paiute Indian Tribes of Utah were terminated and the status of Indians as wards of the U.S. ended.	Southern Paiute lands in Utah and services to tribal members living there were terminated. Southern Paiutes established their claim before the U.S. Indian Claims Commission.
1964 - 1992	Southern Paiutes receive awards under the U.S. Indian Claims Commission.	Southern Paiute family economies and reservation governments are bolstered. Formal political structure established under U.S. control is stabilized.
1992	Kaibab Paiute Tribe and Paiute Indian Tribe of Utah form the Southern Paiute Consortium.	Southern Paiutes actively pursue grants for cultural resource programs.

Encroachment Times (1776 to 1870)

Europeans were first observed in Southern Paiute lands north of the Colorado River in 1776. Some contacts were made before this time through Paiute traders to Hopi in the east and to Mohave in the South. The journey of Father Escalante through northern portions of Southern Paiute territory in 1776 left a lasting impact. Escalante was followed by European trappers like Jedediah Smith (in 1826) and Wolfskill and Yount (in 1830) who recorded their movement through these lands in the early 1800s. Organized settlement of Southern Paiute lands began with colonists from the Church of Jesus Christ of the Latter Day Saints (the Mormons). Mormon settlement was preceded by scouts who assessed likely places to establish colonial settlements. Generally these were along rivers where Southern Paiute people were already living and farming. After Mormon colonial settlements appeared in Southern Paiute riverine oases, other Euroamericans began to migrate through these lands generally on the way to places farther west. The California gold rush of 1849 initiated the biggest stream of travelers through Southern Paiute lands. The 49ers who moved along the Wasatch Range passed through Southern Paiute lands for hundreds of miles, often traveling from oasis to oasis before beginning to move west across the lower Mohave Desert.

After the 49ers came prospectors and non-Mormon settlers. These people lived in mining towns like Pioche and Panaca, Nevada, and herded cattle and farmed wherever water was available. The time around 1870 is key to Southern Paiutes because Mormons signed a peace treaty with the traditional enemy of the Paiutes who call themselves *na Dene* (the people) and who were called by the Spanish *Apache con Navaja* (Apaches with knives) and who came to be called by most people the Navajo. After 1870, the Navajo were frequent visitors and traders with the Mormon communities. Simultaneously the Navajo became raiders of Southern Paiute camps. After 1870, Southern Paiute people increasingly lived in *regions of refuge* like lower Kanab Creek and hidden places along the Colorado River in the Grand Canyon.

Lost Times (1870 to 1900)

For approximately thirty years Paiute people disappeared; that is, their interactions with Euroamericans greatly declined. By 1870, the number of Paiutes was drastically reduced by disease and starvation. Their prime agricultural lands were lost to settlers and domestic animals. They lost the ability to respond as a political unit called the Southern Paiute nation. Mutual protection agreements between Paiute and Mormon settlements were broken by the Mormons once they signed a peace treaty with the formerly hostile Navajos. Southern Paiutes north of the Colorado River all but disappeared as a people. So where did they go? Some Paiute families crossed the Colorado River to live with the Hualapai and Havasupai people. Other Paiute people moved to isolated places where they were unlikely to be disturbed. Many Paiute people were simply hiding out in regions of refuge either from Euroamericans or from Navajo raiders.

The level of stress on Southern Paiutes became evident to non-Indians within a decade. By 1880 Southern Paiute people were so stressed that they participated in the Ghost Dance. This millenarian (world order reversal) ceremony, conceived by a Northern Paiute religious leader, spread to Southern Paiute religious leaders who, in turn, taught the ceremony to other Indian groups. The

1880 (as well as the second movement in 1890) Ghost Dance ceremonies were an attempt to overthrow Euroamerican domination of American Indians and reverse the destruction to the natural environment caused by Euroamericans. The native animals and plants would come back, as would deceased Paiutes *unnaturally* killed by European diseases and starvation. The Europeans would not survive this millenarian event, nor would their noxious weeds that had so quickly replaced native grasses and forbs. Much of the spiritual and resource energy of Southern Paiute, Hualapai, Havasupai and other Indian groups in the region was devoted to Ghost Dances. Eventually, these supernatural efforts to set the world right failed. Indian people converted to Euroamerican religions and, where possible, settled into Indian labor camps near mining and agricultural settlements.

Early Reservation Period (1900 to 1954 - termination)

The Federal government began to reserve land for Southern Paiutes living north of the Colorado River in 1891 when a small amount of land and water were set aside for Paiute people so they could farm and live along a portion of the upper Santa Clara River (see Chapter Two). This land and additional acres were identified as reserved lands by the Secretary of the Interior in 1903 and by Executive Order in 1916. Thus, the Shivwits Indian Reservation was established.

Four other tribes had portions of their aboriginal lands reserved for them by Executive Order in the first three decades of the twentieth century. Kaibab Paiutes had reserved lands by 1907 and by Executive Order in 1913 (see photo 1.3). Indian Peaks was established by Executive Order in 1915 and their reserved lands were expanded in 1921, 1923, and 1924. Koosharem received their reserved lands in 1928, which were expanded in 1937. Kanosh was the last reservation to be established in Utah, when in 1929 lands were reserved and expanded in 1935 and 1937.

The Cedar City Paiutes were to have received reserved lands in 1899, but no land was purchased and the funds were returned to the Federal government. Between 1912 and 1916, attempts were made to purchase reserved lands for them, but no Federal funds were forthcoming. Federal services were provided to the Cedar City group by 1916, and some land was provided by local Mormon funds. For a generation, they were moved when non-Indians desired their lands. By 1925, the BIA agent refused to purchase reserve lands for the Cedar City Paiutes, citing as his reason that they were a *roving band of Indians*.

The early reservation period resulted in both an increased security for some Paiute people who now had protected homelands and conflicts with non-Indian people who strived to continue to use lands, natural resources, and water that now officially belonged to the Indian people. This was a period when non-Indian people and institutions dominated Southern Paiute people in new ways. Children were forced from their parents and sent to Federal or Church boarding schools where they were taught that traditional Indian ways were incorrect and that new Christian ways were correct.



Figure 1.5 Kaibab Paiute Reservation

Reservation-based economies were dominated by Bureau of Indian Affairs agents and by local non-Indian communities. Off-reservation economic activities like hunting, fishing, gathering, camping, and even use of hot springs were restricted by private land owners and Federal and state officials. Indian people were arrested for hunting deer on the Kaibab Plateau, fishing in Duck Creek, and gathering plants in Zion N.P.

The early reservation period also was a time when tribes were formally organized under the Federal Indian Reorganization Act. Tribes began to assume some control over decisions affecting their on-reservation natural resources and human services. Indian families successfully engaged in cattle raising and commercial farming.

Despite initial commitments by the Federal government to afford protection to Indian lands and resources and to assure minimal social services to reservation-based people, the period ended with efforts to terminate the tribal status of Indian people. After two generations of economically marginal but protected existence, local non-Indian interest groups pressured the U.S. Congress to terminate the five Southern Paiute Tribes living in southern Utah. In 1954, all five of these tribes were terminated despite the strong protest of many tribal leaders and members. Thus, yet another generation of highly traumatic events characterized Paiute-Federal government relationships.

Modern Reservation Period (1954-termination to today)

The Modern Reservation Period begins with the termination of the five Southern Paiute Tribes in southern Utah. The Kaibab Paiute tribe escaped termination, but would have been terminated if this national experiment continued to be supported by the U.S. Congress. In 1980,

after almost a generation of doubt, the five Southern Paiute tribes were again given tribal status by the Federal government (P.L. 96-227). Unfortunately, during termination four of the tribes lost some or all of their reserved lands, natural resource rights, and water rights. Only the Shivwits Tribe retained all of these. The five tribes also lost the right to have independent governments, causing them to become a composite tribe called the Paiute Indian Tribe of Utah (PITU). By October of 1981, PITU was a fully operational tribal government.

The Indian Claims Commission began hearing Indian claims for lands lost to the Federal government for which they had not been reimbursed. After years of testimony, the Southern Paiute people won a claim to lands that closely approximated what they held aboriginally and what they defined as their holy land. Claims were finally settled in the early 1970s, resulting in a cash infusion that greatly stimulated new economic, social, and political efforts.

Paiute people first began to have a voice in the identification and management of their cultural resources located beyond the boundaries of existing Paiute reservations with the passage of the National Environmental Policy Act of 1969. In practice, Paiute cultural concerns did not become incorporated into an Environmental Impact Assessment until 1978 when the lands of the Southern Paiute Nation were crossed by the Devers-Palo Verde Proposal. Since then, dozens of studies have documented the cultural concerns of Southern Paiute people for cultural resources located in aboriginal lands. The trend towards full co-management continues today as the Southern Paiute Consortium receives funds to oversee and participate in the production of cultural resource studies such as this one.

1.7.3 Critical Cultural Ecoscape Themes

In addition to the information the Southern Paiute consultants provided about cultural resources within the park service units and their surrounding cultural ecoscapes, their discussions more broadly described their way of viewing the world around them. Several critical cultural themes emerged from their discussions. These address the cultural importance of (1) home, (2) stewardship, and (3) living nature.

Home

Throughout their interviews, Southern Paiute representatives talked of the Northern Colorado ecoregion including both Zion N.P. and Pipe Spring N.M. as their *home* (see photo 1.4). When asked why Southern Paiutes would have gone to the place now called Pipe Spring, one Kaibab elder responded:

It was just a home place for them and they couldn't go away. Because later on they tried to move 'em someplace to a different area and they wanted to move their home 'cause they used to live up in Moccasin, in that area... They wanted to move the people away from here. And they [two sisters] went and found a friend of theirs and talked to him and told him that they were going to move all the people away from this area and they said this was their birth place and this was where they lived, where the old people lived, and they didn't want to leave. They

said, "Those that want to go could go, but we are not leaving." So this man came, and he told his government people that they didn't want to be moved. "I don't think any of them want to be moved," he said. And they really had a big talk over that. I don't know how long it took, but anyway, they'd always talked about that and they'd have meetings. This white man got some other people to back him up and help him to save this place for the Indian people, that this was where they were born and where they were raised and they didn't want to move. And nothing was going to make 'em move... They said that no matter what they did, they were not gonna move, were just going to sit down and not move. And so that ended that and then they decided they were gonna make a reservation out of it. So they went back to Washington, they had to buy some piece of ground for them. So they did and that's how this became a reservation spot where they live now. (CG1)

Another elder who grew up at Pipe Spring before it was a National Monument described his early experiences:

We used to live down there where that van is. That spring was good then. We had it fixed good so it ran off through a little pipe. [There was] a bucket sitting there all the time. When it fills up you go get it, then sit it back again. I used to go to school from there, clear back up that way... My uncle, and my mother, grandmother, grandfather, we used to have that little farm down near, below that snack bar they got down there. We had that farm down there... We had a pond right there to irrigate with. We irrigated and had an alfalfa field and everything - corn, pears was good, too. That pear tree there, nice sweet pears there. (DA4)

The perception of home influences Southern Paiute interpretations of the parks and how they should be managed. For example, one elder argued that the special connection between Southern Paiutes and their home should be recognized by the NPS:

I don't think it's right for people that were born here to come back and in order to come worship the mountains they have to pay the Park Service's charges. It's more like we have to pay \$4 apiece in order to come see the mountain. (DH6)

When talking about the Pah Tempe Hot Springs, one individual said:

It belonged to [the old people]. It was given to them by their Father for them, for that purpose. (CG5)

The Southern Paiute attachment to their homelands is not a new phenomenon. Indeed, such ties were among the first recorded observations made by Mormons, describing the impacts of the slave trade on its Southern Paiute victims:

Notwithstanding their horrible deficiency in all the comforts and decencies of life these Indians are so ardently attached to their country, that when carried into the lands of their captors and surrounded with abundance, they pine away and often die in grief for the

loss of their native deserts. In one instance, I saw one of these Paiuches die from no other apparent cause than this home-sickness. From the time it was brought into the settlements of California it was sad, moaned, and continually refused to eat till it died (Farnham 1849 reprinted in Snow 1929:79).

Stewardship

Another theme that relates to the Southern Paiute perception is that the land is their home and its natural resources should be respected and cared for. In Southern Paiute culture, one important aspect of stewardship is using resources in a respectful manner so they will continue to flourish:

The people that throw things into the water and the spring aren't good for the water or the land itself. They should respect the land. [CG6]

[The water at Pipe Spring is] black and dirty. Ever since housing and these things came in our water has turned like that. Lack of cleaning. Lack of not being able to come here, 'red tape' for gathering medicine. The old people used to say the more you use your water the better it'll get for you. [DA2:B]

I wish they would give all the rights to us, and then we don't take everything. We have to leave some. Even when we're gathering medicine, we don't take the root or anything out with it. We just cut some of what we want to use, and then that way it's just like pruning it. Then that way it gives them a chance, a new one to come out. [CG5]

That red paint seems like it's been covered, either by the weather or seems like people don't use it. That's why it's covered or seems like it's disappearing. [CG3]

Living Nature

Southern Paiutes believe that all natural things (plants, animals, rocks, minerals, mountains, rivers, springs, air) are alive:

In the old days it [the hot spring] was natural, just the walk. You didn't have no trails. You just had to be careful to walk to it. The spring itself wasn't fixed like it is. It just came out of the hole and the people sat under that and sat in it and talked to it... In the old days they came, a lot of people came. They say they come here to doctor their body, doctor themselves. When they talk it's like a prayer they said. They told the spring they were hurt and they were sick, and they had come to it for help. [RS6]

Since all natural things are believed to be alive, Southern Paiutes feel that they must show respect for them. One way to do this is by offering gifts to the earth:

[I would bring a gift or some kind of food] no matter where it is. If I have something, if I'm gonna eat something, I always share it with the earth. [RS6]

Culturally Appropriate Behavior

The cultural themes described above imply *culturally appropriate* behavior. Southern Paiutes speak of ceremonies, both private, individual interactions with the living world and social group activities, that are required at specific places and in the performance of certain activities. Non-human elements of the world, such as ompi (red paint or hematite) and sangwav (Sagebrush or Artemisia), are often required as part of the ceremonies. Southern Paiutes continue to practice ceremonies and use ompi, for example, to "mark the area sacred" (quoted in Stoffle, Loendorf, Austin...1995:61). The presence of red paint on a rock art panel therefore signifies an area has been the location of ceremonial activity and is sacred. Southern Paiute consultants relied on their knowledge of specific culturally significant places, such as Zion Canyon, which is discussed in Paiute mythology; as well as general cultural practices, such as the use of ompi, to interpret sites in Zion N.P. and Pipe Spring N.M.

1.8 The Beginning

A study overview in an applied ethnographic study should not have a conclusion, because a study overview is simply a beginning. It sets the mood of the report by identifying important issues that will be addressed in more detail later in the report. It expresses a hope that the information that follows will clarify rather than obscure. It begins to ask questions, rather than provide answers. It is a first step, much like this entire study, towards better partnerships and new types of land management practices. The next chapter continues to raise questions, but also provides some answers to very important questions.

CHAPTER TWO

AN ETHNOGRAPHIC AND ETHNOHISTORICAL PERSPECTIVE ON SOUTHERN PAIUTE SOCIO-POLITICAL UNITS

The chapter presents an overview of where and how Southern Paiute people lived and perceived their world. This essay discusses the social and political divisions in traditional Southern Paiute life. In contrast to later chapters that rely mostly on statements of contemporary Paiute people, the information presented here has been taken from ethnographic or ethnohistorical accounts and is largely based on what Euroamericans wrote down about Paiute people. Nonetheless, the analysis corresponds closely with and helps to contextualize later comments by Paiute people.

Perhaps the most useful aspect of this chapter is that it brings up and then sets aside many of the major misperceptions Euroamericans have about Southern Paiute people. These misperceptions are critical because they have been passed from generation to generation of Euroamericans until the incorrect information about Southern Paiute people is better known than accurate descriptions of how they once lived, how they organized their societies, and what they believed about themselves and their world. They have been characterized as hunters and gatherers, yet all Southern Paiutes primarily farmed. In 1776 when the first European, Father Escalante, recorded meeting Southern Paiutes, they held aloft ears of corn as a sign of greeting. Southern Paiutes have been characterized as having one of the lowest population densities in North America, yet they held some of the finest natural resources in the Southwest and the Great Basin against intrusion by other Indian people. Southern Paiute held almost 600 miles of Colorado River shoreline, much of which was farmed. They have been characterized as having simple forms of social organization, yet they had national political leadership that survived into the 20th Century. A system of trails and runners formed essential lines of communication which continued into the 20th Century. They have been characterized as having recently arrived in the region, yet linguists, some archaeologists, and Southern Paiutes themselves say they have been here much longer than the 800 years defined by archaeologists.

These are critical issues for the National Parks involved in this study, as well as for other Federal and state agencies. The functioning of government-to-government consultation relationships established between land management agencies and Indian tribes is influenced by the points described above. Years ago the relationship between land management policies and the ways Paiute cultural resources are viewed and evaluated was discussed (Stoffle, Jake, Bunte, and Evans 1982: 108-114). Simply put, if Paiute people are perceived as incapable of producing anything more than a rude, unintegrated, and poor culture as both Kroeber (1970:582-583) and Steward (1938) maintained, then why should Federal land managers today be interested in preserving any aspect of this culture? On the other hand, if Paiutes were sophisticated animal and

plant managers, creating a complex culture that not only permitted them to flourish for thousands of years in this environment, but was more adaptive than that of other Indian groups around them, then aspects of their culture may be worthy of both preservation and simulation by land managers today.

Beyond cultural preservation is the issue that perhaps Southern Paiutes have something to contribute to Federal and state land managers. Critical here is the possibility that Indian people learned during thousands of years of living in these lands how to care for the plants, animals, water, and spirituality that occurs here. These lessons learned, bound in the culture of Southern Paiutes, can potentially be incorporated into how Federal agencies approach the management of these natural resources. Especially important are Indian perspectives that approximate in scale and functional integration those currently being attempted under the new ecosystem stewardship approach of the Federal government. This chapter, and much of this report, attempts to share some of these alternative perspectives on Paiute culture and its potential contribution to contemporary land management issues.

2.1 Holy Lands and Creation Stories

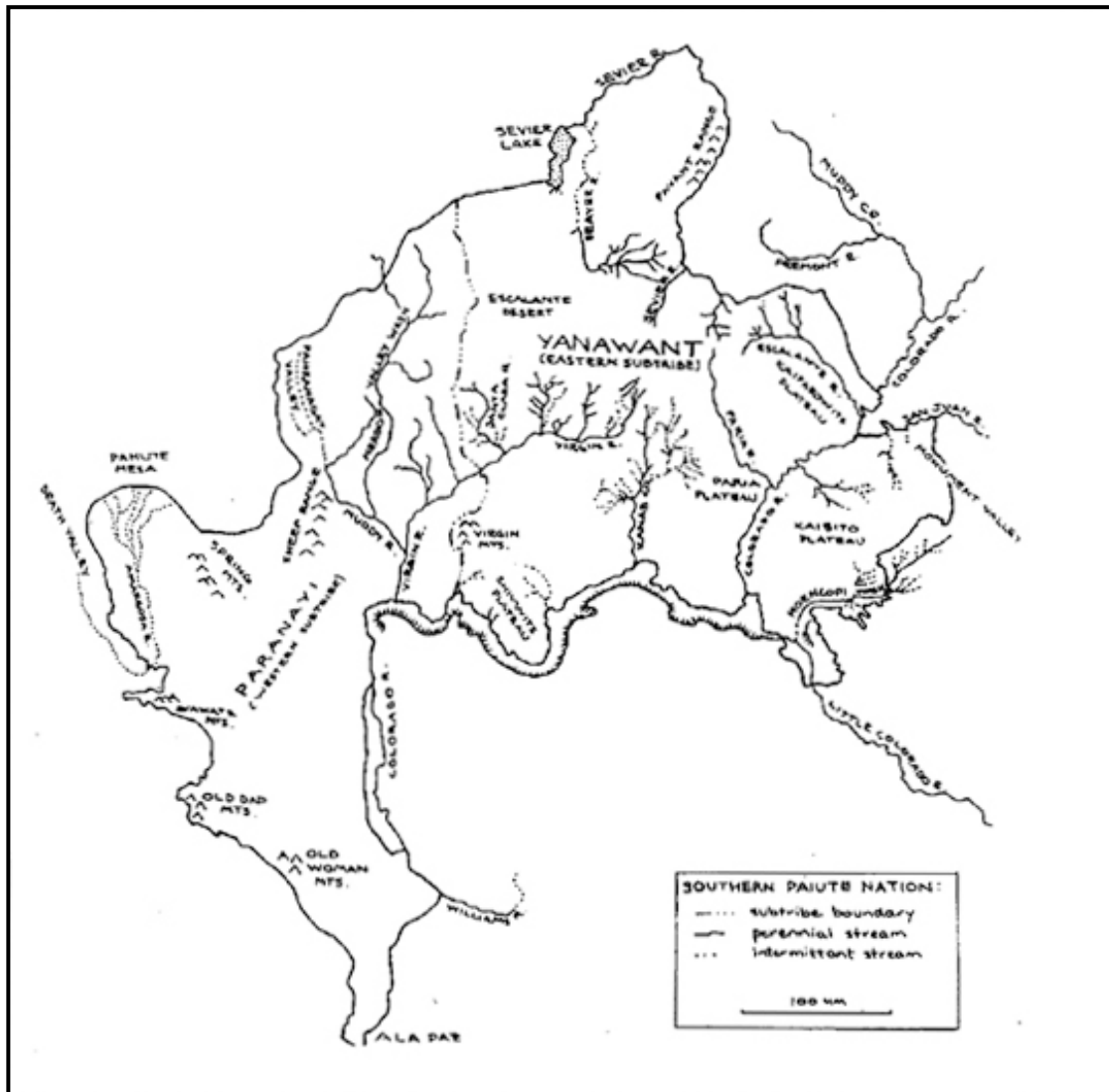
Southern Paiute people have resided in their traditional lands for many generations (Figure 4). According to archaeologists, Paiute people came into the region by at least 1150 AD (Euler 1964, Shutler 1961). Their ethnic group boundary has been defined by travelers' observations in the late 1700's (Bolton 1950), by Euroamerican settlers' diaries, official government surveys in the mid-1800s (Little 1881; Powell and Ingalls 1874), and by oral history interviews in the 1930s (Kelly 1934, 1964; Stewart 1942) and 1980s (Bunte and Franklin 1987; ERT 1980). Existing within the traditional territory of the Southern Paiute Nation is the northern Colorado Plateau ecoregion.

Efforts by Euroamerican scholars to define a boundary and an origin time for the Southern Paiutes are perceived by Paiute people themselves to be overshadowed by their own religious knowledge about traditional ethnic territory and the events by which their people came to inhabit these traditional lands. According to traditional Paiute beliefs, Paiute people were created here. Through this creation, the Creator gave Southern Paiute people a special supernatural responsibility to protect and manage the land and its resources. In Euroamerican terminology, this land is their Holy Land (Spicer 1957:197, 213).

The Southern Paiute people believe that they were created by the supernatural near Charleston Peak -- called *Nɨvagaŋtɨ* [herein rendered as *Nɨvagaŋtɨ*]--located in the Spring Mountains in southern Nevada (Kroeber 1970, Laird 1976, Stoffle and Dobyns 1983). According to Laird (1976:122):

In prehuman times *Nɨvagaŋtɨ* was the home of Wolf and his brother, Mythic Coyote. It was the very heart of *Tɨwiin^yarɨvɨpɨ*, the Storied Land.

Figure 2.1: Puxant Tuvip



There was and is no place in Southern Paiute traditional territory more sacred than the Spring Mountains and the areas around them. One author has noted that Charleston Peak is the most powerful of all cosmic centers in the south and central Great Basin (Miller 1983:72). Concerns for this sacred area have been expressed repeatedly in cultural resource studies involving Southern Paiute people (Stoffle and Dobyns 1982, 1983; Stoffle, Dobyns, and Evans 1983; Stoffle, Evans, and Harshbarger 1988).

Southern Paiute oral scriptures have been recorded that generally resemble Christian Genesis and other creation stories in terms of placing the people on the earth. While there are different versions of this story, the following account derives from southern California and was provided by a Chemehuevi Paiute (Laird 1976). According to this account, Southern Paiutes believe that originally

there was only water. Ocean Woman (*Hutsipamamau ?u*) then created dry land (Laird 1976:148-149). Once there was land, Creator Coyote and Wolf lived on Charleston Peak. Creator Coyote later saw tracks of a woman, but, when he caught up with her, she was a louse (*Poo?ʷavi*). Coyote propositioned her, and she agreed to the proposal on the condition that he build them a house. He ran ahead and built a house, and when Louse caught up she magically put Coyote to sleep and continued on. This happened four times before they reached the Pacific Coast. Louse set out to swim to her home island with Coyote on her back. She dived, and Coyote let go and turned himself into a water-spider. He reached the island first and was waiting for Louse when she arrived. Louse's mother wove a large basket while Coyote enjoyed Louse (Kroeber 1908:240; Laird 1976:150-151). Then Louse's mother sealed the basket and gave it to Coyote to tow back to land. As a water-spider, he did so. As Coyote, he found the basket growing heavy, and, full of curiosity, he opened it before reaching *Nuvagantu*. Louse's eggs had hatched in the basket and become human beings. The new human beings emerged from the now opened basket and began to scatter in all directions over the land. By the time Coyote returned to *Nuvagantu*, only weaklings, cripples, and excrement remained in the basket. On Charleston Peak, Wolf (Kroeber 1908:240 says it was Coyote) used his greater power to create the Chemehuevis and their Southern Paiute kindred. The darker color of Southern Paiute skin is attributed to the ingredients used by Wolf to create them. Because it is the place where the Southern Paiute people were created, *Nuvagantu* -- Charleston Peak -- is holy to Southern Paiutes.

For each Southern Paiute tribal group, there is a slightly different version of this story (e.g., Lowie 1924, for Shivwits version; Sapir 1930, for Kaibab) "which highlights the sacredness of their own local tribal territory" (Bunte and Franklin 1987:227). The Shivwits story has the emergence point at Buckskin Mountain in Kaibab territory (Lowie 1924:104). In general terms, however, Southern Paiute origin stories share much in common. In the San Juan Paiute version of the Creation story, the culture heroes (both Wolf and Coyote) are called *Shunangwav*, a name which also translates into English as "God" or the "Great Spirit" (Bunte and Franklin 1987:33). In the San Juan story, Coyote untied the sack [basket in other versions] near Page, Arizona, and there made the Southern Paiute people. So, for this version of the origin story, the original home of all Paiutes is in local territory of the San Juan Paiutes (Bunte and Franklin 1987:227). By moving the place of their ethnic group's origin, the San Juan Paiutes strengthen their identification with the ethnic group itself and solidify their cosmological ties to that specific portion of Southern Paiute ethnic territory.

Despite local variations in the identification of the ethnic group's place of origin, all portions of traditional ethnic territory remain sacred to all Southern Paiute people. *Puaxantu Tɨvɨp* (variant *Puarɨvwɨp*) is the Southern Paiute term which translates into "sacred land" (Stoffle and Dobyns 1982). The Paiute term *pua* is cognate to the Shoshone term *puha*, or "power" (Franklin and Bunte 1993b:3; Miller 1983). The term *puaxantu* is a derivative of the term *pua*; it may be transliterated as "powerful" or "(sacred) power." Thus, the indigenous Paiute term would refer to sacred or powerful lands, that is lands traditionally occupied by the ethnic group that are made powerful by being where the creator placed the Paiute people.

2.2 Aboriginal Political Units

The Southern Paiute nation comprised several levels of political organization including possibly two or more major subdivisions or subtribes, a dozen or more districts, and numerous local groups--sometimes referred to as bands--within each district. Some of the evidence of hierarchical organization comes from Laird's (1976) documentation of Chemehuevi institutions, elicited from her Chemehuevi husband, George Laird.

It appears that a small elite provided the Southern Paiute people with socio-religious leadership. While male leaders have been referred to as High Chiefs, they functioned as ritualists rather than political officers (Laird 1976:24); or at least they did so in the late 1800s. Some Federal officials called Tutseguvits the head chief for a decade: from 1859 (Forney 1859:73) until 1869 (Fenton 1869:203). Another official in the early 1870s (Powell and Ingalls 1873) perceived that a single tribal chief named Tagon exercised some authority over all Southern Paiutes. That perception may well have been accurate, and a principal chief may have played a more important pre-contact role.

Leaders occupied a special status with special symbols very visible in pre-contact Southern Paiute society. So-called high chiefs could wear turquoise. The elite also spoke a special language known as "t'ivitsi?ampagapĩ" (Real Speech) as well as normal Southern Paiute. High Chiefs chanted it with a strong accent. Living members of the elite preserved that special elite language into the final decade of the nineteenth century. In addition Quail-beans (*kakaramurih*), or black-eyed peas, became a special dietary item for the chiefly elite (Laird 1976:24).

Leaders led at least regional polities made up of lineage bands (Laird 1976:24). In 1873, one identified high chief who was active into post-conquest times provided sacred leadership for lesser chiefs heading at least eight local lineage organizations based at Potosi, Paroom Spring, Kingston Mountain, Ivanpah, Providence Mountain, Ash Meadows, Amargosa, and the northern Chemehuevi (Fowler and Fowler 1971:104-105; Laird 1976:24). Leaders employed a specialized corps of runners to transmit communications. These runners were probably young men (Laird 1976:47). The elite appears to have disappeared as the last surviving high chief died late in the nineteenth century. In the 1870s, Powell and Ingalls perceived the functioning high chiefs as heads of what they called confederacies of local groups (Fowler and Fowler 1971:109).

2.2.1 Disease and Sociopolitical Disruption

Southern Paiutes probably were first impacted by diseases during the first smallpox pandemic in 1520-1524 which spread from Mexico City throughout much of North America (Dobyns 1981, Campbell 1990). Throughout the 1500s, 1600s, and 1700s, major disease pandemic episodes spread from Mexico into the lands of the Pima, Hopi, Hualapai, and across the Colorado River to the Southern Paiutes. Southern Paiute traders, like Inca traders in South America, were probably exposed to diseases while trading with neighboring Indian ethnic groups and then carried these diseases to people in their home settlements. The early centuries of exposure to Euro-american

diseases had social and cultural as well as biological impacts that can only be estimated today; however, book titles like *Their Number Become Thinned* (Dobyns 1983) and *American Indian Holocaust and Survival* (Thornton 1987) target the problems faced by Indian people during these times.

More recent disease exposures and their social and cultural impacts can be documented when literate travelers and immigrants record changes among Indian people and even the presence of diseases in their own communities. A recent analysis has documented the impacts of diseases brought by European immigrants in the early to mid-1800 (Stoffle, Jones, and Dobyns 1995). That analysis demonstrates that European immigrants passing through and moving into Southern Paiute riverine oases transmitted diseases which resulted in declining populations and in turn caused most national and many subtribal functions to be largely eliminated by the late 1850s (Stoffle, Jones, and Dobyns 1995). Ten diseases (measles, cholera, malaria, tuberculosis, scarlet fever, whooping cough, typhoid fever, intestinal parasites, mumps, and smallpox) assaulted Southern Paiute peoples from 1847 until 1856. These ten diseases accounted for the deaths of thousands of Southern Paiutes. The rate of direct European transmission of Old World diseases began to slow appreciably during the years 1857-1876, but this was largely because not as many Paiutes were living after 1857 (Stoffle, Jones, and Dobyns 1995:194).

Even with fewer numbers, Paiute depopulation continued throughout the latter part of the 19th Century and early 20th Century. A 1905 newspaper in southern Nevada carried a story about Mr. Harsha White who took the census and said that "the Piute (sic) population has decreased 60 per cent since 1890" (Stoffle, Olmsted, and Evans 1990: 113-114). So many Paiute people died that even the basic socio-political units which once reflected their dense aboriginal populations could no longer be maintained after this time.

Despite loss of political power, some aspects of national and subtribal leadership persisted throughout this period. Political leadership was recorded by Mormon settlers - like J. Hamblin in the 1854 and A. Jensen in 1855; Federal government surveyors - like Wheeler in 1869 and J. Powell and G. W. Ingalls in 1872; regional historians - like William R. Palmer in the 1880s, and ethnographers - like J. Steward in the 1920s. Steward (1938:185) recorded that a Pahrump, Nevada leader named Takopa was a leader of all the Southern Paiutes. After Takopa's death in 1905, he was replaced by another southern Nevada leader named Jack Penance. When Penance died in 1933, the newspaper account entitled "Piutes Install New Chieftain at Tribe Ceremonial" revealed the continuation of national-level leadership. The *Tonopah Daily Times- Bonanza* (Oct.4,1933:4,1) recorded the inauguration of this Southern Paiute leader as follows

With a mournful chant pouring from 300 aboriginal throats...the Southern Nevada Piute tribe, including Indians of Southern Utah, Southern Nevada and Northwestern Arizona, installed a new chief recently. Their old chief, Jack Penance...was killed recently in a very 20th century automobile, loaded with blankets, his squaw and about eight children (when it) blew a tire and overturned. One of his friends, known to white men as Baboon, served as head of the Nevada Indians a short time until a pow-wow could be set and distant Piutes called into meeting. Over desert roads they came, many by foot, horseback and wagon, but the number who

maneuvered themselves and families to the reservation in rattling, brass-bound flivvers was amazing to old time desert dwellers...Harry Skinner, a young government Reeducated Piute from Arizona, was named Chief...

Southern Paiute people persisted in maintaining traditional social and political structures when possible and preserved their deep personal attachment to their supernaturally-given ecosystems that continued to sustain Paiute people into the 20th Century.

2.2.2 Subtribes

Just below the level of the Southern Paiute nation as a whole, there may have been two or more large divisions, each encompassing a number of neighboring districts (See Map A). The divisions would have included geographically contiguous districts having particularly close ties of economic exchange, intermarriage, and political cooperation. The evidence for these intermediate-scale political divisions within the Southern Paiute nation is sketchy, however, past research suggests that prior to about 1825 there may have been two divisions; a western subtribe called *paran'*[*yitsin*]^w (Sapir 1910:3, herein rendered as *Paranayi*) and an eastern subtribe that derives from a native designation that Jacob Hamblin recorded as *Yanawant* (Stoffle and Dobyns 1983a, 1983b; Stoffle et al. 1991:7-8; Brooks 1950:27; Little 1881).

The relation between ecosystems and socio-political units becomes evident in both the structure and naming of these subtribes. The key contributions that riverine oases made to Southern Paiute subsistence made certain major streams geographically central to aboriginal life. It is important to note, however, that socio-political units do not always exactly fit the natural boundaries of ecosystems.

Paranayi Subtribe. The term *Paranayi* loosely translates into "marshy spring people" (Hodge 1910:202) or "people with a foot in the water" (Palmer 1928:11; Kelly 1934:554) and refers specifically to the Paiute people who lived in the Pahrnagat Valley-Meadow Valley-Moapa Valley riverine oasis. Although the name has been used by some scholars as a band name for the Pahrnagat Valley Paiutes, it is evident that the aboriginal use of the term was much broader.

The water referred to in the designation flows down the Pahrnagat Valley, Meadow Valley Wash, and on to join with the Muddy River. This, in turn, joins with the Virgin River, and then flows into the Colorado River. From the Colorado River back upstream to the headwaters of Pahrnagat Valley and Meadow Valley ran the ribbon-like oasis where people cultivated food crops.

The Muddy River appears to have been the headquarters of this subtribe. The western division of the Southern Paiute nation seems to have been too populous and too wide ranging to be properly labeled a district. Therefore, *Paranayi* might properly be considered one of two subtribes constituting the Southern Paiute nation, where the term "subtribe" is used in a purely technical sense to indicate that the tribe formerly consisted of western and eastern components.

Previous studies (Stoffle and Dobyns 1983a, 1983b) suggest that, when Euroamerican colonization of southern Nevada began, the entire western and southern portion of the Southern Paiute nation was known as *Paranayi*. Within this great geographical area were a number of districts (a concept discussed more later) including the Moapa/Paranagat, Las Vegas, Pahump/Ash Meadows, and Chemehuevi districts.

Yanawant Subtribe. Southern Paiutes inhabiting the higher altitude plateaus of southern Utah and northern Arizona planted their summer crops primarily in the Santa Clara River oasis, up the Virgin River from that tributary, and all along Kanab Creek. Paiute farmers grew maize and other crops on sand-bar fields along the Colorado River. The San Juan Southern Paiute people may have stayed south of the larger stream, planting in oases along the San Juan River and its tributaries, at Paiute Canyon, and the springs and wash floodplains along the Echo Cliffs to the Moenkopi area near Tuba City (Bunte and Franklin 1987:30). The eastern subtribe may have been self-labeled *Yanawant* (Brooks 1950:27).

The Santa Clara Paiute people in the 1850s used a term for themselves that English speakers recorded as *Yanawant* with several variant spellings. For example, Jacob Hamblin used the term *Yanawant* for the Indian people of the region. He attributed this usage to the Indian people themselves, including their overall Chief Tutsigavits. Hamblin quoted the chief as saying "I want all the Yamnawants to love the Mormons all the time" (Corbett 1952:84). In his mid-1850s narratives, Hamblin often referred to the Yanawants: "the Yannewants were much alarmed" (Hamblin 1951:18); "a good feeling prevailed among the Yanwants as they call themselves" (Little 1969:39); "I started for Great Salt Lake City in company with Thales Haskell and Tut-se-gavit (the Yamnawant Chief)" (Corbett 1952:114; Hamblin 1951:27).

In 1872, John Wesley Powell recorded the term *U'-ai-nu-ints*, which Powell defined as "People who live by farming" and also glossed as "Santa Clara Indians" (Fowler and Fowler 1971a:156). This may be the same term as Hamblin's *Yanawant*. In another report by Powell, *U-ai-Nu-ints* are identified as the people "who live in the vicinity of St. George" (Powell and Ingalls 1874:47,51). In another manuscript, Powell renders the same word as "*U-en-u-wunts*, The name of the Santa Clara Indians" (Powell 1971b:161). Elsewhere Powell renders the term as *Yen-u-unts*, meaning "Farmers, those who cultivate the soil" and also as *Yum-a-wints* and *Y-ai-nu-intz*, "People who cultivate soil; farmers" (Fowler and Fowler 1971a:144).

William Palmer, based on late 1880s interviews, gave the term *U-an-no* or *U-un-o* as referring to the St. George area, and also to the larger region of "Dixie"; he recorded that the meaning of *U-un-o* was "good garden place or good fields" (Palmer 1928a:24). Palmer also rendered the word as *Uaino* and *Uano* (Palmer 1928b:50). Adding the suffix *its* or *ints*, to refer to the people of a place (1928b:40), Palmer gave the variant spellings of *Uain-uints*, *Uano-ints*, *Uano-its* (Palmer 1928b:50), and again *U-an-nu-ince* and *U-ano-intz* (Palmer 1933:95) as the term used for people who farm and for aboriginal people of the Santa Clara River. In one article Palmer noted that these numerous variants of *U-an-nu-ince* refer to the economic activity of farming rather than to a specific group of people:

The word "u-an-o" means farmers. The Indians who lived at Washington, St. George and Santa Clara were farmers and they knew something of the practice of irrigation. They cultivated corn, beans and sunflowers for their seed, and other plants used for food and for fibre. For this reason the comparatively small area of Utah's Dixie in which farming was done was called "U-an-o," and the farmers were "U-an-nu-ince" or "U-ano-its." The name has no clan or tribal significance but rather vocational. (Palmer 1933:95)

The Indian words which Euroamericans have adopted to label a geographically localized group of Indian people often did not traditionally have such a localized point of reference. *Yanawant* certainly referred to the people of the Santa Clara River, since they cultivated crops, but it is probable that Euroamerican usage gave the term a more localized reference than the term originally had. When the broader meaning of *Yanawant*, that is "people who farm," is considered and when this is tied to the regional leader who defines himself as the head of the *Yanawant*, a more likely meaning is a reference to all the people within his territory who farm. Since all Southern Paiutes farmed, it is likely that *Yanawant* served as a term to discriminate between Southern Paiutes and their close neighbors whether they be Utes or Shoshone who did not farm. So the term was one of inclusion -- i.e. all Southern Paiutes under the socio-political control of the subtribe leader and exclusion -- i.e. other Indian people who did not farm. Similar observations appear to have been true for the term *Paranayi*. Given the likelihood that such terms referred to socially complex socio-political groupings, one might think of the *Paranayi* subtribe as referring to the organization of the Nevada-California Southern Paiutes, and the *Yanawant* subtribe as the organization of Utah-Arizona Southern Paiutes.

2.2.3 Districts

Traditionally there were about a dozen smaller regional units referred to as *districts*, a term adapted from Julian Steward's *Basin-Political Aboriginal Sociopolitical Groups* (Steward 1938:93) and used by Kelly (1934:560). Each district was a sphere of influence with a geographic territory shaped in part by natural features--chiefly watercourses and watersheds--and in part by the existence of neighboring groups who of necessity reached political agreements about the extent of their respective spheres of influence and resource harvesting territories.

Each Southern Paiute district encompassed a territory that contained all or nearly all of the resources necessary for the survival of its population. To provide a full complement of resources, each district needed to include, and did include, both (1) oasis areas with either riverine or spring-fed sources of water sufficient for irrigation farming, and (2) upland forests and lowland desert areas with a full range of needed wild resources, including game animals, pinyon nuts, and wild seed grains. Each district, then, included permanent settlements near irrigated fields in oasis areas, and outlying upland and lowland territories used for intermittent and seasonal harvesting of wild plant and animal resources from temporary camps. Often small permanent habitations were maintained in the uplands or lowlands near springs. These hinterland settlements were established in order to safeguard Southern Paiute claims to those areas and the crucial resources they contained.

Kelly's Ethnographic Perspective on Districts

The first scientific analysis of Southern Paiute districts was conducted by Kelly (1934) based on her 1932-33 field interviews. Kelly produced and published a map (Figure 5) that has for more than fifty years been used to define aboriginal Southern Paiute district territory (Kelly 1934). Recently updated and reprinted with the help of Fowler (Kelly and Fowler 1986:369), the Kelly/Fowler map continues to have the 1934-district boundaries but adds a new district called the *Antarianunts*.

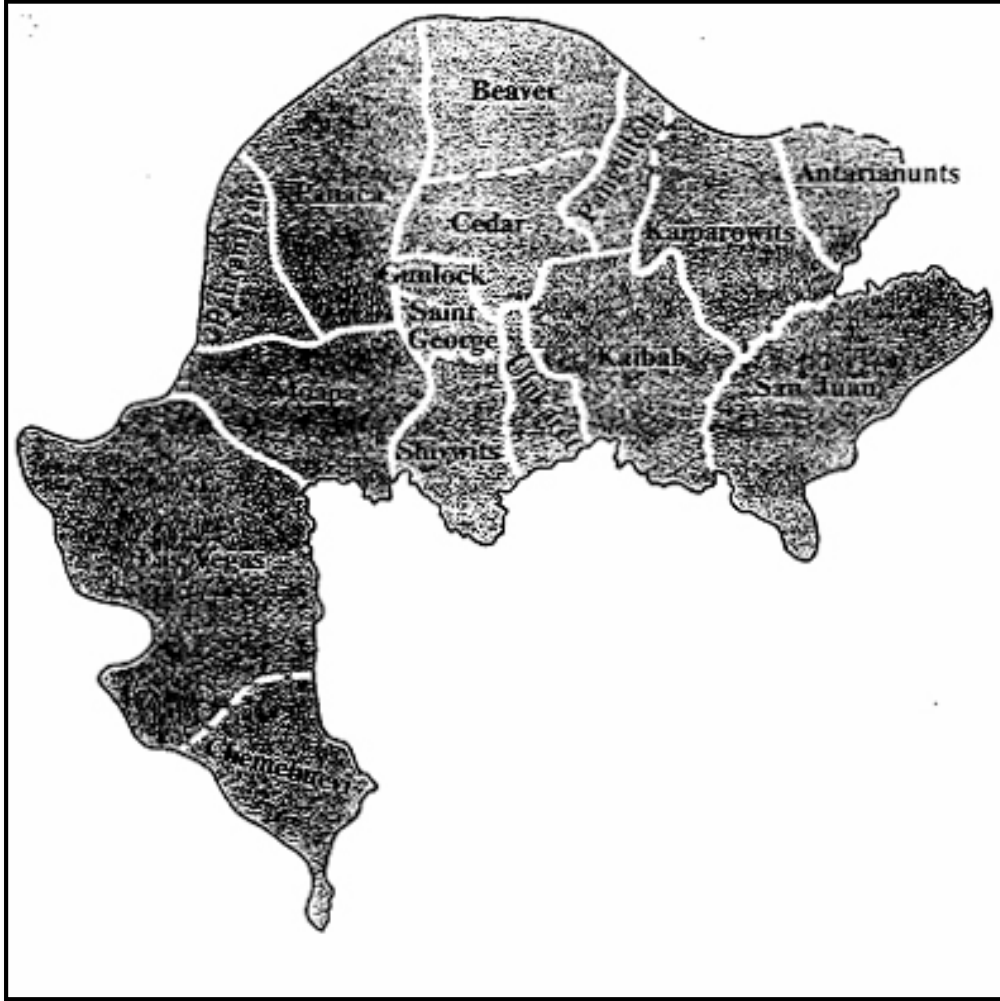
Kelly's district boundaries must be considered in light of more recent research and in light of the internal inconsistencies between her published map and her own descriptive text (Halmo, Stoffle, and Evans 1993). Any errors or omissions in district boundaries would be of little more than scientific interest were it not that Federal agencies (including the National Park Service) assume for purposes of official government-to-government consultation that the aboriginal boundaries are accurate, and thus somehow the Kelly-Fowler maps reflect the aboriginal socio-political units that are reflected in contemporary tribal governments.

Kelly and Fowler say of the sixteen Southern Paiute groups identified in their chapter that "Except for two, each territory was self-sufficient economically" (Kelly and Fowler 1986:368). The exceptions are the Gunlock and Saint George groups, which "had to go outside their own areas for certain staples" (Kelly and Fowler 1986:368). The fact that the Gunlock area and the Saint George area were not sufficiently extensive and ecologically diverse to provide all the resources needed for a self-sufficient and semi-autonomous district indicates that these were not separate districts but rather components of a larger district that included the necessary upland resources, which in this district were located on the Shivwits and Uinkaret uplands. The data suggest that the Gunlock and Saint George groups represent post-contact development of localized labor gangs and that traditionally the Gunlock and Saint George areas were part of a single larger group or district that included the Shivwits Plateau and the Uinkaret area.

It was in the core oasis area (or areas) of the district that the population of a district had the most highly developed sense of territoriality and proprietorship. Core oasis areas and central places of the districts are readily identified. Outer boundaries of districts cannot be as precisely delineated, for at least two reasons. First, those areas were not as sharply delineated by Native American people as were the core oases areas where the most valuable resources were concentrated. Secondly and not surprisingly, there is much more written documentation for the central oasis areas where Euroamerican settlement was concentrated than for outlying upland and desert areas.

Each district had its own political leadership. In the case of the Shivwits/Santa Clara Southern Paiutes, this included a principal leader (principal chief or head chief) for the entire district, and lesser leaders (or subchiefs) from the various local groups or bands comprising the district. There was apparently a similar pattern of leadership in the other districts as well.

Figure 2.2: Kelly's map of Southern Paiute districts (revised; Kelly and Fowler 1986:369)



2.3 Ecosystem Analysis of Yanawant Districts

This portion of the essay is focussed on the *Yanawant Subtribe* of the Southern Paiute Nation (Figure 6) within the context of contemporary understandings about ecosystems and their relationships with aboriginal socio-political structures. In this analysis it is necessary to briefly discuss the Shivwits/Santa Clara district people who were located in the Virgin River ecosystem, the Kaibab district people who were located in the Kanab Creek ecosystem, and the San Juan district people who were located on the east side of the Colorado River and formed the Southern Paiute border with the Hopi territory and Navajo territory. In addition, it is important to explore an ecosystem hypothesis that leads to the possibility that the Uinkaret people were actually connected with another local group living on the Virgin River and together they formed a "missing" Paiute district call the *Ua'ayukunants* (also spelled in the literature as *I-oo-goonits*) perhaps more correctly spelled *Ua'ayukunants* district.

2.3.1 Social and Ecological Logic of Districts

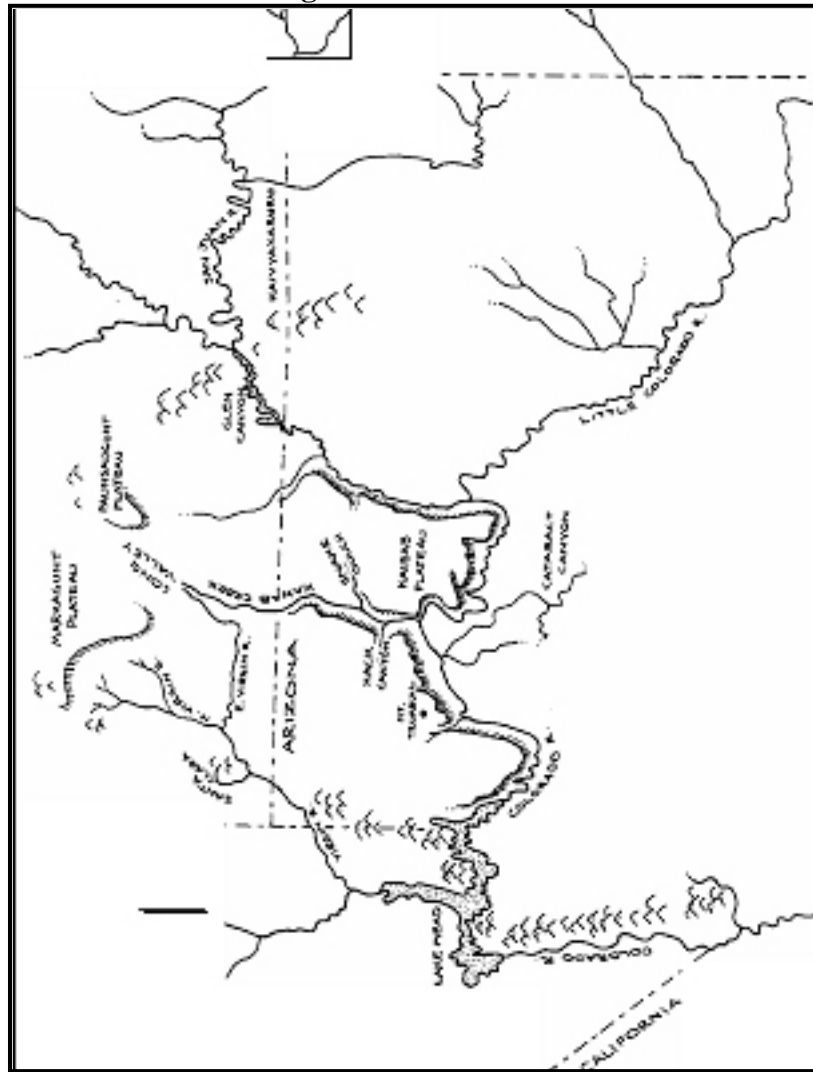
Anthropologist A. L. Kroeber generalized from his study of the Mojave Indians who inhabited Mojave Valley and Cottonwood Island Valley, the first large valleys on the lower Colorado River with cultivable floodplains south of the Virgin-Colorado confluence, and he concluded that an Indian tribe inhabiting a river valley typically exploits upland resources on both sides of the stream (Kroeber 1974:31-33). The data suggest that this economic and ecological model can be transferred upstream to the Southern Paiutes.

Julian Steward, one of the founders of culture ecological theory in anthropology, observed that Western Shoshones and Southern Paiute people had socio-political organizations larger than the local group. At the time, however, Steward was developing an ecological theory of social evolution that was founded on the assumption that some people who reside in extremely harsh environments, like that of the Great Basin, had social organizations no more complex than families. Although this theory has largely been disputed, its development probably prevented Steward from refining a more complex model of social-environmental interactions in the Great Basin.

Steward's more authoritative essay on the concept of the district reflects a confusion among ethnographers in the 1930s who attempted to resolve observations made long before by earlier Indian observer like the non-anthropologically trained J. W. Powell and G. W. Ingalls from the 1870s and the lay observer William R. Palmer (1933), President of the Parowan Stake of the Mormons, who interviewed in the 1880s. Steward questioned Kelly's (1934) 15 Southern Paiute districts and contrasted them with Powell and Ingalls' (1874) 31 Southern Paiute groups. Steward concluded that the 31 units were more likely inasmuch as "band members must habitually have cooperated in a sufficient number of economic and social activities under a central control to have acquired a sense of community of interest" (Steward 1938: 181). This conclusion derives from Steward's assumption that there were very few Southern Paiutes - less than 1 Paiute for every 28.5 square miles between 1870 and 1880 - thus, one of the lowest population densities within the Great Basin (Steward 1938: 47). When there are so few people per square mile, "It is difficult to understand how people who were scattered over such vast territories and often separated by wide, waterless deserts could, when traveling on foot, habitually have joined forces in any important communal undertaking" (Steward 1938: 181). Here we have a critical point. This is where Steward was incorrect because he based his conclusion on incomplete data. He incorrectly assumed (1) that the land was arid, when in fact the environment of the Southern Paiutes contained extensive riverine oases and (2) that the 1870 Southern Paiute population reflected an aboriginal condition, when in fact the population had drastically declined by 1857.

People who wanted to reconstruct Southern Paiute social organization did so with theories that made sense at the time and with whatever data were available. Today, however, we can continue to consider these issues in light of new population and document evidence. Today, it seems that there was a social-ecological logic to the aboriginal structure of Southern Paiute districts. Each district needed a *core area* in a riverine oasis or major artesian spring system where there were permanent farms and villages. In most cases, core area farming involved extensive systems of

Figure 2.3: Yanawant



irrigation. Functionally offsetting the agricultural core of a district was its *hinterlands*. The hinterland gave the district the ecological diversity needed for the *transhumant adaptive strategy* (Stoffle and Evans 1976) component of the overall strategy of ecosystem utilization. Hinterlands were at different elevations than the oasis core. Higher elevations produced a diverse assortment of animals like deer and mountain sheep, while lower hinterland elevations provided chuckwalla and antelope. Plants are an especially important component of the hinterland because not only do higher and lower elevations produce different types of plants, the same plants growing at different elevations can be harvested at different times of the year. Hinterlands provided a variety of natural resources like salt, paint, and tool-making quarries. Power spots, caves, and various types of ceremonial areas tended to be found away from the core area in the hinterland.

When the Southern Paiute district is viewed as an ecological whole, there is a social-ecological logic behind the selection of core areas and hinterlands. When this logic is applied to the Yanawant subtribe, it and its components begin to make sense in new ways. When this logic is applied to Kelly's 15 districts some make sense, others need recombining, and at least one seems to be missing.

2.3.2 Shivwits/Santa Clara District

Kroeber's model suggests that Southern Paiutes who farmed in the riverine core along the Santa Clara River (called *Tonaquint* in Paiute) and middle Virgin River, would have harvested wild resources in hinterlands to the south (including the Shivwits Plateau), as well as to the north (including the watersheds feeding the tributaries of the upper Santa Clara River). Thus combining the Shivwits and Santa Clara districts seems essential.

Other data suggests that three of the groups defined by Kelly and Fowler (the Gunlock group, St. George group, and Shivwits group) in fact comprised a single group or district. In the decades after contact, the massive impact of Mormon colonization resulted in the gradual breakdown of regional political organization, the emergence of labor camps associated with Euroamerican towns (Gunlock, St. George), and the relocation of much of the population into regions of refuge in the uplands (Shivwits Plateau).

The geographic boundaries of this new Shivwits/Santa Clara district would have been the Santa Clara River, the upper Santa Clara watershed to the divide with the Colorado Plateau and the Great Basin, the lower-middle portion of the Virgin River from the confluence with the Santa Clara until the confluence with Beaver Dam Wash, and the arid uplands of the Shivwits Plateau stretching south from the Santa Clara to the Colorado River and roughly from present Lake Mead in the west to the eastern edge of the Uinkaret plateau. Within this ecoscape, Paiute people moved freely back and forth between the oasis farmlands and the upland areas used primarily for wild-resource harvesting. The data indicates that the Santa Clara, and to a lesser degree the middle portion of the Virgin River, was the horticultural center and the population center of a district whose upland territories included the Shivwits Plateau in the south and upper watershed of the Santa Clara in the north (including the Pine Valley and the Bull Valley Mountains).

For whatever reasons (and more on this issue below), it was the Santa Clara River rather than the middle and upper Virgin River that apparently constituted the primary horticultural core of the Shivwits/Santa Clara district. Were there smaller and perhaps subsidiary horticultural settlements on the middle and upper Virgin River and Ash Creek, or were these settlements independent? Information produced as part of this report suggests there were many villages along the middle Virgin River, and possibly a separate Southern Paiute district was located past the Hurricane Cliffs on the upper Virgin River.

Figure 2.4: Hurricane Cliffs



When Father Escalante arrived on the middle Virgin River in 1776 he found Paiute agriculturists who called themselves the *Parussits* people. The name supposedly referred to the *Parussi* River, which they used to irrigate their farms. Escalante renamed the river the Rio Virgin. According to Bolton's (1950:205) translation of Escalante:

...in a small plain and on the bank of the river, there were three small corn patches with their very well made irrigation ditches...From here downstream and on the mesas on either side for a long distance, according to what we learned, live Indians who sustain themselves by planting maize and calabashes, and who in their language are called the Parussi.

The importance of the Parussits people is reflected by their name and the place of their agricultural communities being retained long after they left the middle Virgin River. In 1936 Tony Tillahash told Presnall (1936:5) that the river we now call the Virgin, was known as the Pa-roos, "white foaming water." The Paiutes living along the lower part of the stream, below the I-oo-goo-intsn, were known as the Pa-roos-itsn. Tillahash's oral testimony also documents a distinction between the Paroosits and the I-oo-goo-intsn (see *Ua'ayukunants* discussion below). The relationship between agricultural communities on the middle and upper Virgin River cannot be established at this time because they largely disappeared by the mid-1850s, probably due to diseases. Still, agricultural communities did exist and it is suggested that the Paroosits were a local group within the Shivwits/Santa Clara rather than within the *Ua'ayukunants* district. The Hurricane Cliffs is a formidable geological feature (see photo 2.1) that probably serves as a social-political divisional as well as an ecological boundary.

The Shivwits/Santa Clara people rebelled against Mormon domination but were forced to take refuge south of the Colorado River among the Northeastern Pai. About two dozen Shivwits warriors fought beside the Pai in the Hualapai war of 1866-1869 (Dobyns and Euler 1970: 38; Dobyns and Euler 1971:18). Later these Shivwits/Santa Clara people returned to the north side of the Colorado River, but they remained culturally conservative in what might be called a *region of refuge* (Aguirre Beltran 1973) on the Shivwits Plateau. There they managed to make a meager living farming around springs, hunting and collecting in the upland portion of their traditional territory until this portion of their land also was acquired by a Mormon cattleman. The cattleman had sufficient political power to obtain Federal appropriations to purchase land on the upper portion of the Santa Clara River to relocate the refugee Shivwits/Santa Clara people. There their children attended an English language school, and they were exposed to numerous Euroamerican influences, including more lethal germs. Close to St. George, the Shivwits reservation became a wage workers's bedroom community, although the people farmed all the lands they could reach with their irrigation water allocation from the Santa Clara River. The Shivwits reservation attracted many Paiute people and became the home of famous Paiute leaders such as Uncle Sam (pronounced Sham) after whom the reservation is nicknamed, and Tony Tillahash (who was born at Kaibab).

Today, the Shivwits/Santa Clara people are administratively united with four other Southern Paiute bands into the Paiute Indian Tribe of Utah (PITU). PITU was created by a 1980 Act of Congress, which accorded re-recognition to diverse small enclaves whose trust relationship with the Federal government had been terminated in 1954. The 1980 Act defines five local groups as members: (1) Koosharem, (2) Kanosh, (3) Indian Peak, (4) Cedar City and (5) Shivwits. The five local components of PITU elect delegates to a council, and a chairman. These representatives speak for all five groups and are the point of consultation between any project and one of the five groups (see Chapter Three).

2.3.3 Kaibab Paiute District

The Kaibab Paiute people irrigated gardens of maize, beans, and squash near permanent water sources as well as gathered natural plants and hunting or collecting all the fauna available in their ecologically diverse territory. They had gardens along the Colorado River at 2,300 feet, roasted agave (*yaant*) along the upper edges of the canyon, hunted deer (*Tuhi*) in the mountains of the Kaibab Plateau at 9,000 feet, and gathered hundreds of acres of sunflowers (*akamp*) and Indian rice grass (*wa'iv*) in the sandy foothills below the Vermillion Cliffs. They utilized all of the ecological zones within their territory.

The aboriginal boundary of the Kaibab district seems to be approximately where Kelly's Paiute interviewees placed it. The southern boundary of the district was certainly the Colorado River, probably extending downstream (south and west) from the Paria River to just west of Kanab Creek. Kelly's interviewees placed the northern boundary along the Pink Cliffs near the Paunsaugunt Plateau at the divide between the northern Colorado Plateau and the Great Basin. The western boundary, which incorporated both branches of the upper Virgin River, was marked with a dotted line indicating it was doubtful. Here, in this western-most portion of the Kaibab district lies a discussion about a missing Paiute district with a core oasis on the upper Virgin River (see *Ua'ay#kunants* district discussion below).

The people of the Kaibab district lost access to these many portions of this ecological zone because of various types of intrusions, beginning in the early 1860s. Euler (1972), Stoffle and Evans (1976), and Turner (1985) provide detailed accounts of social, cultural, and ecological impacts of planned Mormon settlements, unregulated mining, and tens of thousands of cattle, sheep, and horses. Despite these intrusions and facing the loss of all but a fraction of their original population, the Kaibab Paiute people continued to reject Federal efforts to move them to distant reservations in Utah and Nevada. A portion of the water from one of their larger artesian springs was reserved for them by the Mormon Church in 1907 and a 12-by-18-mile portion of land near the spring was reserved for them by the Federal government in 1909. Yet, it was not until the U. S. Land Claims payment occurred in the early 1970s that sufficient resources were available to the Kaibab Paiute tribe to begin to build the economic and service infrastructure needed to provide jobs and housing for most of the tribal members. Today, the tribe has a viable and mixed economy, sufficient housing for all tribal members, and a strong concern for preserving cultural resources that are located within traditional Southern Paiute territory.

2.3.4 San Juan Paiute District

The San Juan Southern Paiute district constitutes the eastern-most territorial unit of the Southern Paiute ethnic group. Like all Southern Paiutes, the San Juan share an affiliation with the ethnic self-term *nungwuh* or *nungwuts*, which translates into English as "The People" (Stoffle and Dobyns 1983a:165; Franklin and Bunte 1993b:4). *Payuts* or *Payuts(i)* (Franklin and Bunte 1993b:4; Bunte and Franklin 1987:41), which is the Southern Numic term for Paiute, and variants of this second ethnic-self term are also used by Paiute people (Franklin and Bunte 1993b:4).

San Juan Paiute people occupied, and continue to reside in, their portion of traditional Southern Paiute ethnic territory. The San Juan Paiute local territory extended roughly from the Colorado River in the west to Monument Valley and Kayenta in the east, and from the San Juan river in the north to the Moenkopi Plateau in the south (Kelly 1964:167; Stewart 1942:233). Like citizens of a state incorporated into a nation, the San Juan people were not limited in movement or resource use to their local territory. In fact, the strength of the Southern Paiute Nation derived from the control and redistribution through exchange of resources grown, gathered, and stored in extremely different ecological zones. So, the San Juan Paiutes went beyond their local territory to harvest wild game and plant resources in places like House Rock Valley west of the Colorado River and the San Francisco Peaks to the south. These trips were carried out under reciprocal use agreements with other Southern Paiute territorial units and other American Indian ethnic groups. These reciprocal use agreements were negotiated and cemented through a number of sacred and secular ceremonies such as round-dance ceremonials (Bunte and Franklin 1987:19).

Today, these people are organized and Federally recognized as the San Juan Southern Paiute tribe, which has its headquarters in Tuba City, Arizona. As an officially recognized tribe - now four years old - they have participated in a variety of cultural resource studies, some of which have been sponsored by the National Park Service. Like other Southern Paiute groups, their official tribal cultural concerns generally reflect their aboriginal district boundaries.

2.3.5 Ua'ayukunants District

Current data and the social and ecological logic of Paiute districts suggest that there was once a Paiute district on the upper Virgin River, beginning at Hurricane Cliffs and extending to the upper watershed where both branches of the Virgin River begin. The oasis core for this district was at or near the junction of the north fork and east fork of the Virgin River. This is an area that still has evidence of irrigated farming by Indian people so it could have supported a series of oasis core villages. The name for the people of this area is being spelled *Ua'ayukunants*, but it was spelled by Palmer (1978:29-39) as *I-oo-goone* and Presnall (1936:5) as *I-oo-goo-nitsn*. The name literally refers to a "sandstone quiver," and according to Tony Tillahash refers to a "...nearly complete circle of white cliffs seen from Grafton, Utah which looks like a sack or arrow quiver" (Presnall 1936:4-5). While this name could have referred to a local group within the Kaibab district, it would be a unique situation for a local group to control a larger and more regular water source than that controlled by the core oasis group - the Kaibab Paiutes. Instead of the *Ua'ayukunants* being a marginal group within the Kaibab district, evidence suggests they were the core oasis for their own district.

Further evidence for the existence of a "missing" district in the upper Virgin River portion of the Kelly and Kelly/Fowler maps is the unusual characteristics of the Uinkaret district. These people have been considered as different from the Kaibab Paiutes and the Shivwits/Santa Clara people since Powell began interviews in the area in the 1870s. In the 1930s, Kelly's interviewees maintained that the Uinkaret people had their own territory or district. When Kelly and Fowler reconsidered the Southern Paiute district boundaries in the 1980s, they found no evidence that would downgrade the Uinkaret district to a region of another district. So the question is not whether the Uinkaret held district lands, it seems to be whether their lands were connected with some other lands which formed a larger and more socially and ecologically logical district.

The main social and ecological logic behind connecting the Uinkaret district with lands somewhere else is that, as currently defined by Kelly/Fowler, it lacks an oasis core. The Uinkaret district had access to Colorado River waters but at a section of the river where agriculture would have been difficult at best. There are some small springs in Uinkaret land but they are few and high in elevation. The natural argument is that the Uinkaret oasis core lies along the upper Virgin River. In fact, Kelly's own map brings the Uinkaret district boundary to just below the Virgin River, and at this point she drew a dashed boundary line indicating uncertainty.

If the agricultural core of the *Ua'ayukunants* was located at the confluence of the two branches of the Virgin River, they were the external boundaries. The northern and southern boundaries are rather easy to establish. The Colorado River clearly established the southern boundary of this district, and we believe the northern boundary was the divide between the northern Colorado Plateau and the Great Basin. All other districts in Yanawant extend from north to south and stopped at the watershed between the northern Colorado Plateau and the Great Basin. In fact, even Kelly's district map for the Kaibab Paiutes marks this watershed boundary as a solid line, indicating her interviewees' confidence in it as a boundary.

A more basic question is where was the eastern boundary of the *Ua'ayukunants* district? Does the eastern boundary include the upland forest lands of the upper Virgin River or should these resources remain within the Kaibab district as Kelly concluded? By the early 1900s there was living with the Kaibab Paiutes a people called the red-cliff-base-people (*Un-ka-ka-ni-guts*), a band that formerly lived in Long Valley in the headwaters of the East Branch Virgin River (Kelly 1934:558, citing Sapir's unpublished notes). The people from this band were probably forced to move to Kaibab because:

In the late spring of 1871, 200 former Muddy River colonists united with other Mormon settlers and proceeded 300-strong to Long Valley. Advanced exploring parties had found 1,300 acres of tillable land and extensive ranges suitable for grazing (Arrington 1954:8). Their arrival resulted in land loss and population displacement (Stoffle and Evans 1978:11).

Powell and Ingalls (1874:42) estimated that 125 Paiutes resided in Long Valley in 1871, just before the Mormon immigrants arrived. By 1873, only 36 Paiutes remained in Long Valley. About two-thirds of the population was displaced to live with the Kaibab Paiutes. By receiving refugees from other areas/districts, the Kaibab Paiute became responsible to speak for the protection of these areas. Such admission of acquired territorial responsibility, however, did not necessarily imply that the red-cliff-base-people traditionally belonged within the district of the Kaibab Paiutes. Using the social and ecological logic presented in this report, aboriginally the upper watersheds of the Virgin River were within the territorial control of the *Ua'ayukunants* and the *Un-ka-ka-ni-guts* were a local band within that district.

The western boundary of the *Ua'ayukunants* district is shared with the Shivwits/Santa Clara district boundary. Much of this boundary has been "established" as the Hurricane Cliffs extending from the Colorado River and ending just before the Virgin River. The Hurricane Cliffs have a strong boundary logic that derives from being a 400 to 600 foot volcanic cliff, which is oriented north-to-south, and extends for a distance of almost 200 miles. For these reasons, among others discussed previously, we suggest that the entire western boundary of the *Ua'ayukunants* district is defined by the Hurricane Cliffs.

The question remains -- why did the *Ua'ayukunants* district go unrecognized by previous students of Paiute culture? There are probably four reasons for this. First, living in a riverine oasis, the people of the upper Virgin River must have experienced devastating impacts from diseases; perhaps they were impacted by the smallpox epidemic that hit on the Santa Clara River in 1826 and likely they were hit by the 1840 disease episodes. Interviews conducted as part of this study (see Chapter 5) still record oral accounts of massive deaths among the people of the upper Virgin River. Second, it was one of the earliest places of Euroamerican settlement, beginning here in 1859, and there simply were not enough Indian people living in the core oasis to defend it from encroachment. The *Un-ka-ka-ni-guts* (red-cliff-base-people) were the last band to be forced out of the upper Virgin River in 1871. Third, when *Ua'ayukunants* people were interviewed in the 1870s, they still defined the southern forest uplands of the Colorado Plateau as their own; only they used the upland term *Uinkaret* for themselves and the remnants of their district. Fourth, when the Uinkaret district was

encroached upon by loggers in the 1880s and cattlemen in the 1890s, the last Uinkaret people left the *Ua'ay~~h~~kunants* district. According to Paiute elder interviews, some Uinkaret people went to live with Shivwits/Santa Clara relatives and others went to live with the Kaibab Paiutes. So when Kelly interviewed at Kaibab in the 1930s, she talked with people who only remembered that their families lived in the Uinkaret uplands of the *Ua'ay~~h~~kunants* district.

Figure 2.5: Areas where ceremonies and rituals are or were performed, such as this one in Muuputs Canyon, are considered sacred locations



2.4 Summary

The Southern Paiute people continue to maintain a strong attachment to the holy lands of their ethnic group, as well as to their own local territory, even though Paiute sovereignty has been lost over portions of these lands due to Navajo ethnic group expansion, encroachment by Euroamericans, and Federal government legislation. Despite the loss of Paiute sovereignty over most traditional lands, Southern Paiute people continue to affiliate themselves with these places as symbols of their common ethnic identity. Additionally, all Southern Paiute people continue to perform traditional ceremonies along with the menarche and first childbirth rites of passage rituals. The locations at which these ceremonies and rituals were or are performed become transformed from secular "sites" to highly sacred locations or places (see photo 2.2). By virtue of the transformation of locations into sacred places, Southern Paiute people reaffirm their ties to

traditional lands because they have carried out their sacred responsibilities as given to them by the Creator. Southern Paiutes can be characterized as a "persistent people" (Spicer 1971) with a persistent cultural system (Bunte and Franklin 1987; Stoffle and Dobyns 1983; Stoffle and Evans 1976; Stoffle et al. 1982; Turner 1985; Turner and Euler 1983).

Kelly and Fowler (1986) delineate sixteen Southern Paiute "groups." Their term "group" corresponds to the term "district" used in this report, though the data suggests some modifications to the list of groups developed by Kelly and Fowler. New data, some presented in this ecosystem analysis, suggest that three additional districts should be added to Kelly and Fowler's list: (1) the Pahvants as the northernmost Southern Paiute district (Halmo, Stoffle, and Evans 1993), (2) the Ash Meadows/Pahrump Southern Paiutes as the western-most district (Stoffle, Olmsted, and Evans 1990), and (3) the Ua'ayukunants/Uinkaret Southern Paiutes. With these modifications, the list of a dozen districts comprising the Southern Paiute nation would include the following:

Paranayi Subtribe

Ash Meadows/Pahrump district
Chemehuevi district Las
Vegas district
Moapa/Pahranagat
district

Yanawant Subtribe

Shivwits/Santa Clara district
Ua'ayukunants/Uinkaret
district Kaibab district
Kaiparowits
district
Antarianunts
district Panguitch
district
Cedar City/Indian Peaks district
San Juan district
Pahvant (Beaver) district

Although Kelly and Fowler provide an essential base for the present analysis, the ecosystem approach of this study and the need to provide fine-grained analysis of the ecosystems that contain Zion N.P. and Pipe Spring N.M. requires further assessment of the aboriginal districts in the Yanawant Subtribe region of the Southern Paiute nation. The following chapters provide even more detailed information regarding the meaning of Southern Paiute socio-political units in an ecosystem context.

CHAPTER THREE LEGISLATION AND REGULATIONS

This chapter outlines the legal relationships that exist between the Southern Paiute tribes and the United States government which relate to the lands in the study area. For the purposes of this discussion, legal agreements of relevance include government actions that establish tribal claims to any land, natural resource, or cultural resource in the study area. In addition, legislation and regulations that affect national parks and policies concerning cultural resources are reviewed. This chapter is produced by the ethnographic research team and does not represent legal opinion on any issue involving these tribes and the involved Federal agencies. Instead, the analysis is meant to provide a general background to the legal environment within which this study has been conducted.

The aboriginal territory of the Southern Paiutes was described in Chapters One and Two. As discussed there, all the land in the study area lies within the aboriginal Southern Paiute territory. This land was taken first by Mormon settlers and then by the U.S. government. Holt (1992:xv) has summarized the relationship between the tribes, the Mormons, and the Federal government:

By means of military superiority, the Mormons controlled the Paiutes by controlling access to their traditional means of production: food resources and water for irrigation. While the Mormons justified their dominance of the Paiutes through religious ideology, the foundations of this relationship rested on military superiority, and force was occasionally applied when ideology failed. The Mormons seized the social and political initiative as they seized the Paiutes' land; affairs that had previously been the responsibility of the Paiutes were referred to church officials and, later, to the BIA. The opinions or preferences of the Paiutes were seldom elicited and, when they were consulted, they were generally offered only a series of preconceived alternatives, one of which they were forced to accept... The Utah Paiutes were not only subjected to the tutelage of these missionary colonists, they were also neglected by the Federal government and then ravaged by a series of ill- conceived and poorly administered Federal policies.

This study is an example of a Federal government effort to learn the opinions and preferences of the Southern Paiutes regarding the lands and resources in their aboriginal territory and to develop and implement effective management policies to govern the lands and resources. This chapter describes the history and present status of these relationships. Recommendations for future management practices are provided in the final chapter of this report.

The chapter is divided into five sections. The first section describes the methodology by which the legal review was conducted. The second section is a legal summary of the involved Southern Paiute Tribes. None of the tribes were included in any ratified treaties with the United States; their claimed lands were simply taken by the United States (U.S. House of Representatives 1874; U.S. Indian Claims Commission 1965). Therefore, the reservations of these tribes were all established by Executive Order. Contemporary political structures of these groups result from U.S. government actions rather than aboriginal relationships (Dobyns and Euler 1970).

The National Park Service (NPS) units that are involved in this study were established within aboriginal Southern Paiute territory after the land had been removed from Paiute control. The third section reviews the legislation that established Zion National Park and Pipe Spring National Monument.

Among other issues, Native Americans and the NPS share concerns about the cultural resources associated with NPS units. Cultural resources are defined as "material remains of past human life or activities that are of significant cultural interest and are more than 50 years of age" (36 CFR 1.4). In addition, cultural resources include Traditional Cultural Properties, defined as properties that "(a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community" (Parker and King 1990). The fourth section describes legislation and policies that address the study, protection, and preservation of cultural resources. The cultural resource policies of the NPS that respond to Federal laws are described in the final section of this chapter. Examples of recent activities at Zion and Pipe Spring are included.

3.1 Methodology for Legal Review

The legal review was accomplished through two avenues: searching documents and personal contacts. Documents were reviewed in the University of Arizona Law Library and Main Library, particularly the Documents Center and Special Collections. In addition, materials were collected from the library at the Western Archaeological and Conservation Center and from individuals who possessed relevant information. Documents that contributed to the review are 1) Congressional Acts, with accompanying reports and legislative histories, 2) Presidential proclamations and Executive Orders, 3) Indian Claims Commission reports, 4) National Park Service reports, bulletins, and management plans, including available issues of the *Cultural Resources Management Bulletin*, and 5) published legal reviews. Legal reference guides and indices were used to identify existing laws, regulations, and policies of relevance to this task. In addition, newspaper and magazine articles, ethnographies, and reports provided information about their historical development.

To assist in the legal review, personal contacts were made with individuals and organizations deemed relevant to the task. To begin, tribal chairs and attorneys of the affected tribes provided information about both formal and informal agreements existing between them and the Federal government in the study area. Attorneys within the U.S. Department of Justice and the Native American Rights Fund were also contacted. Information was also gathered from representatives of the Bureau of Indian Affairs, from the Phoenix Area Office in Phoenix,

Arizona and the Southern Paiute Field Agency in Cedar City, Utah. National Park Service officials provided additional information and documents. Contacts also included individuals from the Washington and Denver offices of the Advisory Council on Historic Preservation. These contacts provided information, materials, and references to documents relevant to this review.

3.2 Legal Summary of Southern Paiute Tribes

Southern Paiute tribes were generally ignored by the U.S. Federal government until the end of the nineteenth century. The Mormon Church, on the other hand, sought to establish an independent state. They took control of Paiute lands and attempted to convert Paiutes to Mormonism. For example, in 1850, Brigham Young sought the assistance of a Mormon lobbyist in Washington, D.C. to persuade U.S. government officials to extinguish Indian title to the Great Basin and thereby legalize Mormon land claims in the region (Coates 1969:175, cited in Holt 1992). Although Indian title was never legally extinguished, Mormons continued to pour into the region and take control of Paiute lands and resources. Young established the Southern Indian Mission in October 1853 to expand Church influence over the Paiutes (Brooks 1972).

An early official contact between the Federal government and the Southern Paiute bands was the 1856 visit of George W. Armstrong to examine conditions of the Paiutes (BIA 1982). Armstrong noted extensive Paiute irrigation and farming projects and recommended that the government establish two farm sites for the Paiutes (U.S. Senate 1856), but nothing came of his recommendations. Shortly after the visit, the Federal government attempted to consolidate all the Utah Native Americans onto one reservation. A consequence of this effort was the Spanish Fork Treaty signed by the Utes. In addition, negotiations with a handful of Southern Utah Paiutes in September 1865 specified the movement of the Southern Utah Paiutes to the Uintah Reservation and a small compensation for the tribe, most of which was designated for the signers of the treaty (BIA 1982, Irish 1865 cited in Holt 1992). The treaty was never ratified by the U.S. Senate, so the Paiutes were left without treaty rights. They were regarded as "'scattered bands' and thus ineligible for substantial Federal assistance" (Holt 1992:35).

In October 1871, Special Agent Charles Powell reported to Washington from St. George that the Paiutes living in southeastern Nevada and southwestern Utah had been sorely neglected by the Pioche Nevada Indian Agency. This Agency was responsible for "the three southern counties of Utah, that part of Arizona north of the Colorado River, all Lincoln County, and part of Nye County, Nevada" (Powell 1871, cited in Holt 1992). In 1872, Paiutes received goods that were distributed from St. George, Utah by representatives from the Indian Bureau (Dellenbaugh 1926: 191). A November 1, 1872 report from the Pioche Indian Agency recommended a tract of land east of Kanab located "in one of the most fertile valleys in Southern Utah" for the Utah Paiutes (U.S. House of Representatives 1873:2). In addition, the agent acknowledged receipt of communication from General Crook of Arizona urging that several bands of Paiutes in Arizona and California be withdrawn across the Colorado into the Muddy Valley because they were "not now attached *to* or provided for *by* any agency: they are very destitute [*italics in original*]" (U.S. House of Representatives 1873:3). The Muddy River Valley is the traditional home of the Moapa Paiutes, and, when a reservation was established in Nevada on the Muddy in 1873, few of the Utah Paiutes settled there. In 1873, a special commission

headed by John Wesley Powell and G.W. Ingalls was sent to Nevada and Southern Utah to seek reservation sites for the Great Basin tribes (Shoshone and Southern Paiute). Powell and Ingalls recommended the removal of Indians not already on reservations and suggested that the Southern Paiutes be sent to Uintah. This arrangement was unsatisfactory because certain Ute bands, who were traditional enemies of the Southern Paiutes, were living at Uintah. Lack of other "good" reservation land resulted in the Southern Paiutes having the choice of moving to the Moapa reservation in Nevada or doing without (BIA 1982; Fowler and Fowler 1971). Most stayed where they were. No further involvement of the Federal government and the Southern Paiutes occurred until the 1890s. The first Federal government program for the tribe was an Indian school for Southern Paiute students. It was established in 1891 and was located on the Santa Clara River upstream from St. George (Stoffle and Evans 1976). Reservations were later established for the Shivwits, Kanosh, Koosharem, Indian Peaks, and Kaibab Paiutes in the first third of the twentieth century. However, even after these reservations had been established, Bureau of Indian Affairs (BIA) reports noted that the resources on them were limited and that they were not productive enough to provide all the residents with an adequate living (BIA 1931, cited in Holt 1992).

In 1951, the Southern Paiutes filed a claims suit with the Indian Claims Commission seeking compensation for their lands which had been taken. The Commission did not make its final judgment until January 18, 1965. The disposition of funds was appropriated by Congress on October 17, 1968 (PL 90-584), and the claims money was distributed in 1971. In this settlement, the precise value of the land was not determined; the Paiutes were awarded \$8,250,000 for 29,935,000 acres of land (U.S. Indian Claims Commission 1965, 1978). Entry of the final judgment disposed the involved parties "of all rights, claims or demands which the petitioners have asserted or could have asserted with respect to the subject matter of these claims, and petitioners shall be barred thereby from asserting any such right, claim or demand against defendant in any future action" (U.S. Indian Claims Commission 1965). Land claims settlements did not extinguish other rights, such as those associated with water and cultural resources.

The Shivwits, Cedar City, Indian Peaks, Kanosh, Koosharem, and Kaibab Paiutes are all part of the Southern Paiute Nation, but their legal histories are distinct due to their inclusion or exclusion from the various laws and Executive Orders affecting them. Today these groups are Federally recognized as the Paiute Indian Tribe of Utah (PITU) and the Kaibab Paiute Tribe. Each tribe will be discussed separately in the following sections.

3.2.1 Paiute Indian Tribe of Utah

The Paiute Indian Tribe of Utah (PITU) is a composite tribe composed of Shivwits, Kanosh, Koosharem, Indian Peaks, and Cedar City Paiutes. The Shivwits, Kanosh, Koosharem, and Indian Peaks tribes were at one time all independent Federally recognized sovereign Indian tribes, and all these, plus the Cedar City Paiutes, had previously received the Federal services and benefits furnished to Federally recognized tribes and their members. Between 1891 and 1929, reservations were established for the Shivwits, Kanosh, Koosharem and Indian Peaks tribes. The Shivwits and Kanosh Paiutes organized under the 1934 Indian Reorganization Act (PL ; 48 Stat. 984) in the early 1940s. However, on September 1, 1954, Congress passed

legislation terminating the Federal trust relationship between the U.S. government and the Shivwits, Kanosh, Koosharem, and Indian Peaks Bands of the Paiute Indian Tribe (PL 83-762; 68 Stat. 1099). At the time, the four tribes had an aggregated land base of 43,000 acres. The Act did not abrogate water rights of the tribes or their members. The inclusion of the Paiutes in the termination legislation contradicted all studies and recommendations made earlier concerning their readiness for termination (U.S. House of Representatives 1983; BIA 1982). Within a few years, more than 16,000 acres of the Paiutes' land base was lost in termination; only the Shivwits Paiutes maintained any land (U.S. House of Representatives 1983).

In a reversal of the 1954 decision, on April 3, 1980, the Paiute Indian Tribe of Utah (PITU) became the seventh tribe in the United States to be restored to Federal recognition status (PL 96-227; 94 Stat. 317). The PITU was established as a composite tribe of the Shivwits, Kanosh, Koosharem, Indian Peaks, and Cedar City Bands. The restoration legislation authorized the transfer of up to 15,000 acres of public lands for the enlargement of the PITU's reservation and required that a reservation plan be drawn up allocating land for each band as well as a separate tract of land to be placed in trust for the entire tribe. The land was to be taken only from the Utah counties of Washington, Iron, Beaver, Millard, and Sevier. The 1982 Reservation Plan was never implemented. Public outcry and resistance from the Federal agencies whose land was targeted in the plan resulted in allocation of virtually worthless land to the bands. New legislation (PL 98-219; 98 Stat. 11) was passed on February 17, 1984 to void much of the 1980 legislation requiring a reservation plan, to place in trust 4,770 acres of land, and to appropriate \$2,500,000 for the PITU in lieu of the 14,800 acres as provided for in the restoration legislation. The description of the parcels of land set aside for the PITU was published in the *Federal Register* on September 13, 1984. Included in the legislation is provision for rights to use and occupy national forest land at Fish Lake for religious or ceremonial purposes (section 3), including the right to make reasonable use of local plants and materials and to erect temporary structures (U.S. House of Representatives 1983). The separate histories of the five bands of the PITU are reviewed below.

Shivwits

The first official U.S. government action on behalf of the Southern Paiute people in Utah was the 1891 authorization by Congress for the purchase of lands along the Santa Clara River near St. George for a school (BIA 1982). The school, known as the Shebit Day School, was established in 1898 and then closed in 1903 and moved to Panguitch to be opened in September 1904 as a boarding school. The Secretary of the Interior established a reservation for the Shivwits Band on the original school land on November 1, 1903. The Panguitch school was closed in June 1909; it was moved to Shivwits as a day school and operated until 1930. The reservation was formally established by Executive Order on April 21, 1916 (Wilson 1916) and enlarged by Congress on May 28, 1937 (50 Stat. 239).

In 1940, the Shivwits tribe organized under the 1934 Indian Reorganization Act (48 Stat. 984), and approved a constitution and bylaws on March 21 of that year. A corporate charter was issued and ratified August 30, 1941. On February 21, 1957, the Shivwits Tribal constitution was terminated and the corporate charter was revoked. The people were left with little other than the marginal lands in their possession.

At the time of termination, the Shivwits tribe had 26,680 acres of land. The surface and subsurface rights were transferred in trust to the Walker Bank and Trust Co. of Salt Lake City. The trustee attempted to dispose of the surface rights to all but 840 acres (BIA 1982:40). The U.S. Senate report to accompany the disposition of funds appropriated to the Southern Paiute Nation as a result of the Indian Claims Commission settlement (U.S. Senate 1968) states that the Shivwits Band had land holdings of 27,520 acres at the time of termination, all but 840 of which were disposed of by the trustee, Walker Bank and Trust, Co. It further states that the surface rights to the 840 acres were transferred to the beneficiaries of the trust on April 24, 1964. The failure of the government to later appropriate any new land for the Shivwits due to their continued possession of the land they retained at the time of termination (PL 98-219) provides evidence that the Senate report is in error on this point.

Of the five bands of PITU, only the Shivwits still possessed a significant amount of land (26,680 acres) when the tribe was restored to Federal recognition status. Therefore, the reservation plan drawn up at restoration did not provide for additional land to the Shivwits band, although the plan provided for expansion of existing Shivwits facilities (BIA 1982:135). In addition, though the Shivwits band was not included in the band land allocations because of its existing reservation lands, it was to participate in the management of and benefits from the lands designated in the plan as tribal lands (BIA 1982:165). No agreements between the U.S. government and the Shivwits band exist for land or resources outside of Utah.

Cedar City

In 1899, the U.S. Federal government appropriated funds to buy land for the Cedar City Paiutes. However, no land was ever purchased with that money (Holt 1992). The Band lost all its land to Mormon settlers and was nominally administered by the Indian agent in Salt Lake City from 1912 to 1916. In 1915, one agent visited Cedar City and recommended that land be purchased for the Paiutes (McConihe 1915, cited in Holt 1992), but no funds were obtained to purchase the land. In 1916, the Band was placed under the supervision of the superintendent at the Goshute Indian School, located more than 300 miles away (Holt 1992), and were administered as a "scattered band." In 1919, they had 80 acres of land for farming and 5.5 acres on which they lived. The Mormon Church made plans to move the Paiutes to a new plot of land, but the Federal government only agreed to move them to an existing reservation. Finally, on March 2, 1925, Congress passed legislation authorizing an appropriation for the purchase of nine lots in Cedar City for the Paiutes (43 Stat. 1096), but no action was taken. The Mormon Church moved the Paiutes to church property and burned their homes and belongings. After the move, no land was purchased for the Paiutes, and the Federal appropriation was returned to surplus in 1928.

Indian Peaks

The Indian Peaks Reservation was established by Executive Order on August 2, 1915 (Wilson 1915). It was enlarged in 1921, 1923, and 1924. At Indian Peaks, the Paiutes cultivated lucerne (alfalfa), corn, potatoes, melons, and other vegetables (Farrow 1927, cited in Holt 1992). During the 1940s, the Indian Peaks Paiutes moved into Cedar City and settled mostly in the Indian village there (Holt 1992).

Kanosh

The ancestors of the Kanosh Band of Paiutes inhabited the Corn Creek region in the early historic period and raised corn, beans, pumpkins, squashes, potatoes, and other vegetables (*Deseret News* 1851). The Mormon Church filed patents for six homesteads for the Kanosh Paiutes under the 1884 Indian Homestead Act (Stat.). In 1919 and 1920, the Kanosh Indians received land in twelve allotments (Holt 1992). The Kanosh Reservation was established adjacent to the allotments in February 1929 as the last reservation to be formally established in Utah. The reservation was administered by the BIA office in Cedar City. It was expanded in 1935, but by that time the Kanosh Paiutes had lost half the water rights they had held between 1853 and 1930. The reservation was again enlarged by Congress on May 28, 1937. The corporate charter issued to the Kanosh Band was ratified on August 15, 1943.

Koosharem

In the early 1900s, the Koosharem Paiutes raised their own grain and hay and worked in beet fields in spring and fall (McConihe 1915, cited in Holt 1992). In 1904 and 1913, four hundred acres of land were included in allotments that had been filed by the Mormon church for the Koosharem Paiutes. The Koosharem Reservation was established adjacent to the allotments in 1928, and it was enlarged in 1937. The Sevier Stake, the local Mormon church, held control of the Koosharem and was the trustee of their water rights until 1958 when the Paiutes sued for those rights (Holt 1992). Under the Sorensen Lease of 1969, the Sevier Stake leased land in Richfield, Utah to provide homes and garden plots for the Paiutes.

3.2.2 Kaibab Paiute Tribe

Beginning in 1906, in response to letters from a Utah congressman and Indian agent that described the difficult circumstances facing the Paiutes due to the loss of water and access to hunting on the Kaibab Plateau (Knack 1993), the Federal government began appropriating money to the Kaibab Paiutes (34 Stat. 325). Public lands were withdrawn for the Kaibab Paiutes by an October 16, 1907 order of the Department of the Interior. The Kaibab Paiute Reservation was made permanent by an Executive Order of June 11, 1913 (Wilson 1913). The reservation occupies a twelve by eighteen mile rectangle lying approximately 30 miles north of the Grand Canyon and immediately south of the Utah border. Mormons had taken control of the land and its water resources in the 1860s, and they continued to run their cattle and control the two large springs on the reservation (Knack 1993). Mormon fences on the reservation were not removed until 1925 when ordered by a Federal lawsuit (Knack 1993). The reservation was reduced to 125,000 acres with the removal of approximately twelve square miles for the town of Moccasin on July 17, 1917 (Wilson 1917). An additional 40 acres of land were also removed from the reservation for the creation of Pipe Spring National Monument (see section below).

Money was appropriated by Congress in 1928 for the improvement and maintenance of a road leading across the Kaibab Paiute Reservation to the Grand Canyon. The Commissioner of Indian Affairs in 1929 noted the inadequacy of the reservation and the Paiutes' need for tillable land; only 28 acres of reservation land were capable of being irrigated under the supply of water

available at the time. The Commission recommended the U.S. government acquire the Heaton ranch at Moccasin in order to provide sufficient resources to support local Indian people (USDI 1929), but that was never done. Competition over resources between the Kaibab Paiutes and the Mormons has continued through much of the twentieth century (Knack 1993). On May 29, 1965, the tribe's constitution and bylaws were approved by the Secretary of the Interior (U.S. Senate 1968).

3.3 Legal Summary of Involved Park Service Units

This section examines the legal history of Zion National Park and Pipe Spring National Monument. It also includes a review of Federal policy regarding cultural resources and Native Americans. The section concludes with a discussion of NPS policies regarding cultural resources and interactions between the Southern Paiutes and the NPS regarding the involved parks.

3.3.1 Zion National Park

Southern Paiute access to most of their traditional lands in the vicinity of the Virgin River was impeded as early as 1861 when Mormons entered the region in significant numbers (see Chapter Two). The first Federal government activity regarding Zion Canyon was John Wesley Powell's 1872 exploration of the area as part of the surveys of the west conducted by the U.S. Geological Survey (Kelly 1947, 1948). The first legal restriction on Southern Paiute use of Zion Canyon occurred on July 31, 1909 when a presidential proclamation by William Taft set aside the lands of "Mukuntuweap canyon, through which flows the North Fork of the Rio Virgin, or Zion River, in Southwestern Utah." The National Park Service was established in 1916. On March 18, 1918, Woodrow Wilson issued a presidential proclamation that set aside as Zion National Monument the lands including and also bordering the former Mukuntuweap National Monument. According to that proclamation, the name change occurred because the canyon "was named 'Zion Canyon' by Mormon settlers many years before the name 'Mukuntuweap' was given to the region because it was regarded as a safe refuge in the event of Indian attacks on neighboring settlements" (see Chapter Two for more complete discussion of names given to the canyon). The proclamation also placed the supervision, management and control of the monument under the Director of the National Park Service as an agent of the Secretary of the Interior. On November 19, 1919, Zion National Monument was declared a national park. On June 7, 1924, the Secretary of Interior was authorized to exchange alienated lands in Zion National Park for unappropriated and unreserved lands of equal value and approximately equal area in the state of Utah. On June 13, 1930, additional lands were added to Zion National Park. On July 11, 1956, Zion National Park and Zion National Monument were combined into a single national park unit to be called Zion National Park and administered by the Secretary of the Interior. On February 20, 1960, the boundaries of Zion National Park were extended and lands within the park that were needed for the refinement and construction of U.S. Highway 91 were made eligible for conveyance to the Utah State Road Commission. In exchange for the lands, the state of Utah was required to construct an interchange providing

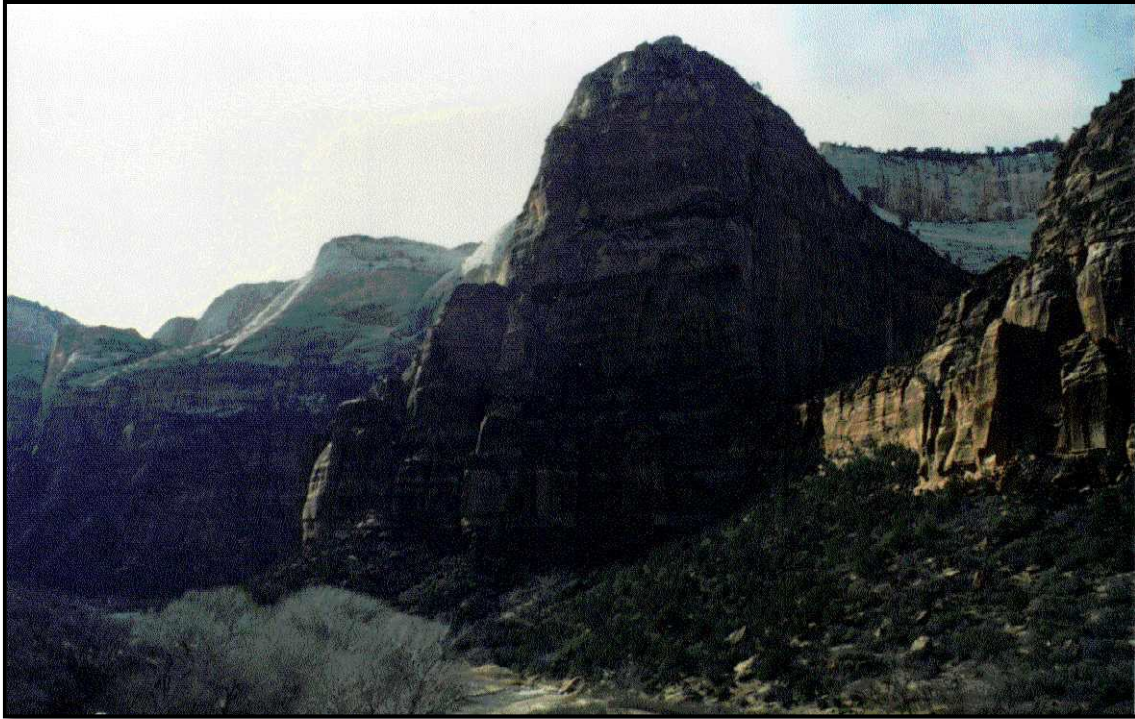


Figure 3.1 Zion National Park

vehicular access between Highway 91 and Zion National Park. The lands upon which the highway lay were then excluded from the national park. On October 21, 1976, the boundaries of Zion National Park were again revised to include additional land that was to be acquired by donation only.

3.3.2 Pipe Spring National Monument

At the urging of a prominent Mormon family, forty acres within the Kaibab Paiute Reservation were redesignated by Presidential Proclamation as Pipe Spring National Monument on May 3, 1923 (see Knack 1993). These lands were placed under the administration of the National Park Service. The proclamation provided specifically for Kaibab Paiute use of water from Pipe Spring "for irrigation, stockwatering and other purposes, under regulations to be prescribed by the Secretary of the Interior" (Harding 1923). The Secretary of the Interior designated that the water flow at Pipe Spring was to be allocated in thirds to the Kaibab Paiutes, an area cattlemen's organization, and the NPS. However, the Paiute's third was dominated by the NPS for domestic and water use at the monument until 1969 (Fields 1980, Knack 1993). Kaibab Paiute use of the tribe's allotted water would have threatened activity at the monument, so in 1970 the NPS drilled a well on Kaibab Paiute land, piped water to Pipe Spring, and made water available to the tribe. To further assist the tribe, NPS engineers and architects from the Indian Assistance Division worked in cooperation with tribal members on the design of a structure architecturally compatible with the visitor center and employee housing units at the monument. The tribe began construction of the building in 1972. Upon completion, the tribe leased approximately half the building from the NPS so members could set up a snack bar and gift shop (Fields 1980).



Figure 3.2The Fort and Pond at Pipe Springs

3.3.3 U.S. Laws Governing Management of Cultural Resources

Despite the unique relationship between the Kaibab Paiutes and the NPS at Pipe Spring that evolved from the monument's history and its location within reservation boundaries, government-to-government relationships between Native Americans and Federal agencies frequently concern the study, protection, and preservation of cultural resources. This section describes the Federal laws governing the management of those resources.

Environmental Policy Act

The National Environmental Policy Act (NEPA, PL 91-190, 42 U.S.C. 4371, 40 CFR 1500 et seq.) requires completion of an Environmental Impact Statement (EIS) for any Federal action determined to have potentially significant environmental impacts. Relevant to the purposes of this study, NEPA encourages the preservation of historic resources and requires consideration of social impacts. A report from the Council of Environmental Quality specifically directs the solicitation of input from affected Indian tribes at the earliest possible time in the NEPA process (40 CFR 1501.2). The lead agency in the process is also directed to invite the participation in the scoping process of any affected Indian tribes as well as Federal, state, and local agencies or other interested persons (40 CFR 1501.7). In addition, the agency preparing the draft environmental impact statement is directed to request the comments of Indian tribes where effects may be on their reservation (40 CFR 1503.1). However, the NEPA legislation also clearly indicates that in those cases where project impacts are entirely social or economic no EIS is required regardless of the severity of those impacts. NEPA can be an effective means by which

to incorporate Native American interests into NPS planning, but concerns have been raised including the possibility that non-artifactual cultural resources considered only under NEPA could be vulnerable to Freedom of Information Act (FOIA) requests, thereby eliminating protection of confidential site locations, and the fact that NEPA requires documentation of impact but provides no real protection for any specific resource (Stuart 1979). Those early concerns have been answered by other legislation and also addressed by specific policies of the implementing agencies. These will be reviewed briefly here.

Early Historic Preservation Legislation

Concern for historic and cultural resources has been expressed in legislation throughout the twentieth century. In 1906, the Antiquities Act (PL 209, 16 U.S.C. 431-33) authorized the President of the United States to declare landmarks, structures, and objects of historic or scientific interest to be national monuments and to reserve land to aid in their protection. The Act also established the necessity of obtaining permits for the excavation of archaeological sites on public lands. On August 21, 1935, the Historic Sites Act (PL 74-292, 49 Stat. 666) provided for the preservation of historic American sites, buildings, objects and antiquities of national significance and confirmed the role of the National Park Service as the Federal government's central agency for historic preservation. On October 26, 1949, Congress created the National Trust for Historic Preservation to receive donations of sites, buildings, and objects significant in American history and culture and to preserve and administer these for the public benefit. On June 27, 1960, Congress provided for the preservation of historical and archeological data threatened by the construction of a dam (PL 86-523, 74 Stat. 220). The Act requires any agency of the U. S. involved in construction of a dam to give written notice to the Secretary of the Interior who shall then order a survey to be conducted to ascertain whether the affected area contains historical and archeological data which should be preserved in the public interest. If indicated by the survey, the Secretary shall then see that the data be collected and preserved. The 1974 amendments to the Act (PL 93-291) added significant scientific and prehistoric data to the others which would require notification and preservation in the public interest. The amendments also require consent of "public entities having a legal interest in the property involved."

National Historic Preservation Act

On October 15, 1966, the National Historic Preservation Act (NHPA, PL 89-665, 80 Stat. 915, 16 U.S.C. 470 et seq.) increased the scope of historic preservation as public policy and broadened the duties of the National Park Service (Connally 1986). The Act expanded the properties to be preserved to include those significant in American history, architecture, archeology and culture (section 101-2). The Act provides assistance to *states* and established the Advisory Council on Historic Preservation whose duty it is to advise the President and Congress on matters relating to historic preservation, encourage public interest and participation in historic preservation, and assist state and local governments in drafting legislation relating to historic preservation. The Director of the National Park Service, or his/her designee, serves as Executive Director of the Council. PL 94-422 of September 28, 1976 amended Section 102 of the NHPA and established the National Historic Preservation Fund. The 1980 amendments to the Act directed the Secretary of the Interior to study the means of "preserving and conserving the intangible elements of our cultural heritage such as arts,

skills, folklife, and folkways..." and to recommend ways to "preserve, conserve, and encourage the continuation of the diverse traditional prehistoric, historic, ethnic, and folk cultural traditions that underlie and are a living expression of our American heritage" (PL 96-515, 94 Stat. 2989, 16 U.S.C. 470a). The amendments are explicit in the requirements for the protection of the confidentiality of the location of sensitive historic resources. They direct the head of any Federal agency to "withhold from disclosure to the public, information relating to the location or character of historic resources whenever...the disclosure of such information may create a substantial risk of harm, theft, or destruction to such resources or to the area or place where such resources are located" (section 304). National Register Bulletin 29, *Guidelines for Restricting Information on the Location of National Register Properties*, provides full detail for agency directors.

The NHPA amendments also demonstrate the shift in U. S. policy toward the recognition of Native Americans, including for the first time in historic preservation legislation explicit mention of the Federal government's partnership with Indian tribes in the protection and preservation of prehistoric and historic resources (section 2). A report, *Cultural Conservation*, was prepared to respond to the directives of the Act and submitted to the President and Congress by the Secretary of the Interior on June 1, 1983 (Parker and King 1990). That report directed the National Park Service to prepare guidelines to assist in the documentation of intangible cultural resources. National Register Bulletin 38, *Guidelines for Evaluating and Documenting Traditional Cultural Properties* fulfilled that purpose with specific inclusion of Indian Tribes (Parker and King 1990:2). That bulletin is significant for preservation of Native American cultural resources because the policies and procedures of the National Register can be interpreted by Federal agencies and others to exclude historic properties of religious significance to Native Americans from eligibility for inclusion in the National Register (Parker and King 1990:3). On October 1, 1985, a Joint Resolution recognized the fifty years of accomplishments resulting from the Historic Sites Act (PL 99-110).

On October 30, 1992, the National Historic Preservation Act was again amended to provide greater authority and assistance to Native Americans. The 1992 amendments specifically mention the need for Federal agencies to contact and consult with Indian tribes. Properties of traditional religious and cultural importance to an Indian tribe may be determined to be eligible for inclusion on the National Register, and a Federal agency must consult with any tribe that attaches religious or cultural significance to such properties. In addition, Indian tribes are to receive assistance preserving their particular historic properties. Coordination among tribes, State Historic Preservation Offices (SHPOs), and Federal agencies is to be encouraged in historic preservation planning, and in the identification, evaluation, protection, and interpretation of historic properties. Additional language is also included in the amendments regarding confidentiality and tribes are eligible to receive direct grants for the purpose of carrying out the Act. The amendments provide for tribes to assume part or all of the functions of a SHPO with respect to tribal lands.

In response to the 1992 NHPA amendments, a new policy statement, "Consultation with Native Americans Concerning Properties of Traditional Religious and Cultural Importance," was adopted by the Advisory Council on Historic Preservation (ACHP) on June 11, 1993. That policy provides explicit principles for application of the amendments, including that Native American groups who ascribe cultural values to a property or area be "identified by

culturally appropriate methods" and that participants in the Section 106 process should learn how to approach Native Americans in "culturally informed ways" (ACHP 1993:3-4). Consultation with Native Americans must be conducted with sensitivity to cultural values, socioeconomic factors and the administrative structure of the native group. Specific steps should be taken to address language differences and issues such as seasonal availability of Native American participants as well. According to this policy, Native American groups not identified during the initial phases of the Section 106 process may legitimately request to be included later in the process. The Advisory Council's policy statement also reaffirms the US government's commitment to maintaining confidentiality regarding cultural resources and states that participants in the Section 106 process "should seek only the information necessary for planning" (ACHP 1993:3).

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (ARPA, PL 96-95, 93 Stat. 712, 16 U.S.C. 470) was signed into law on October 31, 1979. It extended the protection of archaeological resources on Federal and Indian land. Archeological resources are defined as material remains of past human life or activities that are of archeological interest, have retrievable scientific information, and are over 100 years old. Under ARPA, excavated resources remain the property of the U.S. government and are subject to inventory and repatriation in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA, see below). ARPA provides the first significant criminal penalties for the vandalism, alteration, or destruction of historic and prehistoric sites or for any transaction conducted with an archeological resource that was excavated or removed from public or Indian lands or in violation of state or local law (section 6). The Act directs Federal land managers to notify any Indian tribe considering a site as having religious or cultural significance prior to issuing a permit for excavation or removal of archeological resources from the site. Section 9 restricts the release of information concerning the nature and location of any archeological resource requiring a permit for excavation or removal.

In 1984, uniform regulations were promulgated, as required by the Act, by the Secretaries of the Interior, Defense, and Agriculture and the Chairman of the Tennessee Valley Authority (43 CFR Part 7; Carnett 1991:3). Additional regulations may be promulgated by Federal land managers as needed by their agencies. The January 25, 1988 amendments of the Act (PL 100-555 and PL 100-588) strengthened ARPA with requirements that Federal agencies develop plans for surveying lands not scheduled for projects.

American Indian Religious Freedom Act

Additional legislation which affects tribes and cultural resources includes the American Indian Religious Freedom Act (AIRFA) of August 11, 1978 (PL 95-341, 42 U.S.C. 1996). AIRFA reaffirms the First Amendment of the United States Constitution rights of American Indian people to have access to lands and natural resources essential in the conduct of their traditional religion. In Section 2, Congress asks the President of the United States to direct various Federal departments and agencies to consult with native traditional religious leaders to determine appropriate changes in policies and procedures necessary to protect and preserve

American Indian religious practices. The Act requires the NPS, like other Federal agencies, to evaluate policies and procedures with the aim of protecting the religious freedoms of Native Americans including "access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites." During the twelve years since AIRFA was passed by Congress, all Federal agencies have developed means of interacting with American Indian tribes having cultural resources potentially impacted by agency actions. The Bureau of Reclamation has established an Office of Native American Affairs that helps to facilitate interactions between tribes and facilities. The National Park Service has published specific policies concerning American Indians; these will be discussed at greater length below.

Specific guidelines regarding AIRFA are presently being prepared. Until they are published, most of the guidelines and regulations that address the spirit of AIRFA have been passed as part of the National Historic Preservation Act (NHPA). It is important to note that while these guidelines and regulations deal with issues of concern in AIRFA, there are a number of issues that are not covered by NHPA guidelines.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA, PL 101-601, 104 Stat. 3048) became law on November 16, 1990. NAGPRA makes provisions for the return of human remains, funerary objects and associated sacred items held in Federally-funded repositories to American Indian, Native Alaskan, and Native Hawaiian peoples who can demonstrate lineal descent, cultural affiliation, or cultural patrimony. In addition, the Act provides for formal consultation with, and participation of, indigenous peoples to decide the disposition of these resources. This process should occur as a result of repository inventories and in the event that resources are encountered by activities on Federal and tribal lands (Price 1991:32-33).

According to a memorandum from the Executive Director of the Advisory Council for Historic Preservation (Bush 1991), the NAGPRA will affect the Section 106 review process in at least three ways: (1) with regard to the conduct of archeological investigations, formal consultation must occur with appropriate American Indian groups regarding the treatment and disposition of human remains and other cultural resources recovered during archeological studies on Federal and tribal lands, and tribes must give their consent to the excavation of human remains and removal of remains and other cultural resources from tribal land beyond that normally required of the Section 106 process; (2) in discovery situations, agencies are encouraged to develop plans to deal with unexpected discoveries of archeological materials and in the event of inadvertent discovery, all project activities must cease, the appropriate Federal agency or Indian tribe must be notified, and activities must not resume for 30 days. Disposition will be resolved in accordance with the provisions set forth in NAGPRA; (3) with regard to curation, NAGPRA allows for the affiliated American Indian group to decide on the treatment and disposition of recovered cultural items. This goes beyond the ACHP policy that simply requires professional curation.

3.3.4 National Park Service and Cultural Resource Policy

The laws described above apply to cultural resources in general, but this section will examine those laws as they are applied within the National Park Service (NPS) in relation to Native American groups. Early NPS management policies limited the definition of cultural resources to archeological, historical, and architectural resources. Concern for intangible cultural resources, particularly for Native Americans who identify locales of traditional importance that do not exhibit physical evidence of human behavior, began to be expressed by the late 1970s (Stuart 1979). The September 1984 keynote address by NPS Director Russell E. Dickinson to the First World Conference on Cultural Parks called for park officials to "seek innovative forms of rapprochement among native communities, government land managing agencies, and groups who share that concern." Working together requires recognition and respect, developing permanent working partnerships, recognition of the value of cultural differences, and recognition that culture means more than objects or structures (Scovill 1987). Natural and cultural features are now viewed as park resources with traditional subsistence, sacred ceremonial or religious, residential or other cultural meaning for members of contemporary park-associated ethnic groups, including Native Americans (Crespi 1987). *Bulletin 38* was one NPS response to the need to evaluate and document *traditional cultural properties* (Parker and King 1990). The *Bulletin* is intended to supplement rather than supplant more specific guidelines such as those used by Indian Tribes (Parker and King 1990:3-4). The *Bulletin* provides guidance in conducting cultural resources surveys, noting the importance of background research about what is already recorded and consulting with persons who have been students in the cultures and traditions of the area under review. The agency conducting a cultural resources survey has the responsibility for coordination and consultation with Indian tribes. Recommendations include making contact with knowledgeable groups in the area and specifically seeking out knowledgeable parties in the affected community outside the official political structure, with the full knowledge and cooperation of the contemporary community leaders (Parker and King 1990:6).

The NHPA, as amended, provides for the protection of traditional cultural properties as historic properties under Section 106 and is a new endeavor in cultural resources management (Parker 1993). A special issue of the NPS periodical, *CRM* (1993), was devoted to the topic. The July 1994 release of *NPS-28* defines *cultural landscapes* as complex resources including landforms, soils, and vegetation that are a reflection of human adaptation and resource use. It specifies that "all cultural landscapes are to be managed as cultural resources, regardless of the type or level of significance" (NPS 1994:93).

NPS policies (NPS 1988) provide explicit direction for involving Native American groups in cultural resource management and commitment to creating cooperation with Native American authorities and seeking to establish both formal and informal lines of communication and consultation. The *NPS Management Policies* specifies that the integrity of contemporary Native Americans necessitates that the NPS consult with affected communities before reaching decisions about the treatment of traditional associated resources. Accordingly, potentially affected Native American communities will be given opportunities to become informed about and comment on anticipated NPS actions at the earliest practical time (NPS 1988:5:4). Each park with cultural resources is to prepare and periodically update a cultural resource component

of the park's resource management plan defining and programming the activities required to perpetuate and provide for the public enjoyment of those resources. Any action that might affect cultural resources is to be undertaken only if, in cases involving ethnographic resources, associated Native Americans and other ethnic groups have been consulted, and their concerns have been taken into account. In addition, certain contemporary Native Americans and other communities are permitted by law, regulation, or policy to pursue customary religious, subsistence and other cultural uses of park resources with which they are traditionally associated. The policies also state that the NPS will actively consult with appropriate Native American tribes or groups regarding interpretive programs, repatriation of museum objects, etc. The NPS will conduct appropriate cultural anthropological research in cooperation with park-associated groups to develop interpretive programs accurately reflecting Native Americans. Discussion of Native American involvement includes both formal tribal leaders and traditional elders.

The data stored in the memory of Native American elders, extraordinary in quantity and quality, can only be acquired by setting up intimate and equitable working relationships with them...Native American elders who are interested in working with NPS personnel should be contacted immediately, worked with extensively and seriously, and their information integrated with already available material (Bean and Vane 1987:27-28).

NPS policies require establishment and maintenance of consultative relationships with Native American groups who have historical ties to specific park lands and direct the Service to "seek the broadest feasible range of views from members of the involved group, while recognizing that it must also respect the views of the group's tribal chair or other formal leaders" (NPS 1987:2457). NPS mandates for cultural resource management are further outlined in *Cultural Resources Management Guidelines* (NPS - 28). One aspect of this document is the requirement that "properly selected, sensitized, and trained people shall serve as intermediaries between the NPS and local groups" (NPS 1981:2-18). Further, the "Native American Relationships Management Policy" (NPS 1987) presents the National Park Service philosophy regarding Native American relationships and outlines NPS policy toward American Indians, Eskimo, Aleut, and Native Americans of the Pacific Islands. The policy expands and clarifies Special Directive 78-1, *Policy Guidelines for Native American Cultural Resources Management*, and provides guidance to NPS personnel for management actions affecting Native Americans. Emphasis is placed on implementation of activity in a "knowledgeable, aware, and sensitive manner" (NPS 1987:35674). Park managers are directed by the policy to identify and consult with Native American groups traditionally associated with park lands and other resources.

Neither Zion nor Pipe Spring have an extensive history of involvement with Native Americans regarding cultural resources. Indeed, early interpretations of Pipe Spring focused almost exclusively on Mormon history with little mention of the Paiutes living in the region. An early NPS publication of the monument and its history, for example, ignored the existence of the Kaibab Paiute reservation (NPS 1930). Acknowledgement of the tribe is limited to mention of "a Piute [sic] Indian guide" who led the 1858 [sic] Mormon party headed by William Hamblin to the site of "a marvelous spring" and a concluding sentence that the custodian of the monument "resides within the reservation," with no indication whose reservation that was. Occasional efforts have been made at each park to involve

Southern Paiutes (e.g. Fields 1980), but these have not been formal consultation relationships, governed by legal agreements such as Memoranda of Understanding. Both parks have begun to seek greater involvement of tribes, including recent efforts to deal with the legal requirements of NAGPRA. Pipe Spring was the location of a pilot NPS-funded NAGPRA effort regarding unassociated funerary objects, sacred objects, and objects of cultural patrimony (Evans, Dobyms, Stoffle, Austin, and Krause 1994), and Zion has contacted the Hopi tribe regarding human remains taken from park lands (J. Burns, personal communication, 1995). This study is the first comprehensive effort to establish a relationship regarding Native American cultural resources associated with the parks.

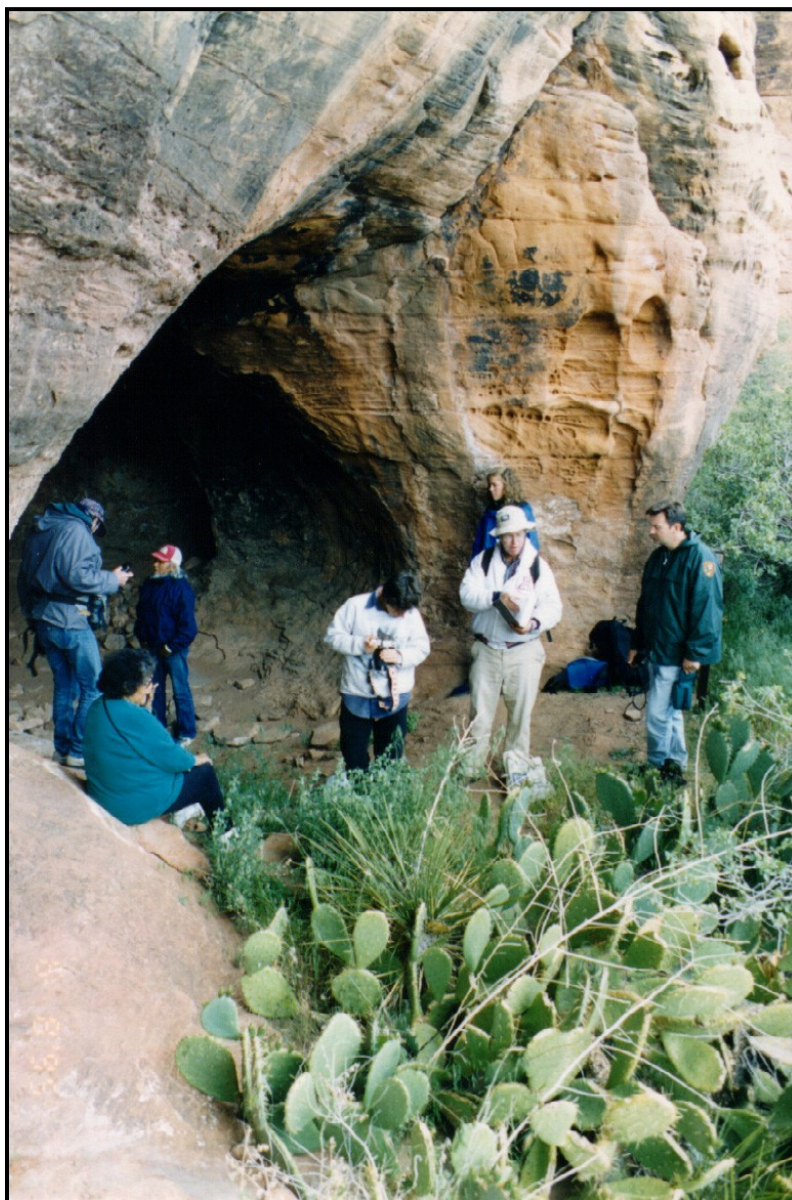


Figure 3.3 Southern Paiute Elders, Park Employees, Botanists, and UofA Ethnographers Working Together

3.4 Summary

The relationship between the National Park Service and Southern Paiute tribes with regard to Zion N.P. and Pipe Spring N.M. is governed by specific laws and regulations. However, the legal requirements of such a relationship specify only a minimum framework within which government- to-government relations must be established. In recent years, park service personnel and tribal representatives have demonstrated a readiness to move beyond minimal legal compliance to establish a meaningful partnership for the interpretation and preservation of cultural resources.

CHAPTER FOUR

SOUTHERN PAIUTE CULTURAL ECOSCAPES

This chapter presents Southern Paiute perspectives on the Northern Colorado Plateau Ecoregion, emphasizing the Virgin River and Kanab Creek as cultural ecoscapes. This chapter begins with overview essays written by the Coordinator of the Southern Paiute Consortium. These essays are followed by discussions of Southern Paiute perspectives on places within these two cultural ecoscapes and the relationships with one another.

The information in the Virgin River and Kanab Creek ecoscape discussions was taken from individual and small group interviews with Southern Paiute representatives. Those representatives were selected by their tribal governments for participation in this study. They were then contacted by the University of Arizona research team, and interviews were scheduled. A member of the Southern Paiute Consortium was present at most of the interviews. The interviews were intended as a learning process; only a few questions initiated the discussions. Places, times, and topics emerged in the discussions, and questions about them were incorporated in later discussions. As a result, these initial scoping interviews became richer and more complex as the process progressed. The information learned from these interviews contributed to the design of a more structured segment of the study that included onsite visits to places within the ecoscapes. The information from those visits was integrated with that taken from written documents and is presented elsewhere in this report. Information about the Virgin River ecoscape, with a focus on Zion National Park, is provided in Chapter Five. A similar discussion of the Kanab Creek ecoscape, with a focus on Pipe Spring National Monument, is provided in Chapter Six.

4.1 A Southern Paiute Homeland Perspective

Angelita Bullets

Our Homeland: The Colorado Plateau Ecoregion
(adapted from Stoffle et al. 1995)

This land that some consider to be desert, isolated and containing little life, is the home of the Paiute people. Through the eyes of the Paiute people, this land has beauty that no other place in the world possesses. It is the place of our creation as a people, and in our belief, it is the place that our individual life cycles end.

Evidence of Paiute presence within the Colorado Plateau Ecoregion is marked by omphi, or hematite, showing the path of the People and physically visualizing their journeys. Throughout Paiute history, the Grand Canyon and its surrounding areas have been a place of prayer, of everyday living and, in the end, a final refuge for a people who were being squeezed out of their traditional lands by newcomers.

Within the lives of Southern Paiutes, there is an inherent understanding that all things are placed on this land with the breath of life just as humans. This land is considered to be their home, just as it is for man, and it is taught that one must consider that rocks, trees, animals, mountains and all other things are on the same level as man. Each has a purpose in life, and the one who created every living thing on this earth placed all living things here to interact with one another. Therefore, it is customary to show respect to everything that must be disturbed. There is mutual regard between man and these things, each having something to share and each being dependent on the other for life. It is said that the plants, animals, and, in fact, everything on this land, understands the Paiute language, and when one listens closely and intently enough, there is affirmation and a sense of understanding.

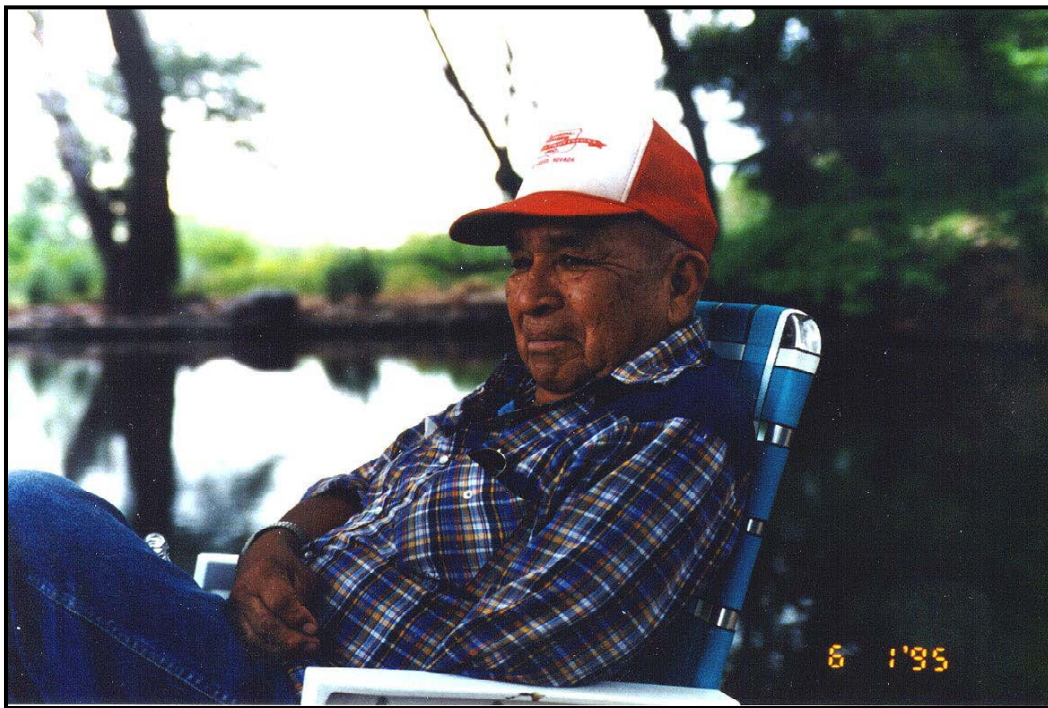


Figure 4.1 Southern Paiute elder at Pipe Springs National Monument

One of the most primary and innate responsibilities of the Southern Paiute people is to care for and nurture the land which feeds, cures and clothes us. When cultural knowledge can be employed in a way that maintains, utilizes and enhances the land, then it is to the advantage of the resources and the people. For instance, plant resources are at a maximum when they are

pruned by utilization, and they will reoccur in their most advantageous state. In a traditional context, it is said that if plants aren't used, then they will disappear and be gone from the People forever.

It is with our basic knowledge that Paiute people have a responsibility to care for this land that we have sustained a life through impediments placed here by those who sought to constrain and disseminate our culture. The prior awareness of life as it should be and how one day traditional life will be again sustains the Paiute people. It is believed that we will once again have the opportunity to live as naturally as was intended.

Much of the land that the Colorado River passes through has been the traditional lands of the Southern Paiute. Submerged under what is today called Lake Powell are Paiute farms that supplemented the traditional food gathered by the People. Beneath the waters of Lake Mead is one of the most important natural resources considered by the Southern Paiute, that is salt. When the U.S. Federal government chose to take traditional lands away from the aboriginal people, it also took the People's ability to live a traditional lifestyle. The taking away of land also caused the People to become dependent upon others for sustenance instead of relying on traditional hunting and gathering skills and tools.

Conceivably, the traditional land of the Southern Paiute may one day be restored back to a people who will care and nurture the land and its resources. Prior to Euroamerican encroachment, it is said in tribal oral history, this plateau contained grasses as tall as one's knees; the children could hide and play within it. After the arrival of the pioneer, use of the land became a competitive process for range animals and the wildlife that were here prior to the livestock intrusion. It was only a very short time span until the grasses began to disappear and, in more time, some species of wildlife disappeared as well.

The traditional culture of the Southern Paiute people has been documented by anthropologists during this century. This research views Paiute culture as primitive and simplistic, and, to the outside researcher, this may be what one sees when merely looking in through a window without having the capacity to be enveloped within the culture. The complexity of our culture lies in our ability to converse with the animals and the landscape in this land. It is believed that this ability will prove to be important for all mankind someday.

This entails much more than the simplicity of speech; it entails the knowledge of a higher communication through the animals and the ability to live humbly within the grandeur of this land. One of the basic truths of the Southern Paiute people is the need to ensure that care is maintained for the land; then, in turn, the land will care for the People. This fundamental concept has enabled the Paiute to live continuously on the Colorado Plateau.

Materialistically, the Southern Paiute lived very humbly. The land provided all that was needed to live, though, within literature, it is implied that the Southern Paiute were nomadic with no real direction, merely living to suit nature's will. In truth though, present Southern Paiute people view themselves as part of a legacy of people who were the first conservationists, having the ability to live off the land and prospering within it. Cultural characteristics that include little or no ceramic development may be categorized as primitive, but Paiute basketry skills were such that there was no need to advance the art of ceramic technology. As an example, the tightness of a basketmaker's weaving was such that food stuffs could be cooked by placing hot rocks within the basket that contained water, resulting in the heating of a broth or boiling of plants or meat.

Farming was practiced near water sources such as springs, rivers and creeks. Within the Grand Canyon, it is historically documented that Paiute farms were observed during the time of the Powell expeditions, and, in fact, these were scavenged when the crew's food was no longer palatable. Through tribal oral history, descendants of the owners of the farm have stated that their grandfather was there in the rocks observing these men the day that his garden was trespassed on. Interestingly enough, the majority of researchers in Paiute ethnohistory continually state that the Paiute people did little or no farming prior to contact with Euroamericans. This coupled with the little practiced art of ceramics, leads professionals to believe in the primitiveness of the Southern Paiute. Even today, Paiute people pride themselves on their gardening expertise, passing fruit and vegetable seeds on from parent to child. Grandparents take pride in teaching their grandchildren to plant, how to water and care for the garden.

Insofar as the belief system of the Paiute people can be documented, there is much more that cannot be told to non-Paiute people. Prophecies of the People explain many of the reasons why certain aspects of Paiute beliefs cannot be shared with those outside of the culture. During the 1930's, an anthropologist studied the Paiute people and became one of the premier authorities on the Southern Paiute culture. Through tribal oral history, there is a story about that situation and smiles emerge as they recall those who were telling the make believe stories. These interviews were later documented from the field studies by the anthropologist. Unfortunately, the people chose to mislead the anthropologist, giving misleading information that was taken as fact and tradition. They chose to do this rather than to explain that some of the stories and traditional information must be kept confidential and stay within the culture.

From this study came misleading information of Southern Paiute traditions and, even today, it generally takes a Paiute person many years to really become comfortable enough with a researcher and even longer for that Paiute person to speak confidentially with the researcher. It is with this study that the Southern Paiute Nation can now speak on its own behalf and research can be conducted with Paiute people leading the way.

Prior to the coming of the Euroamerican, one of the ways the Southern Paiute utilized the Colorado Plateau Ecoregion was to make contact, trade and intermarry with the other Indian people of the area. Through intermarriage, the Southern Paiute formed connections with other Indian people to protect the land and its resources. Many forms of cultural traditions were exchanged and passed on to the other tribes, namely basketry, songs and dances, and even sometimes beliefs. The Southern Paiute viewed the Colorado River as the dividing line with the other tribes; therefore, the northwesterly portion of the Grand Canyon was safeguarded by the Paiute and the other side of the river was designated for the other tribes.

The people of the Southern Paiute Nation continue to gather food and medicinal plants in and around the Colorado Plateau Ecoregion. Through tradition, each band possessed sacred knowledge about certain portions of the river and, in many instances, it was the responsibility of the membership to preserve the water sources, plant gathering and garden locations for use by the People. The Colorado River was divided in the middle with an imaginary line, with one side belonging to the other tribal groups and the other belonging to the Southern Paiute. In this way, it was possible for the Paiute people to preserve resources being utilized year after year by the bands. Even with this imaginary boundary line, the Southern Paiute continued to exchange culturally significant goods with the other tribes; in fact, in the historic period of time, the traditions and songs of the Yuman-speaking people and Paiute people co-mingled in the canyon walls and were brought north to the Southern Paiute Nation. Within a traditional ceremony of the Southern Paiute, the words of the songs are sometimes spoken interchangeably between languages.

It is said that songs are derived by spiritual guidance within the homeland that special places have the ability to speak to Paiute people. In Southern Paiute mythology, there are certain places in the land of the Paiute that give songs to the person who opens himself up to hearing them. One need only listen to them speaking. This goes back to the belief that all things in the land of the Paiute speak to man and if he humbles himself to these things, then he will learn.

4.1.1 Our Connection to This Land: Zion National Park and Pipe Spring National Monument

Present day Zion National Park and Pipe Spring National Monument are two locations that have a deep history in Southern Paiute life. The primary life element for Paiute people is water, and these two areas served as places that were constantly lived in because of the availability of water. The abundant water supported farming, brought in animals, promoted plant growth, and was utilized for day to day living.

Southern Paiute people believe that we have lived in this area since the time of creation here and that we were that same people as, or have lived alongside, what anthropologists today call the Virgin Anasazi. As or together with the Virgin Anasazi, the Paiute forged a living in this land, and, since creation in this homeland, Southern Paiute people have lived specifically in Zion and the area around Pipe Spring. Because of the abundance of animals, plants, and water in these places, Southern Paiute people thrived and lived along the Virgin River in Zion and the numerous springs on the present day Arizona Strip near and including Pipe Spring.

Today, Zion National Park and Pipe Spring National Monument are controlled by the National Park Service, and that agency has become the caretaker of the natural resources there. These natural resources are still significant to the Paiute people to perpetuate our culture. Within the park boundaries, the plants of this area are gathered and utilized still today because in some instances information has been passed down through the generations about locations in which to gather plants for medicine, food, and utilitarian construction.

4.1.2 Plant, Animal, and Water Resources

Zion is abundant in plant resources within canyons, along the river, and in the mountainous areas. As young children, Paiutes are taught to walk along nature, and when plants must be harvested, they are taught to show respect and talk to them as one does to another human.

Within Paiute philosophy, plants, animals, humans, mountains, rocks, and water are viewed as intertwined, and each has a significant purpose to the connectedness of life in this land. All natural objects are seen as having a life force very similar to humans in that these have feelings and power that can help if used in a correct and reverent way. The power of an animal or a plant may be used through a human, but it is power that belongs to that spirit that ultimately heals. It is in Paiute etiquette to speak to a plant before it is picked, to ensure the plant's spirit that it will be used in the correct way, explaining that there is a purpose involved and asking the spirit of the plant to aid in the remedy. It is believed by Paiute people that if a person harvests a plant without doing these things first, the plant's power will not help or heal.

It is very similar with animals and the respect that must be shown to them when taking their lives. It must be explained to an animal what it will be used for, and the person must show gratitude by making an offering to the animal's spirit. Sometimes also gratitude is shown to the spirits of the mountains for allowing the hunter to be successful since the spirits of the mountains are the caretakers of the animals. It is they that protect and hide the animals when it isn't proper to take them.

All things have a spirit, and water is seen as especially powerful. It is used for prayer and for purifying, besides its utilitarian value.

4.1.3 Using Natural Resources

All of the above natural resources must be used by Southern Paiute people, it is believed, or the spirit will know and take them away, making them no longer available. Southern Paiute people believe that this is what happens in areas today that are managed by Federal agencies and private land owners. From the Paiute perspective, eventually what happens is that the resources leave the area because the resource no longer serves a purpose and cannot flourish, just as humans behave when they are not well taken care of.

For this reason, one of the primary concerns of Paiute people is accessibility to the parks to care for, speak to, and use the resources of the area. These are seen as an obligation of the Paiute people to ensure that the resources remain fruitful in the traditional territory. It is improper to ask an elder to pay at the gate, and much of the time Southern Paiute elders won't enter a park that is within the traditional land base if they are asked to pay to enter. The basic impropriety is when the elders are journeying to or within their homeland to offer prayers, and park personnel ask for payment in order to grant them entrance.

Further, the relationship with the plants of the area is very important to Southern Paiute people. It is standard National Park Service (NPS) policy that the NPS seeks to preserve natural resources. Therefore, it is against Federal policy to gather plants in the way that Paiute people are accustomed. The People gather plants for the same reasons one prunes; therefore, the plants flourish and remain by multiplication. It isn't the intention of destroying a plant by unearthing all of a particular species; what is taken is only what is needed. For this fundamental reason, plants reoccur because of the care and prayer they receive from the Paiute people.

4.1.4 Access for Educational Purposes

Southern Paiute people see their children as the most valuable treasure, and for this reason it is important that the children don't lose the attachment that they have to the traditional land base. Many times the present day reservation land base is the only area that the Southern Paiute child envisions as the traditional land base. This is because of the restrictions the Federal land managers place on the utilization of the surrounding resources. It is a primary goal of the Kaibab Paiute and Paiute Indian Tribe of Utah tribal governments to ensure the instruction of culture through summer camps and field trips to supplement what Paiute children learn at home. The NPS can help the Southern Paiutes reach their goal by making it easier for Southern Paiutes and their children to visit and use the parks.

4.1.5 Park Interpretation

It is recommended to the NPS that Southern Paiute philosophy be integrated into the interpretation of the history of Pipe Spring National Monument and Zion National Park. The interpretation of Paiute culture should be disseminated to the public through Paiute interpreters. Questions that the public may have about the mountain range, canyons, and the use of natural resources could only be interpreted by the Southern Paiute person who has a basic knowledge of the history of the People.

Because of the close proximity of Pipe Spring National Monument to the Kaibab Paiute Tribal headquarters, many park visitors inquire about the Native American presence on the Arizona Strip. It is therefore further recommended that that park modify the presentation to the public to include Southern Paiute history, particularly Kaibab Paiute history.

Today, the groundwork is being set for the two parks discussed here to open the area of interpretation so that the Southern Paiute people may broaden the general public's viewpoint on Pipe Spring National Monument and Zion National Park and the ecosystems that surround them.

4.2 Perspectives on the Virgin River Ecoscape

The Virgin River ecoscape is generally bounded by the watershed of the Virgin River, but its divisions have been established through oral history interviews with Southern Paiute elders. The following analysis is divided by reaches of the Virgin River ecoscape which are: (1) Upper Basin, (2) Zion Canyon, (3) Zion Canyon to Ash Creek, (4) Ash Creek to Virgin River Gorge, (5) Virgin River Gorge to Confluence with Muddy River. No oral history is available for the East Fork Virgin River so that reach is not discussed in this chapter.

The headwaters of the Virgin River Ecoscape begin on the southern flanks of the Markagunt Plateau. At this point in the headwaters, erosion has created a gash in the bedded and colorful sandstones that form this plateau, creating what are commonly called the Pink Cliffs. A large basin has been created by the watershed of the North Fork Virgin River. This basin drains through various streams into a single slot canyon called the Narrows located at the northern end of Zion Canyon. The well traveled and recognized Zion Canyon continues to be shaped by the North Fork Virgin River before it leaves to joins the East Fork Virgin River just south of Zion Canyon. The eastern flank of the Markagunt Plateau is drained by a series of small streams that join to form the East Fork Virgin River. This river flows to the south through Long Valley before curving sharply to the west where it passes through and continues to shape Parunuweap Canyon. At the mouth of Parunuweap Canyon, the two branches join to form the main stream of the Virgin River. From this confluence the Virgin River flows west until it dissects the Hurricane Cliffs. At this point it joins Ash Creek and flows southwest until joining with the Santa Clara

River below the town of St. George, Utah. Below this confluence, the Virgin River slashes through the Virgin Mountains, dropping a thousand feet in little more than a dozen miles and creating the rugged Virgin River Gorge. At 2,000 feet of elevation, the Virgin River travels to the southwest along the western flank of the Virgin Mountains until it reaches the confluence of the Muddy River near the historic town of St. Thomas. This analysis ends at this point even though historically the Virgin-Muddy River traveled a few more miles before it reached the Colorado River. Today, however, this reach of river is under Lake Mead and thus beyond the bounds of this study. The information in this section is presented according to the five reaches of the Virgin River ecoscape discussed above. However, because of the high degree of integration among reaches, there is considerable overlap throughout the discussion.

4.2.1 General Ecosystem Integration

Virgin River Integration. There is a question as to what extent the Virgin River ecoscape was socially interrelated from its headwaters to where it joins with the Muddy River just above the Colorado River near the historic town of St. Thomas. Evidence that it was integrated comes from a woman elder from Koosharem (Richfield, Utah) area who was born in 1927. This woman, whose family lived far north of the Virgin River headwaters, said:

My dad used to go to Zion. I heard of Indian names for Zion where he would go all the time. My mother use to go down to St. Thomas and get salt.

Virgin River Integration. An elderly woman from the Koosharem Paiute group provided information about how, during her 63 years, she did not use the Virgin River ecosystem. This woman never visited Zion Canyon or the salt mine at St. Thomas, and has only been to Moapa once, years ago when she was a teenager. The woman and her family have not used the hot springs in the Hurricane Cliffs even though she has heard of it. She said:

My family go in another direction from here. There is a hot spring near Monroe, Utah where we go. There was a case where an older woman died in a hot spring – near by (Richfield, Utah area), so no one (local Koosharem Indian people) go there any more. I think it was the fumes that became poison. So now they go to another hot spring near to Monroe. We also get ompi there.

A hot spring is a sacred area because that is where they go for healing. There are Carrie Owl stories associated with hot springs – sometimes bad stories. Carrie Owl was weakened by a hot spring and almost drowned. My relatives went to Monroe hot springs and offered quarters and silver dollars to that hot spring.

Kanab Creek and Virgin River Integration. As to the social integration between the Virgin River and the Kanab Creek ecoscapes, the same woman elder from Koosharem said:

Indians used to live at Pipe Springs. They had big ceremonies there. My dad used to go there for Bear Dances.

A man from the Cedar Paiute group said:

I used to play in the springs at Pipe (Spring National Monument) when I was little. [I] lived at Pipe awhile with the Fred Bulletts family including his wife Julia Bulletts. My mom left me there when she had to go away.

Colorado River, Kanab Creek and Virgin River Integration. A man from the Indian Peaks Paiute group and his wife from the Kaibab Paiute group spoke about the relationship between the Virgin River, Kanab Creek, and the Colorado River when they said:

The water from these rivers (Virgin and Kanab) flow underground and come out in the Colorado River. We are related to these waters. There was a lot of Indian nations at that time – we lived near the water.

The Indian Peaks people and the older people from all the Paiute groups understand the Colorado River.

The Colorado River has a song – there you can hear it. Old men (from Indian Peaks and Cedar area) used to go down there. That spiritual was given to them in that area. Father-Creator chose them to receive this ability to cure people. A very spiritual man would lead them down there. He would be responsible for going there because you don't know what took place where these people lived. The Colorado River is really a spiritual area (emphasis added by moving arms). On both sides (of the Colorado River) they know the power of the place. I have seen the O'mpi at Hualapai in a home. It was real pure – real strong. The ompi gathered in the canyon (Grand Canyon) by [my wife] has only been used for very special occasions. We have given it to Sun Dancers. Lots of people ask for it because it has been gathered from a very powerful sacred place in the proper manner.

4.2.2 Upper Basin Reach

Virgin River Headwaters. A man from Kanosh talked about Virgin River headwaters when he said:

My dad talked a little about Zions – how the Indian were down there. We even had Hopi in the Escalante Desert because the Hopi were part of the Paiutes. Hopi land is Southern Paiute land. A lot of those old guys hunted between Zion and here (Kanosh). We had this land by treaty rights – it was not lost under termination. We only terminated the Federal supervision of the Indians.

Virgin River Headwaters. A woman from Koosharem talked about around Cedar Breaks at the headwaters of the Virgin River, when she said:

My dad would go up on Cedar Mountain. He would hunt and fish. He would hunt woodchuck and deer. They would live in tents. I went with them when I was older.

Virgin River Headwaters. A man from the Cedar group talked about being up near the top of the Virgin River when he said:

At the top of the Virgin River near Webster Flats (see photo 4.2). Indians used to live there. They even used to have a hole in the ground. They could live down in that hole. It was on private property, close to a road. The land owner let them live there, no one knew. I was told about them when I was a young boy. One Indian stuck his head down into it and saw so many things down there – grinding rocks. The old man died (the former owner), maybe his sons still own the area. The Indian used to hunt and fish in this area, but they cannot now because so much is private property now.

An Indian was tracking a deer in the mountains above Bryce. He tracked a deer to a hole. He followed it into the ground where he found it was light. He found a man at a camp setting by a fire who said, "What are you doing going around in the dark," but to the man it was light. He stayed there for a while. When he came back the others (Indians) would not believe him. This is an area where the deer go some years. The Mountain just opens up and closes, protecting the deer.

Virgin River Headwaters. A man from Indian Peaks Paiute group talked about the upper Virgin River basin when he said:

Above Zion Canyon, that was their hunting grounds. In spring time the deer would go up into this basin. In the fall the deer would go down to Zion and below. Zion was a great place for the early Indians.



Figure 4.2 Webster Flats and Zaion Canyon (background), Just Left of the Cedar Mountain

Virgin River Headwaters. An elderly woman from the Koosharem Paiutes group spoke of the upper Virgin River drainage:

Me and my relatives traveled to this area and it is all familiar to me.

Upper Santa Clara River. A man from the Cedar group talked about an area just on the watershed of the upper Santa Clara River when he said:

In those days there was lots of snow -- it would last a long time until late spring. We used to cut ice blocks off the ponds and could keep them in storage areas until summer. It was a lot wetter, too. I remember in the Caliente, Nevada area when there was grass on the hills -- it was real wet then.

Near Newcastle there were huge snakes. Indians used to travel through the area at night or early in the morning when the snakes were slow. Near Enterprise (a few miles to the south) Indians were hunting with guns. A big snake stood up and scared a hunter who dropped his gun and ran away. Isaac said there were big earthquakes in those times. One of these may have closed the caves in the ground and that was the end of the big snakes...The huge snakes used to fly, sometimes they would hit Milfred Mountain and make a big noise. There is also a big cactus on this mountain. These stories were told by Isaac Hunkup who was 115 when he died. He saw the first pioneers in the area and observed the Mountain Meadows massacre.

4.2.3 Zion Canyon Reach

Zion Canyon. One elder from the Cedar Paiute group talked about Zion Canyon when she said:

My people came from the Pinto area, near Enterprise. The old people had their summer homes near what is now New Harmony and Zions. Also, Indians came from other directions to live there in the summer. But some of the Indians were massacred there, this is why there are too few...Zions is a beautiful country. Their summer food was there. I was raised with old people, so that is how I know.

Zion Canyon. A woman from Koosharem talked about Zion Canyon when she said:

They had lots of Indians living in Zions -- up in the canyon where it goes up towards the tunnel. Indians from all over would meet during harvest -- have lots of Indian food there. It would be a big gathering. Deer hunting also. At that time they had a lot of plants, now when you look around you cannot find them. It is like they (the plants) disappeared with the old Indians.

They used to live all the way down to the mouth of the canyon. When the Mormons came they began to shoot the Indians there and drove them out of the water and up into the mountains. They (Mormons) took all the water like that -- like up in Richfield and Fish Lake. All the Indians know about these things.

Zion Canyon. A man from the Cedar Group said:

The old people said there was a spirit that lived in Zion. It was not a bad spirit, but it was the creator. I get that feeling when I go there. Zions -- when you go there you know you are not perfect. Some ones of them feel they do not deserve to be there.

Zion Canyon. A 76 year old woman from Kaibab said:

When we go into Zion we have a feeling. Like a lot of people are guiding us. We feel at home down there. We see the deer. Long time ago when we would gather together we would talk about Zion.

All those little places (along the Virgin River) -- that is where the people had their corn fields. The Mormon settlers, they made a home there. They would kill you. Indians wanted

to be neighborly, but the Indians were shot by local Mormons. Later on they organized to drive the Indians out of there (Zion). The Indians didn't have guns. They (Mormons) said the Indians were scared (like the old sign at the head of Zion Canyon road)--the reason we were scared is we were scared of the Mormons who lived at the mouth of the canyon. The Indians were afraid of the Mormons. The Mormons had another story -- saying the Indians were afraid of the Canyon.

*We didn't go there (Zion Canyon) to gather often, because the plants belong to the spirits. We did gather momomp (*Datura meteloides*) over there from Zion -- it is real strong -- special plant. We gathered it and used it as a medicine to stop foolish behavior during the change of life. There are lots of other plants in Zion Canyon -- like cattails (*Typha domingensis*), suuv (squawbush - *Rhus trilobata*), pa'up (Wolfberry - *Lycium andersonii*).*

There is an archway where the water comes out...they lived there and gathered the herbs and berries. Lots of medicine there. Must give a place or a plant something like a little rock if wish to pick it.

Zion Canyon. A 76 year old man from the Indian Peaks Paiute group spoke about the minerals in Zion Canyon that were used by the Indian people, when he said:

There are four Indian paints the cream color is a'vimp, the red color is o'mpi, the black, and the copper-blue color. The a'vimp is found in Zion Canyon -- it was used in Indian wars because it was more powerful. You can drink a'vimp to make you strong in war.

Weeping Rock. One elder spoke of Weeping Rock

That place is called Pah Teepits, which means water seep. It has plants there. They would camp anywhere in there. They had gardens in there. They would stay there in the winter because it was a warm place with lots of animals and plants.

Zion Canyon. An 80 year old woman from the Shivwits Paiute group spoke of Zion canyon from her own experiences and from those of her father when she said:

Old people had visited these places before it was a park. We always used to give a blessing in Springdale when we went up there. My dad said that the Mexicans came through the area. Indians there in Zion had a garden and would feed the Mexicans when they came through. Indian people lived mostly in Springdale where they could plant and hunt a little. They also lived around where that Weeping Rock is. They made their homes up there.

Zion Canyon. A woman from the Shivwits Paiute group noted the use of Zion Canyon by Paiute people when she said:

The older people used to live in Zion Canyon and near Springdale. Georgie George was born there. He was Kaibab (Paiute). There was lots of 'em over there all the time. Mostly the Kaibab people.

The people lived in Zion Canyon by eating berries and pine nuts and planting corn along the (Virgin) river. They have lots of deer over there. They used bow and arrow to hunt.

There was a prayer meeting way up at the end of canyon a long time ago -- it was organized by C.B. Weeping rock is also important prayer spot. Indians in them days -

- when they traveled along the way they would pray. That was what my grandmother would do before we camped. She would cut a piece of bread and spread out to the four directions. When you don't do that something happened.

There are lots of berries in Zion Canyon -- elderberries, chokecherries. There is also i'si which is used for juice. They used to have these all over Zions but now hard to get. This is a berry that Paiute people like to collect but the white people along the (Virgin) river cut these bushes down now and so it is rare. Also there is the yellow bean mesquite -- called opimp -- we used to collect this one and use the juice. It was chewed on by children. There are two kinds of mesquite in the Grand Canyon.

Zion Canyon. An elderly woman from Shivwits reservation commented on the cultural meaning of Zion Canyon and Weeping Rock -- although an elder expert in her own right, this elder also learned many of these things from her father -- when she said:

We always had to give a blessing before we went through there. My dad and I would give it there at Springdale. There was areas where they lived. They lived mostly in Springdale where they could plant and hunt a little. They lived around where that Yahadid tumpi (crying rock - Weeping Rock) is. Some of them would make their homes there. The Springdale area was the most valuable area on the Virgin River because it was where they lived mostly and made their farms.



Figure 4.3 Seeps, such as this one at Zion Canyon, are Habitats that are Dependent on Water and Contain a Unique Combination of Plants

Zion Canyon. An elderly woman from Kaibab commented on the importance of plants to her from the Zion Canyon when she said:

Food is everywhere at Zions. I used to go up there with my dad and Maggie. The old people used to yell, "Oh! stop there, look at all that food -- we should get some of that." But sometimes we could not get it because it belonged to the white man. So we went on by when it was getting ready to be picked, but we had to go on by. No one now goes out to pick food...we get food at the super market.

We used to gather ku'u -- we used to gather sacks and all those people up there did too. We got bags of it and we were glad to get it. But they (the park

rangers) used to tell us to get away from there ... "You are not allowed over there...Get away." They (the park rangers) would even do that with the i'isi, even though the white man didn't know what to do with it. They just ran us out. I'isi is our cool-aid.

Zion Canyon. An elderly Kaibab Paiute woman expressed her desire to gather the plants in Zion Canyon when she said:

What I would like to get down there is willows. I used to make baskets. I would like to teach my grand children something more about it. They would need willows. The colors are hard to find. My mother used to go to Moapa to get the yellow fiber. Devils claw is for the black. The red is from the root of that large cactus (Joshua tree). The green is from that yucca. The Moapa yellow plants were covered over when they bulldozed for the housing.

4.2.4 Zion Canyon to Ash Creek Reach

Tsing wantu. A man from Indian Peaks noted a named place downstream from the mouth of Zion Canyon at an unspecified location. It is on the inside of a big curve in the Virgin River and is called Tsing wantu, meaning gravel. This place is known, but its meaning was not revealed.

A'tank suv. According to a woman from Kaibab there is a place along the Virgin River where the rocks form three women. The name means "it looks like women standing that way." No further information was revealed about the meaning of this place.

Hot Springs. A woman from Koosharem talked about the hot springs when she said:

I used to go there when I lived in Sham (Shivwits Indian Reservation). The Indians went there. It had healing power. The Indians used to sit there and pray for being healed. This was 49 years ago. It was an old Indian place.

Then you had to pay 50 cents to use it. It was all cemented in. Before that when old Indians used it they didn't have to pay. They just went over there when they were sick.

Hot Springs. A man from the Cedar group talked about he hot springs when he said:

The hot springs was a place where the Indian went to pray, then they'd sit in it

and drink the water. This was a religious area -- for healing. I went to the spring when I was a kid. I took my kids down there when they were little. You get a great spirit down there. I had to stop going because it was expensive.

Hot Springs. A man from Indian Peaks talked about the hot springs when he said:

The hot springs is well known among the Paiute Nation. That is where they came from far for to use it. It is called Piki Kwanaar (means bad smell or odor) is the name for the hot spring. They talk down there -- talk to that water. When they go in there they pick up some small trinket or small beautiful rock along the way to give to the spring. You can drink a little bit of it (the mineral water) for a cure.

The name Tempe Pah is nonsense. The owner did not keep up his word -- "Any time your people want to come, it is ok." But next year he charged us \$2.00. That was the last time we went there. He didn't keep up his word and that is why he is having trouble down there.

The Indian people have respect for that water down there, but it is not being respected. It is sacred water -- is most important. Our people all come there.

Hot Springs. A woman from Kaibab talked about the hot springs when she said:

My grandmother used to come from Kaibab to that hot spring. She would be talking and talking like she was talking to someone. It was all time. When ready to go in she would throw her gift rocks into it -- a gift. This was when I was 8 or 9 years old (approximately 70 years ago or about 1925). We traveled in a wagon. The spring was not developed then and it was free. It was two caves, each having water coming out. It really scared my husband once -- he was not prepared for it. It was too strong.

4.2.5 Ash Creek to Virgin River Gorge Reach

Confluence with Santa Clara. A woman from Kaibab talked about a culturally important place along the Virgin River where it meets with the Santa Clara River, when she said:

In St. George, the college (Dixie College) was built on a very sacred gathering place. We would come from all over on Christmas day. It was a big social gathering. But the college was built right on that place. White people do not care.

An elderly couple from the Indian Peaks Paiutes group gave the name Parusa Uwinwa for the Virgin River gorge.

A woman from Koosharem talked about the Virgin River Gorge area, when she said:

Sham people (Shivwits Reservation) used to go over there to hunt Mountain Sheep. Ray Mose and Norbert Zungia ran away from school at Ft. Mohave and hid out in the Virgin River Gorge area. They found a cabin with food in it and lived in this. The school never found them.

4.2.6 Virgin River Gorge to Confluence with Muddy River (St. Thomas)

Tasa. Above Bunkerville, Nevada along the western side of the Virgin River is a mountain that is called Tasa. A woman from the Shivwits Paiute group mentioned this place when she said:

My grandfather's mother's father lived in Tasa which is a mountain above Bunkerville. Those people planted here along the Santa Clara River and then spent the winters over there in that Tasa area. They would have a spring over there for water. There is a man named Tom who still owns the water right there but the BLM is trying to take it away from him.

Those old people who lived at Tasa went down to get salt at that cave (near St. Thomas).

Salt Cave. A woman from the Shivwits Paiute group commented on use of the St. Thomas salt cave when she said:

My dad used to get salt down there with Fred Fisher. The salt was in a cave and it look like ice. We used it just for food. Used to pray before they took it from the cave. It was on the Virgin River. Last time we went to get the salt was when I was a little girl. There was a memorial service for Frank Fisher in 1939. While we were there we went to get the salt. Then the water rose from the dam and covered the cave.

My family lived all the way in Cedar (City) then, but visited at Moapa because Frank Fisher was my mother's uncle. My mother's father and mother's brothers were from Needles, but they came to the Shivwits reservation and later went all the way to Cedar (City). My mother was born just below what is now the Gunlock dam (on the Santa Clara River). The place is now just weeds.

Salt Cave. A 78 year old woman from Kaibab said that she saw the salt mine at St. Thomas when she was ten years old. She would go to Moapa and stay with Harrett Homes and Jim. She would go with them. The salt is called owavi and it would come out in big chunks. We would grind it up. At that time St. Thomas was bigger than Overton, Nevada -- they had a big store there (St. Thomas) then. The salt cave was deep -- the older ones (people) would go in there -- they would talk along thanking the Creator and explaining how they would use the salt.

Salt Cave. An elderly man from Shivwits commented on the importance of the salt mine near St. Thomas when he said:

Old folks got rock salt down to St. Thomas. Some of my family went down there through Glendale. I was down to the mine when I was small. It was an important place to the Indians then.

There were Indian families living in the St. Thomas area then. They were from Moapa.

Salt Cave. An elderly woman from Kaibab commented on the use of salt and the ownership of the land around this portion of the Virgin River when she said:

My grandfather, Joe Pagen Pockets -- used to go to get the real crystal-like salt down there (St. Thomas salt cave). They used to dry lots of meat -- deer and pork -- all the live stock. My grandfather's land was down through Mt. Trumbull towards Moapa. They had a cave where they stored their meat. Nothing would spoil. When we went there we would camp through the Virgin Mountains. Would camp all through there. We would come from Kaibab. Parashant is my country through my grandfather on my father's side. Joe Pagen Pockets was my grandfather on my mother's side. That land (near St. Thomas) is my inheritance -- the land was not made into a reservation then. So the area where they gathered was where they said they owned this land (emphasis added by lady). So this is my inheritance.

4.3 Perspectives on Kanab Creek Ecoscape

Kanab Creek, called Kanav 'uip (literally willow canyon) is a culturally special ecoscape within the Grand Canyon regional landscape. Physically the Kanab Creek ecoscape is defined by steep-sided canyons and streams. Culturally the Kanab Creek ecoscape is defined by its contribution to the aboriginal adaptation of Southern Paiute people and to their ethnic groups' survival during the

historic period. Oral history accounts indicate that this ecoscape should be divided into the following reaches (1) upper basin (Alton to below Kanab at the confluence with Johnson Wash, (2) Kanab Creek - Johnson Wash confluence to the Colorado River, and (3) Skumtumpah Creek to Johnson Wash - Kanab Creek confluence. There was no oral history on the first and third reaches, so these are not discussed in this essay. However, ethnographic interviews were conducted there and are presented in Chapter Four.

The Kanab Creek ecoscape (See Map E) is one of the most extensive canyon and stream ecosystems to join the Grand Canyon regional landscape. The greater Kanab Creek ecosystem, as defined by hydrology, is more than 60 miles north to south and 40 miles east to west. Kanab Creek begins in the mountains of southern Utah and flows to the south. The Kanab Creek ecoscape, as further defined by steep sided canyons, is significantly smaller, being about 30 miles from the Colorado River to where canyon walls begin to appear at a location now on the Kaibab Paiute Indian reservation and about 30 miles from the upper portion of Snake Canyon in the east to the upper portion of Hack Canyon in the west.

Aboriginally the Kanab Creek ecoscape fell within the territory or district of a local group of Southern Paiutes called the Kaibab Paiutes. Riverine and spring oasis farming were central to Kaibab Paiute aboriginal adaptation in this district, and the permanent waters of Kanab Creek were a key oasis. Kaibab Paiute people farmed the length of Kanab Creek oasis from Long Valley in the north to the delta on the Colorado River. Plants were also gathered in this special ecosystem; in fact, the term Kanab comes from the Paiute term kanav (willow). Similarly Kanav 'uipi (willow canyon) refers to the large expanse of willows which grew near Paiute residences along this creek. Animals of all kinds lived and were hunted in this topographically unique ecosystem, making it even more valuable to Kaibab Paiutes. Finally, the Kanab Creek ecoscape defined one of the major north-south access trails from the mountains of southern Utah to the water boundary defined by the Colorado River. Along this trail was a two-way flow of goods and materials drawn from neighboring Indian tribes to the south, as well as the transhumant movement of plants and animals found at various ecology zones.

The Kanab Creek ecoscape is a persistent region of refuge for Southern Paiutes, especially because it was used as a protected area between 1870 and 1900. This was a period marked by the 1870 treaty between the Mormons and the Western Navajos. After this treaty, Mormon reliance on Southern Paiute labor declined, and the Southern Paiutes were systematically excluded from labor positions in Mormon settlements. After 1870, Southern Paiute people were increasingly driven into lower Kanab Creek where they farmed in relative isolation until the turn of the century. It was here, while in hiding from Europeans, that many Southern Paiutes gathered for the Ghost Dance ceremony in 1890, making white pictographs on the protective walls of Kanab Creek to commemorate the event.

Kanab Creek is an ecoscape for Southern Paiutes because it represents a unique combination of the topography, plants, and animals which served a key role in their aboriginal adaptive strategies. Because of events during the historic period, Kanab Creek ecoscape also acquired special cultural importance to Southern Paiute people as a region of refuge.

4.3.1 Bedrock Canyon Reach (Confluence Kanab Creek and Johnson Wash to Colorado River)

Ghost Dance Site. There is a place in the upper portion of this reach where a Ghost Dance ceremony occurred. The Ghost Dance movement sought to restore dead animals, destroyed botanical landscapes, and dead ancestors to their aboriginal condition, so as to shift power from Euroamericans (who would not survive the event) back to Indian peoples. According to Indian visions, the millennium would occur more quickly if Indian people performed the Ghost Dance ceremony.

The ceremony in Kanab Creek probably took place in 1890 when the second Ghost Dance movement passed through Southern Paiute society. At this site is an extensive set of white paint figures which are interpreted as being related to the ceremony. A Kaibab Paiute woman talked about the importance of this site to contemporary people when she said:

History is written here -- the headless people are about the killing of Paiute people.

Another Kaibab Paiute woman noted that:

This is a good record of events, a part of history that took place including ceremonies. The whole panel is connected.

Farming Site. There is a place along Kanab Creek which is interpreted as a place where Paiute people used to live and farm. This place is composed of areas for farms and homes, and rockshelters that contain several kinds of rock paintings associated with various types of paintings. One Kaibab Paiute elder noted the meaning of this place when she said:

They lived here -- had good and bad experiences. There is a farming area in front of the rock shelters. The rocks have been cleared away from the bottom. The stenciled flowers could be squash plants in bloom. There is a counting system that is related to the farming system in the way of weeks when to plant and how long before harvest. The person who stencil painted the flowers was taken with the beauty of the flowers. There were Paiute villages below here with whole families in them. The deer were here and important to this

community. Any ceremony conducted at this location was giving thanks of offering from crops.

Shaman's Cave Site. There is a cave in Kanab Creek that has many multi-colored rock paintings. The place and paintings have been interpreted as being associated with Southern Paiute shamans. The Kaibab Paiute people who visited have asked not to be quoted about this site, so documents from the early 1900 are used to further understand shamans in Kanab Creek.

The place where these rock paintings are located, the kinds of rock paintings that are here, and especially the presence of one special rock painting (see Figure 6.28) called a possible knotted string, suggest that this place is part of a Southern Paiute songscape (see Chapter Four). The

Southern Paiute people have two major categories of songscapes. One is connected with the trail to the afterlife. The other is connected to a traditional Southern Paiute system of trails which specialists followed when carrying messages, goods, and services. A knotted string, called *tapitcapi* (literally "the knotted") was sent out via specialists or runners to other Paiute people to inform them of events (Laird 1976:26-27). Perhaps the best account of these trails is provided by Carobeth Laird who was married to one of the last ritual runners from the Chemehuevi Southern Paiutes (1976:47-49).

The trails were specifically created by the Southern Paiute people for travel by Chemehuevi Paiute runners. Because they passed from water source to water source across the rugged terrain of the Mohave Desert regional landscape, the trails were quite complex. They were often traveled at night as well. In order to remember the trail routes, the runners would learn a song that told the way. The trail songs described the path to be followed as well as encouraged the runner by recounting stories of mythic beings who traveled or established the same trail. The trail songs were so critical that ownership was limited to specific individuals and families, who maintained the songs and passed them from generation to generation as a heritage (Laird 1976:19-20, 268-276).

One final bit of information about the religious importance of the Kanab Creek ecoscape comes from the 1932 to 1934 study of the Southern Paiutes by Isabel Kelly (1939:151-152). In her analysis of Paiute shamanism, she recorded the names of recent, but deceased shamans. Kelly's informants knew the names of twenty shamans from the Kaibab Paiute district, only two of these being women. One of these women shaman was named *Tcantuya* (slashed forehead). She lived in *Kana diuip* (willow canyon; Kanab Creek) and was the only shaman known by Kelly's informants to have lived in the Kanab Creek area. *Tcantuya* must have been powerful to singlehandedly attend to all spiritual needs of the people living in her area. It can be assumed that she practiced with her Kanab Creek people in the late 1880s before all the Indian people in the district were moved to the new Kaibab Paiute reservation in 1907.

4.4 Conclusion

Southern Paiute people see these two riverine ecosystems simultaneously as complete entities consisting of culturally meaningful components, and as parts of bigger ecoregions. These perspectives can serve as an introduction to the following more detailed chapters on these ecosystems and can be briefly summarized as follows:

Virgin River Ecoscape: Main Stream

The Virgin River Ecoscape drains the southern slope of the Markagunt Plateau along a geologic landscape known as the Pink Cliffs. Water from this area flows along the North Fork Virgin River, considered in this report to be the main stream. The East Fork Virgin River drains the eastern end of the Markagunt Plateau and a portion of the Paunsaugunt Plateau where it shares a watershed divide with the Kanab Creek Ecoscape.

Upper Basin This area was used for hunting, gathering, and living. It contains a place where whole deer herds can hide within a mountain. Within this mountains another world which is like the surface world, but which exists below the ground. The two worlds have opposite dimensions, when one is day the other is night. Indian people can pass between the upper and lower worlds.

Zion Canyon This area was used for farming, hunting, gathering, and year round living. The area contains places of special cultural significance; some because they are powerful places, others are significant because historic events occurred here.

Springdale to Hot Springs This area contains aboriginal farms and communities. The hot spring is very special and much is known about this place from direct experience.

Hurricane to Virgin River Gorge This area contains the "home of the wind" which has been transliterated as Hurricane. Farming activity and communities were located in Quail Creek as well as along the Virgin River.

Virgin River Gorge This area was a place of hunting and ceremony, but became a region of refuge during the historic period.

Virgin River Gorge to

Muddy River This area contained farms, communities, and hunting and gathering areas. A traditional trail passed along the west side of the Virgin River. Another traditional trail came from Pipe Spring, passed south of the Virgin Peak Ridge and on to the confluence of the Virgin and Muddy Rivers. The major Southern Paiute salt cave was located downstream from the confluence of the Muddy River across from the historic town of St. Thomas, Nevada.



Figure 4.4 Southern Paiute Elder Points to a Grinding Stone

Kanab Creek Ecoscape: Main Stream

The Kanab Creek Ecoscape shares much of its western watershed boundary with the Virgin River Ecoscape. The Kanab Creek Ecoscape begins on the southern flank of the Paunsaugunt Plateau. From here water flows south along two major drainages: Kanab Creek and Johnson Wash. Additional water flows from the east into Kanab Creek from the western flank of the Kaibab Plateau, especially through Snake Gulch and Jumpup Canyon. From the west, water flows into Kanab Creek from Antelope Valley, especially through Bulrush Wash, and from the Kanab Plateau, especially through Hack and Grama Canyons. The Kanab Creek Ecoscape ends when Kanab Creek flows in to the Colorado River.

Alton to

below Kanab This is an area of hunting and gathering ending at the agricultural fields near Kanab. The upper portion of Kanab Creek contains lakes used for ceremonial purposes. Pipe Spring was one of a number of similar places that combined shelter (Hart Canyon, Moccasin Canyon), natural resources, and water for agriculture. Many places of historic significance occur within this portion of the ecoscape. Pipe Spring acquired special significance because surrounding this spring is the only portion of aboriginal land in the Kanab Creek ecoscape that was reserved for Paiute people.

Below Kanab to

Colorado River This area contained farming, hunting, gathering, and ceremonial places. A Ghost Dance ceremonial area is found near a major source of white paint. A ceremonial cave is found deeper in the canyon. The bedrock canyon of Kanab Creek became a region of refuge for Southern Paiutes after 1870. An aboriginal trail existed along the length of the bedrock canyon. The confluence of Kanab Creek and the Colorado River was an area of cultural significance.

The streams and washes which flow down side canyons into main stream canyons and valleys all contribute to the overall cultural meaning of the Virgin River and Kanab Creek ecosystems. These tributaries of the main stream are the focus of Chapters Five and Six.

CHAPTER FIVE

ZION NATIONAL PARK-VIRGIN RIVER ECOSCAPE

SITE ANALYSIS

According to Southern Paiute oral tradition, they have lived in and around what is now called Zion National Park since they were created. According to some archaeologists, linguists, ethnographers and the Paiute people themselves, Paiutes were either living with or actually were a people called the Virgin Anasazi who lived in Zion long before 1250 AD, a date some archaeologists suggest for their arrival in the area. Today, the traditional Paiute lands contained within the park are perceived as being very culturally significant. Zion N.P. lands, however, are a part of other Paiute places that contribute to the overall cultural significance of Zion N.P. This analysis takes an ecosystem approach in order to discuss how Southern Paiute cultural resources fit within the Virgin River ecosystem. The purpose of this chapter is to describe the results of the ethnohistoric and ethnographic overview of Zion N.P. and the Virgin River ecoscape within which the park is located.

5.1 Study Methodology

This chapter is based on both documents and interviews with Southern Paiute people while they visited places in the Virgin River ecoscape. Previous chapters have either focused on documents or interviews, however, this chapter mixes these to present a fine grained analysis of the Virgin River ecoscape.

5.1.1 Documents Search

Documents were reviewed to obtain information about the historical and current relationships between Zion and the Southern Paiute people. Documents were collected from: (1) the Zion National Park natural and cultural resource library and the park archives, (2) the University of Arizona library, and (3) the Southern Paiute files of the researchers. Primary sources were consulted as available. However, the scope of this project prevented exhaustive searches in other locations where certainly other important original information about Southern Paiute cultural resources is to be found. In general, the document information presented in this chapter does not duplicate documents used elsewhere in this report. In a few cases, however, portions of key quotes are used again to reinforce a point critical for understanding the cultural significance of Zion N.P. and the resources of the Virgin River ecoscape.

5.1.2 Onsite Visits

Fieldwork involved onsite visit to places in Zion National Park and elsewhere in the Virgin River ecoscape. These onsite visits were designed to elicit contemporary Southern Paiute concerns for places, and the cultural resources those places contain. The fieldwork also was designed to obtain recommendations from tribal elders about how the NPS could best protect

these places and resources in consultation with Zion National Park personnel.

The Zion onsite visits were conducted in two sessions. The first session occurred between June 4-6, 1995. Four Southern Paiute elders participated in this session. One elder represented the Cedar Band of the Paiute Indian Tribe of Utah (PITU); a second elder represented the Indian Peak Band of PITU; the third elder represented the Koosharem Band of PITU; and the fourth elder represented the Kaibab Paiute Tribe. During the second Zion session, which occurred between June 7-9, 1995, three elders represented the Kaibab Paiute Tribe and one elder represented the Shivwits Band of PITU.

Ideally, the process of cultural resource assessment studies entails separate studies of specific, bounded cultural domains, or categories of knowledge regarding certain resource domains such as plants, animals, water, culture history, and the like. These knowledge domains may either be widely shared among culture bearers or widely dispersed among occupational specialists, elders, women, men, and religious leaders. A comparative analysis of ethnobotanical studies of Southern Paiute plant significance demonstrates that the number of interviews and the age and gender of participants, affect the researcher's ability to obtain systematic plant use data. These factors are determined by the scale of the research project and the availability of participants.



Figure 5.1 The Project Botanist

The sites included in the Zion National Park onsite visits varied considerably in size and in the focal point that defined the site. Definition of the extent of the site was developed by consultation between the ethnographers and the project botanist. At Crater Hill and Parunuweap

Canyon, areas with dispersed archaeological sites, the entire area through which the group hiked was considered to be the study site. At narrowly focused sites, such as Weeping Rock, Emerald Pools, and the Cave Valley rock art sites, the study site was confined to the area immediately surrounding the focal point.

Once the study site was defined, the project botanist (Art Phillips) covered the study site as completely as possible. The project botanist prepared a list of all plant species observed, noting particularly all culturally significant species encountered, as identified by SPC consultants on previous projects in the region. New culturally significant species identified during this project were noted, and common and scientific names were provided to ethnographers. Welsh et al. (1993) is used as a standard reference for nomenclature for the lists; other references used to identify plants in the field are Kearney and Peebles (1960), Nelson (1976), and Welsh (1990). The botanist also prepared an overview environmental description of the study sites, including the exact location, elevation, general could be ascertained, and a brief description of the vegetation association and most important species. Finally, the botanist collected herbarium specimens of culturally significant plants. Specimens of each species were collected once or twice, either the first time encountered or as collectable specimens were found. Time constraints prevented collecting each plant known to be significant to Southern Paiutes at every site, or all species encountered, including those having no known significance. Plants were pressed in a standard plant press at the first opportunity, at least every evening. Three or four sheets of each species were collected, for deposit at the SPC Cultural Resources office, Zion National Park, and the Northern Arizona University Herbarium. Collecting permits were provided by the National Park Service for collecting at Zion National Park.

One of the places (Birch Creek) was visited at the request of Jack Burns, the Cultural Resource Specialist at Zion. The place is under consideration for development, and therefore is part of an Environmental Assessment (EA) sponsored by the Park. The site was visited to document potential ethnographic concerns. However, as it was very late in the EA process, the Southern Paiute interviews conducted at this place should be considered only as a part of a scoping visit. Further systematic work is required to adequately document Southern Paiute concerns for places potentially affected by development, and which are therefore the subject of this and other EA and EISs.

A total of ten places were visited in the Virgin River ecoscape that contains Zion National Park. Two of these places are located outside of Zion National Park boundaries. The upper East Fork Virgin River was visited on June 2, 1995. Four Kaibab Paiute elders participated in this visit. Pah Tempe Hot Springs, located where the Virgin River breaks through the Hurricane Cliffs, was visited on June 9, 1995, with three Kaibab elders and one Shivwits elder. A total of 32 interviews was conducted with Southern Paiute elders during both Zion field sessions.

5.2 Ethnographic Overview of Zion

Zion National Park lies within the Virgin River ecoscape, which is defined by Southern Paiutes today as one of their most important cultural landscapes (see Chapter Four). The park includes two major canyons formed by the north and east forks of the Virgin River, mountains, valleys, and mesas. Southern Paiutes utilized the region in and around Zion for farming, hunting,

visiting medicinal springs, and gathering plant and mineral resources. By 1861, when Mormon settlers moved into the canyons along the Virgin River, only a few Paiutes were still farming there. Written documentation of Southern Paiute occupation and use comes primarily from Mormon accounts (e.g. DeMille 1982), but also from the reports and diaries of explorers (e.g. Gregory 1948).

5.2.1 General Overview

A brief chronology of Southern Paiute Ethnohistory in southwestern Utah was provided in Chapter One. The effects of the events described there were somewhat altered by the topography of the Virgin River ecoscape and the establishment of Zion National Park. Table 5.1 identifies five significant periods in Southern Paiute history at Zion. This report is a major effort within the most recent period when park service officials are seeking to establish government-to-government relationships with Native Americans, including Southern Paiutes. Archaeologists first recorded Native American prehistoric sites in the 1930s, but the majority of archaeology work done with Zion has been conducted in response to proposed development projects and boundary changes (NPS 1994). Broader cultural resource issues have only recently begun to receive significant attention. Zion's most recent Resource Management Plan (NPS 1994) provides considerably greater emphasis on cultural resources than did earlier versions (e.g. NPS 1987).



Figure 5.2 Zion National Park

Table 5.1 Significant Periods of Southern Paiute Ethnohistory at Zion National Park

Time Period	European and Euro-American Activities	Southern Paiute Response
Creation		
Pre-1520	None recorded.	Aboriginal period.
Encroachment		
1520-1865	Europeans and their diseases enter the region.	Southern Paiutes occupy core areas of primary residence within an extensive territory of seasonal use areas. They farm along the Virgin River and its tributaries and harvest wild cultigens and hunt game in the surrounding uplands.
1865-1869	Euro-American trappers and traders travel frequently along the Old Spanish Trail, passing along the Virgin River below Zion.	Southern Paiutes move away from the Virgin River where it is near the Old Spanish Trail. Disease causes major disruption of traditional organizational patterns. Leadership is transferred to Tonaquint. Paiutes continue to farm along both the eastern and northern forks of the Virgin River in Zion and Parunuweap Canyons and at Rockville.
Lost Time		
1870-1902	Mormons occupy Zion and Parunuweap Canyons and establish numerous small towns. When small towns are abandoned, the population becomes concentrated at places like Rockville, just south of Zion, but Mormons continue to farm within the canyons.	Individual Southern Paiutes relinquish what remains of their control over their farms and the rivers in Zion. Some continue to live in the area and work as hunters, farmers, and guides for the Mormons. Others leave and join labor gangs working in nearby mines, etc.
Reservation		
1903-1989	Any Mormons still living or farming within the canyons are removed as Zion National Park is established and expanded. The park is established to protect the erosional features of the area, but the Mormons establish a strong presence there. Religious ceremonies, such as an Easter pageant, are held within the park.	Southern Paiutes generally remain excluded from the park due to governmental restrictions and Mormon use. Some reenter the park to work on building the road and live at the CCC camps during the 1930s. Many avoid the park because they have to pay a fee to drive through. Some Southern Paiute elders participate in handicraft demonstrations, etc. at Zion.

1989-1996	A cultural resources program is established at Zion. Park service officials seek to establish formal government- to-government relationships with Native Americans with cultural affiliation to the park and/or resources there.	The Southern Paiute Consortium enters into a co-management agreement with the National Park Service for an ethnographic overview and assessment of Zion and Pipe Spring.
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5.2.2 The Encroachment Period (1520 - 1865)

By 1776, Southern Paiutes were found living and farming along the Paruru, later named the Virgin River by Father Escalante, below Zion. These Southern Paiutes were observed because the Old Spanish Trail followed the Virgin River from its intersection with Ash Creek to below its intersection with the Muddy River. The Spanish Trail was so-named because it was the route followed by Father Escalante during his 1776 expedition (Bolton 1950) and was later used by miners, trappers, and explorers throughout the nineteenth century (see Wheeler 1877). Most early travelers kept few if any records. Governmental restrictions on trading with American Indians made it unlikely that private traders would leave any record of their activities. Historians have nevertheless inferred, from the occasional records that have been uncovered, that trade between the Spanish and the Utes was apparently continuous during the entire period from 1765-1776 (Hill 1930).

Fairly unique in his time, explorer Jedediah Smith recorded his interactions with the Paiute Indians who were farming along the Santa Clara River and his discovery of Indian artifacts in a salt cave on the Virgin River in 1827 (Shutler 1961:1). In the fall of 1830, trappers George C. Yount and William Wolfskill travelled along the Virgin River to its confluence with the Colorado, apparently following Smith's trail (Camp 1923; Woodbury 1931). The results of a trading expedition through the area around 1841 have also been recorded (Adams 1930), as have the findings of members of the Fremont expedition who traversed the region in 1844 (Fremont 1845). During his 1949-50 exploration of the Virgin River, explorer Parley P. Pratt noted that the Indians were raising good crops by irrigation (Larson 1950:36).

Unfortunately, the heavy use of the Spanish Trail yielded relatively little information about Southern Paiute lifestyles along the Virgin River near Zion. The lack of traveler accounts may have occurred because in the late 1700s the Spanish Trail from Santa Fe to California was often used for illegal commerce. Another reason was that many of the traders over the Spanish Trail were not literate or did not have a sense of making history as did later travelers. A third, and perhaps principal reason for the absence of information, is that early travelers brought diseases and hostile interactions to Southern Paiutes, who were forced to move away from major corridors of Euroamerican travel.

Significant Euroamerican encroachment into this region began much earlier than in other areas occupied by Southern Paiutes. By the arrival of Escalante in 1776, Paiutes who were met near Coal Creek, a few miles above Cedar City, Utah, would "only trade for red clothes," an indication that they had been in some contact with Europeans (Bolton 1950:201). Whereas elsewhere written documentation is available from sources such as Mormon diaries and

newspaper accounts, by the time the Mormons arrived near Zion, the patterns of Southern Paiute life had already been severely altered. In addition, by the time anthropologists began interviewing Southern Paiutes in the 1930s, several generations had passed since Paiutes had lived and farmed in and below Zion. Consequently, much of the discussion of the Southern Paiutes living along the Virgin River during the Creation period is speculative.

Southern Paiute Groups in the Virgin River Ecoscape. The first recorded mention of a group of Southern Paiutes along the Virgin River is Escalante's discussion of the "Parrusis" Indians he found living at the confluence of the Virgin River and Ash Creek raising corn and other garden crops in irrigated fields. These Indians, the Parussits, were a subgroup of Paiutes (Palmer 1928a). Their name was derived from Parussi, the Paiute name for the Virgin River, meaning whirling water (see Palmer 1928a, Palmer 1928b, and Martineau 1992 for discussions). Thus, Parurutsits refers to Virgin River Paiutes. Martineau (1992:162) states that both the Parurutsits and the Tonaquint people, members of the Shivwits/Santa Clara district, were referred to as "Farm People." Presnall (1936:5,11) distinguishes the "Pa-roos-itsn," the Paiutes living along the lower part of the Virgin River, from the "I-oo-goo-intsn," and he also refers to the Paiutes who lived at the confluence of the Virgin River and Ash Creek as the "To-ker-ats."

Nearly all the historical data of the early settlement of the Virgin River indicate that the Paiutes recognized political leadership. Mormon accounts from the 1850s describe a multi-level system of political organization among the Southern Paiute people at the time the Mormons began to colonize the Santa Clara and that the highest-level political leader was Chief Tutsigavits (e.g., Bleak 1928:129, Hamblin 1951:15, Brooks 1972:104). One Mormon account described the subgroups as follows:

(T)he Pah-utes, in the south, were broken up into fragmentary bands, each with its own chief, but recognizing no general leadership. The Moapas, occupying the Muddy valley and lower Rio Virgin, were led by To-sho; the Tonaquint and Parusche Indians, on the Santa Clara and Upper Virgin, by Tut-se-gavit; the Kai-bab (Mountain That Lies Down) Indians, by the father of Kanab Frank, whose name the writer has forgotten, while a branch of this same tribe, which extended to the San Juan River... (Ivins 1916:2).

Woodbury (1950:117) also argues that "the Virgin River Indians (the Parrusits) were dominated by a chief of the band living on the Santa Clara sometimes referred to as the Tonaquintits." Although the individual accounts were frequently inaccurate and none can be accepted as the work of trained ethnographers, the consistent references to the various local groups deserve attention.

Based on the review of all references to the Paiutes who once lived near and within Zion, there appear to have been two groups living along the Virgin River, the Parurutsits and members of the Ua'ayukunants district. The Parurutsits lived in the region along the Virgin from Ash Creek to the Santa Clara River and were members of the Shivwits/Santa Clara district. According to Palmer (1928b:44),

(T)he Parrus tribe was well known to all the older Indians I have interviewed, but they are now all gathered to their fathers on the happy hunting grounds. There were also small bands living at what is now Berry Springs and Washington fields, on the Virgin River that were called Parrusis or more correctly Parrus-its.

The Ua'ayukunants lived upstream from the headwaters of the Virgin River to just below Zion Canyon. Because they were part of the same regional subtribe, Yanawant, as the Tonaquints and Parurutsits who lived along the Santa Clara River, their response to European and Euroamerican encroachment was reorganization rather than disappearance, as Palmer and others have suggested.

The Virgin River and its tributaries experience alternating cycles of deposition and erosion. Nevertheless, the Shivwits/Santa Clara and the Ua'ayukunants people had developed irrigated agriculture and were identified both within the Southern Paiute nation and beyond as farmers. For instance, in the summer of 1857, a Mormon settler who visited the Santa Clara River observed "13 Indian dams across the stream above the Santa Clara Fort" (Brooks 1950:32). Numerous references have been made to these as distinct groups of people living along the Virgin and Santa Clara Rivers who appear to have had equal status with other districts such as the Kaibab people (Palmer 1928, 1946; Presnall 1936). For instance, a Paiute legend describes how the Ua'ayukunants were preparing for the annual meeting of the council of chiefs. According to Palmer's (1946:29-30) rendering of the tale, "Three more sleeps and I-oo-goone will be filled with our friends. The Kaibab-its are coming. The Uint-kar-its are coming. The Shivwits and Tono-quints and many bands of Pah-roos-its are on their way. "

These groups had their own leaders. Among the most well-known of the Parurutsits leaders was Chief Toquer who, as early as 1852, interacted with the Mormon settlers (Wakeling and Jackson 1950, Brooks 1950b). Similarly, William W. Seegmiller, an early settler, concluded that Mukuntuweap, a name Powell applied to Zion Canyon, was actually the name of Mukun, a chief of the Virgin River Indians (Woodbury 1950:114). Tony Tillahash, a Southern Paiute who was raised at Shivwits, differentiated between Mukuntuweap, the name that Paiutes applied to the lower part of Parunuweap Canyon, and Muhuntuweap, the name applied to lower Zion Canyon. Tillahash asserted that "Muhuntuweap simply means the land of Muhun, Tony's maternal grandfather" (Presnall1936:4). According to Tillahash, Paiutes used the name "I-oo-goone", which means a quiver made of sand rock, to "designate all the circle of white sandstone cliffs which from Grafton are seen to encompass the Zion region" (Presnall 1936:4). The Paiute group inhabiting this entire region was called the Ua'ayukunants.

Impacts of Slave Raiding. By the early 1800s, Southern Paiutes were being impacted by slave raids conducted by the Ute Indians. By that time, the Spanish and the Utes had forged a solid relationship (Snow 1929). The Old Spanish Trail was a commonly used route for the slave traders:

After the Spanish Trail accomplished its purpose of tying the long arms of the empire together north of the Grand Canyon, it was necessary that the road be kept open. Roads are kept open by the business and traffic that flows over them. . . The chief products of the trail were Indian slaves and peltries. This traffic had its clearance at Santa Fe, the capital of the Province of New Mexico, where licenses for trapping and hunting were issued which included the right to capture or trade for Pahute Indian slaves (Palmer in Knell 1950:19).

Accounts of the extent and impacts of the slave market on the Paiutes are common. A Native American woman who accompanied a trading expedition traveling south from the Pacific Northwest recorded the following after entering Paiute territory six days south of the Great Salt Lake:

Their great enemies were the Spaniards of Taos and California, who always when they could, robbed them of their women and children, leaving nothing but the men and the aged women, thus making their desolation more disconsolate. Their captive women were led to breed with their captors and to work them and sell them like cattle. For these reasons they always fled from us until they knew what we were, although some of us were of similar brand (Adams 1930:9).

After his 1853 expedition to the Pacific, G. H. Heap recorded the following:

Yearly expeditions are fitted out in New Mexico to trade with the Pah-Utahs for their children and recourse is often had to foul means to force their parents to part with them. So common is it to make a raid for this purpose, that it is considered as no more objectionable than to go on a buffalo or a mustang hunt (Heap 1854).

In 1854, Jacob Hamblin was called upon to help the Southern Paiutes resist Ute raids:

It had been the habit of this Ute chief to raid the Paiute band nearly every winter, and when word came that he was on his way, the Indian were filled with fear. The chief, Tutsegavit, came to the Mormon missionaries and asked if they would help fight Sanpitch (Brooks 1944:14).

Problems with slave raids continued to be reported by both Mormon missionaries and Indian agents throughout the 1850s and into the 1860s (e.g. Ives 1861).

Impacts of Disease. In many cases, Europeans and Euroamericans entered Southern Paiute territory and brought significant changes, many which they did not intend and most of which they were largely unaware. For example, diseases were brought to the region by both Native American and foreign traders and explorers, and these caused massive disruption and dislocation long after their carriers had moved on or died. Even efforts by the Mormons to rescue children destined for the slave markets had often devastating results:

A surprising number of Indian children in white homes died in childhood or early adolescence; they seem to have had little resistance to white man's diseases, especially measles (Brooks 1944:33).

Communicable diseases were undoubtedly spread to Southern Paiutes in the sixteenth, seventeenth, and eighteenth centuries. The first recorded evidence of the impacts of such diseases was Jedediah Smith's report of seeing burned Paiute lodges on the Santa Clara River but no people or sign of their presence (Morgan 1953). Smith was evidently recording the Southern Paiute response to the 1826 measles epidemic among Pueblo peoples that spread to Southern Paiutes through trade (Stoffle, Jones, and Dobyns 1995). Mormon settlers did not enter the immediate vicinity of Zion until 1858, but they had begun to occupy Southern Paiute territory

elsewhere as early as 1851. They rapidly colonized the region, especially the riverine oasis agricultural areas. For example, in nineteen villages established between 1851 and 1871, Mormon families irrigated fields that had previously been controlled by Paiutes (Stoffle, Jones, and Dobyns 1995).

The Parurutsits and Ua'ayukunants were among the first Paiute groups to be severely impacted by European and Euroamerican encroachment because heavy travel occurred through and near their homes, and they were closely associated with riverine environments through which diseases could spread very rapidly. It is likely that, after suffering severe population loss and being unable to return to their homes, their members became consolidated under the Shivwits/Santa Clara leaders because of their association with a riverine lifestyle. Because their populations and farming centers had been significantly altered by the time the Mormons actually arrived near Zion and because the new settlers were eager to gain control over the riverine systems, the Mormons and other Euroamericans ignored the evidence that these people were farmers and argued that they were unable to use the land effectively (see Stoffle and Evans 1976). A common sentiment of the period is expressed in the following excerpt from the report of the U. S. Geographical Surveys of the early 1870s:

Reflection makes it apparent that not only is the large area reserved greatly in excess of any actual need of the Indian, especially when their roving and predatory habits are abandoned, but also that these large tracts impede the harmonious and homogenous settlement of these regions, now being availed of for farms, homes, mines, mills, and workshops...it is safe to assume that the land that might be spared by the Indian could be made the home of 3,000,000 farmers and stockgrowers... (Wheeler 1889:214).

Assuming from the start that the Paiutes had little social or political organization, the distinctions between the various subgroups went largely unnoticed; small groups and individuals were usually identified merely as "Paiutes" with no subgroup affiliation. Yet, according to Woodbury (1950:121):

At the time of the white settlement of the Virgin River Valley in the 50's and 60's, there were perhaps a thousand Parrusits in various bands along the stream with their principal camping places near Rockville, Virgin City, Toquerville, Washington Fields and Santa Clara. These all appear to have recognized the leadership of Chief Tut-se-gavits, head of the Tonaquint band living on the Santa Clara Creek, and to have been held together under regular tribal control.

A Mormon settler wrote, "The Indians (I-oo-gune-intz), one of a dozen little bands of the Ute Indians who inhabited Rockville, became an accepted part of the community." (Hall in Brooks 1950b:33).

5.2.3 The Encroachment Period (1865 - 1869)

Although Mormon settlers had begun producing cotton along the Santa Clara River by 1855, documented Euroamerican entry into Zion Canyon did not occur until 1858 when the Mormons began seeking new sites to establish communities (see Zion Canyon below). In that year, Brigham Young sent scouts to explore the region between California and Salt Lake City and identify sites for hundreds of small towns that were to become part of the "Mormon Corridor." The corridor was part of a colonization scheme that was designed to enable Mormon converts to travel safely through the region under constant care of other Mormons. A road through the area was begun in 1859 (Markoff 1982).

By the time Mormon settlers began to settle along the Virgin River, Southern Paiute populations had been impacted by the extensive travel in the region and Mormon colonization of nearby areas such as the Santa Clara River. The Paiute social and political system was under significant stress, and the settlers who moved into the Zion region received little resistance:

The coming of the Mormon pioneers gradually upset the Paiute government. The whites frequently settled on Indian camp sites and occupied Indian farming lands. Their domestic livestock ate the grass that formerly supplied the Indians with seed, and crowded out deer and other game upon which they largely subsisted. This interference with their movements and the reduction in the food supply tended eventually to bring the Indians into partial dependence on the whites (Woodbury 1950:122).

The Establishment of Towns and Irrigation Ditches. Several towns, including Grafton, Adventure, and Northrop, were established near Zion Canyon beginning in 1859. In 1861, the town of Shunesberg was established on the site of an abandoned Paiute village through the purchase of land from a Paiute farmer (see Parunuweap Canyon below). These towns were established quickly because groups of families were sent into the region with specific instructions about where to settle and how to organize their settlements. Nevertheless, they faced significant challenges, particularly in their attempts to irrigate along the river and its tributaries. Mormons were attempting to settle along the Virgin River during a period of deposition, so farming was difficult in many places because of frequent and massive floods; Mormon accounts are full of tales about how dams and farms were washed away (see Bradshaw 1950):



Figure 5.3 Modern agriculture and homes along Ash Creek and the Hurricane Cliffs where Southern Paiutes traditionally farm.

The Virgin River taxed to the utmost the strength and patience of those who stayed. Summer floods and the high waters of the melting snows made their efforts to get the water on to the fine land on the left bank of the stream a perpetual nightmare. The first dam was built in 1857; it was washed out twice that season. This misfortune was repeated in 1858, and in 1859 the structure was destroyed three times. This process was repeated for about thirty years with monotonous regularity (Larson 1950:39).

The pioneers soon learned that the Virgin River carries a tremendous load of silt in times of high water and flood, and the only remedy they knew was the expenditure of an abnormal amount of "elbow grease" at monotonously regular intervals which seemed to come all too often. The [Virgin] ditch was six miles long, three feet deep, and six feet wide, and the tunnel was over 900 feet in length. The ditch broke incessantly (Larson 1950:42). For example, heavy rain began in late December 1861 and continued nonstop for more than a month. Several towns and the irrigation dams and ditches that supported their farms were completely destroyed. Some of these, such as Grafton and Adventure, were abandoned after the floods and reestablished on higher ground.

The Mormon settlers' efforts to control the floods brought significant changes to the riverine system and appear to have increased downcutting and erosion in many places. For example, several Mormon accounts describe Ash Creek as a small, narrow stream when the settlers arrived:

When they first came here our Ash Creek was a ditch one could jump across, but the storms and erosion have caused it to become as it is now (Wakeling and Jackson 1950:257).

In 1859, the Virgin River, at the site where Virgin City was established, was also significantly altered by the attempts to create dams in the wrong places:

The river was dammed by the simple expedient of placing a big log athwart the stream, the ends of the log resting in slots cut in the sod of the river's banks. Smaller trees were then placed in the river with the butt ends resting on the [sic] log and the limbs pointing up-stream. The dam and ditch at Virgin were destroyed by the great flood of 1862, and much of the good farming land was washed away (Larson 1950:41).

The settlers' difficulties in farming along the river increased their impacts on the Southern Paiutes who continued to live in the area. For example, the town of Rockville was established in 1862 on a Paiute campsite after the town of Adventure was destroyed by Virgin River floods in January of that year. At that time, Paiute camps were also located across the Virgin River from Northrup, in the foothills across from Rockville, and at the lower end of Springdale. When the settlers first arrived at Rockville, they recorded the presence of 200-300 Paiutes, apparently Ua'ayukunants, living in the vicinity (Bradshaw 1950:286, Brooks 1950a, Brooks 1950b). According to one Mormon account:

At first the Indians were quite suspicious of the whites, thinking that they were going to steal their land and push them out of their homes. By following the advice of Brigham Young to feed the Indians instead of fight them, the people in Rockville and surrounding communities were able to make friends with them and for some years they lived in peace together. Sometimes the Indians would attend the ward gatherings (Bradshaw 1950:286).

By repeatedly occupying and taking control of most of the region's resources upon which the Paiutes depended, the Mormons caused the Paiutes to disperse. According to a descendant of the earliest settlers:

[The Indians] were kind of scattered down here. There were Indians off and on through here. I think they were more out here on the plain, on the Strip. They used to come in here in Rockville. I heard them stay and raid the crops. They came from out in the direction of the plain. One of the Millets, a big fellow, came in here. He took those Indians out. They were scared to death of him. He was a big strong man. He picked a couple of them up and batted their heads together and after that they just cleaned right out. That was one man they were really scared of. I don't think they had too much trouble. They gave the Indians a lot here, to have peace (A. DeMille 1982:14).

Also in 1862, the town of Springdale was established, and a few settlers built their homes and began farming within Zion Canyon (see Zion Canyon below). An influx of new settlers in

the fall of 1862 caused the expansion of the remaining towns. However, insufficient crops in 1862 and 1863 drove many settlers away so that, by 1864, a church census recorded 765 individuals from 129 families distributed along the upper Virgin River (Woodbury 1950:154).

Impacts to Resource Access

The Mormon settlers caused tremendous impacts to the remaining Southern Paiutes. Extensive trade networks had made it possible for Paiutes to exchange agricultural products with resources that were gathered and hunted in other parts of Southern Paiute territory. The loss of major agricultural centers was a significant disruption. Then, in addition to occupying key farming sites, Mormon ranching practices caused serious damage to the other resources upon which Southern Paiutes depended. Livestock, in particular, destroyed the uncultivated plants that were harvested and served as a mainstay of the Paiute diet:

Among the plants, grass seed was a staple article of diet. It could be gathered in those days almost anywhere, though the grass has largely disappeared since the advent of the white man's horses, cattle and sheep (Woodbury 1950:119).

The livestock business flourished for several years near Zion as settlements along the Virgin River established cattle and sheep herds. Mormon settlers depended on their livestock for work and food. In addition, Church members frequently paid their tithing in livestock, so the Church owned many cattle. As the livestock herds increased in size, the settlers had to extend their grazing ranges. According to one account:

The up-river settlements, Springdale, Rockville, Grafton, and Virgin, all took quite a prominent part in the livestock business. They had the advantage of the Kolob Mountains for summer and the Hurricane Valley for winter, so that the two ranges together made it very ideal for the business. These people took advantage of their opportunity and almost every man had from a few head to several hundred head of cattle, from which they derived a good revenue (Fawcett 1950).

Other domesticated animals, although fewer in number, created impacts as well. For example, one individual reported that the settlers kept pigs on the rim of Zion Canyon and "brought them down in the fall of the year when there were a lot of acorns" (D. DeMille 1982:11).

Interactions between Southern Paiutes and Mormon Settlers

Disease also continued to cause depopulation. For example, a malaria epidemic struck settlements along the Virgin and Santa Clara Rivers in the late 1850s (Larson 1950:39). Woodbury (1950:122) provides the following quote from a Kaibab elder:

When white man come, lotsa Injuns here; alla same white man now. Injuns heap yai- quay [meaning lots of them die]; maybe so six, maybe so five, maybe so two in night. Purty soon all gone. White man, he come; raise'm pompoose. Purty soon lotsa white man.

By June 1866, due to the Black Hawk Indian Wars that caused the withdrawal of Mormon settlers from many small towns, only three of the fifteen or sixteen Mormon settlements that had been established throughout southern Utah and northern Arizona remained.

Although many Mormon diaries and newspaper accounts describe the Paiutes as starving and desperate people, scattered through these reports are statements attributing the survival of the early settlers to the assistance they received from the Paiutes in both hunting and farming:

I was talking to Frank Petty's boy, Frank, in Cedar City. He was telling me about his grandfather. He said his father was a gunsmith and he had quite a few guns. He would give the guns to the Indians and furnish them with so many rounds of ammunition, powder. In return for that the Indians would hunt deer and they would take a share of the deer. He said that really helped those early pioneers get through. He said it helped the Indians and it helped them (D. DeMille 1982:4).

A small group of Indian missionaries led by Jacob Hamblin established themselves at Santa Clara, or Tonaquint Station as they called it, in December of 1854. Assisted by the Indians, in February they built a dam in the Santa Clara, plowed the land, and planted wheat and vegetables (Larson 1950:37).

The Southern Paiutes at times organized resistance against the Mormon settlers, but their populations along the Virgin River were so reduced by the time the Mormons began to establish their settlements that only limited resistance was possible. When other Indian groups, particularly the Navajo, crossed the Colorado River to raid Mormon settlements and Paiute camps, many Paiutes joined the Mormons to resist these attacks and thereby gained some bargaining power. However, after the Mormons negotiated a peace agreement in 1872, the Paiute warriors were no longer needed by the Mormon settlers, and the Paiutes were overwhelmed by their Mormon competitors (Stoffle and Evans 1976).

5.2.4 Lost Time (1870 - 1902)

The Virgin River and Zion and Parunuweap Canyons were included in the U. S. geographical surveys of the early 1870s. In 1872, Major John Wesley Powell and other members of the U. S. Geological Survey visited Zion and Parunuweap Canyons (Wheeler 1889, Gregory 1948). Although their numbers were greatly reduced, Paiutes continued to inhabit the country around Santa Clara Creek and parts of the Muddy and Virgin Valleys (Wheeler 1889:54). The Shivwits were living along the valley of the Colorado River, in the Grand Wash, and in the canyons and valleys leading into it. By 1880, their tribal organization had broken down to such an extent that surveyors reported the Shivwits Indians to be "a small nomadic tribe, who live along the narrow cañon valleys, planting small patches of corn, wheat, and watermelons, subsisting in part by the chase and upon roots, mice, etc," (Wheeler 1889:285). Similar accounts of wandering Paiutes led Mormons and U. S. government officials to almost completely ignore their existence.

The Mormons did not develop mining during the initial colonization of southern Utah, and in 1872, the U.S. surveyors found only surface mines developed (Wheeler 1889:54).

However, mountain mines had already been opened in several locations by that time, and the route to Pioche, Nevada was the principal route for east-west communication and travel (Wheeler 1889:55). Mining attracted many additional people to the region. In addition, Southern Paiute labor gangs became tied to mines throughout the region by the 1880s.

By the 1880s, visits to Zion were becoming more common and the region was gaining national attention for its geologic features. Mormon settlers continued to farm in Zion and Parunuweap Canyons until the 1900s.

5.2.5 The Reservation Period (1903 - 1996)

By the time the U.S. government sought to provide assistance to the Paiutes living in the Virgin River ecoscape, their land base had largely been lost and their tribal organization had been significantly altered. Nevertheless, the Southern Paiutes continued to recognize local and national leaders. For example, members of a special U. S. Commission appointed to examine the condition of several tribes, including Southern Paiutes, attempted to meet with both principal and subordinate Paiute chiefs (U.S. House of Representatives 1874). It would be more than a generation before one of these political leaders (Shem) would have the chance to be officially recognized as a leader and he and his people begin a new life on reserved lands (Shivwits Indian Reservation) with a reserved water right (Santa Clara River).

In February 23, 1891, the Fifty-Second Congress set aside lands, water, and funds for the first and only reservation ever to be established in the Virgin River ecosystem. This Act of Congress (Public No. 105) said:

For the temporary support of the Shebit tribe of Indians in Washington County, Utah, and to enable them to become self-supporting, the purchase of improvements on lands situated near the Santa Clara River on which to locate said Indians. The purchase of animals, implements, seeds, clothing and other necessary articles, for the erection of houses and for the temporary employment of a person to supervise these purchases and their distribution to the Shebits, ten thousand dollars. This item to be immediately available.

In response to the Congressional act, John Nobel, Secretary of the Commissioner of Indian Affairs sent Special Agent George W. Parker to visit these Indians to examine the land where they were residing and see whether it was suitable to make allotments, and whether there was enough unappropriated public land there for that purpose (Nobel letter dated April 13, 1891). Parker reported that the lands on the Santa Clara River above the Mormon village of Santa Clara were non-surveyed, and therefore it was only necessary for the U.S. Federal government to buy improvement of the settlers, but not necessary for the U.S. Federal government to purchase the land (Nobel letter dated April 13, 1891).

In May of 1891, the Federal government acquired without purchase some one hundred acres of land on the Santa Clara River and designated Anthony Ivins, a prominent Mormon leader, as the agent to relocate the Indian people from throughout Washington County, Utah and the Shivwits Plateau onto that Indian farm. Ivins reported in a letter dated June 10, 1891, to the

Acting Commissioner of Indian Affairs, that the three Mormon families (Abram Woodbury, Laura Knight, and Elizabeth Conger) vacated the improvements and premises referred to about May 1st, and that he took possession of the same and put a few of the most reliable of the Shebit Indians to work cleaning the canals, and that the prospect was good for a fair crop of beans, corn, melons, and etc. According the Ivins' letter:

I am furnishing the Indians who are at work with a little flour and have promised them a beef tomorrow. This is necessary as they have nothing to subsist upon until their crops mature.

Ivins wrote on August 24, 1891, about the status of the new Shibet Reservation:

That you may more fully understand the character of these lands upon which it is designed to locate the Shebits, and where the greater part of the tribe are now engaged in farming, I will say that the Santa Clara River at this point and in fact throughout its...course, flows through a narrow canyon and the farming lands along it's banks are of necessity and at best long and narrow strips of land. From the farms formerly occupied by Laura Knight to the farm occupied by Abraham Woodbury it is about six miles. At many points between the two farms the canyon though which the river flows is so narrow that (frislets) have carried away all of the land that would have been available for agriculture there.

Later in this same letter, Ivins records his effort at influencing the political organization of the Shivwits people gathered on the new reservation. He notes that:

These Indians have no acknowledged head and seeing the necessity of some controlling spirit to counsel and advise with them I called them together and explained to them the necessity of choosing a chief and told them if they would select one of their number to be their acknowledge head I would ask you [Commissioner of Indian Affairs] to appoint him. There were 24 indians present entitled to vote and among them 10 candidates for the office. The highest number of votes cast for one man was 5 but on the second ballot they went unanimously for "Shem". He is the best Indian in the tribe and if you think it wise to appoint him I believe it would have a good effect.

Even though a much larger block of land was set aside by Congress in 1891, the full reservation was not established until a presidential order was passed on April 21, 1916. That order reaffirmed that 26,800 acres were withdrawn from all forms of disposal and set aside as a reservation for the Shebit or Shivwits Indians. It also reaffirmed that on September 29, 1891, the Department, upon the recommendation of the Indian Office, had directed the General Land Office to permit of no fillings or entries on a certain tract of unsurveyed land in Washington County, Utah, occupied and used by the Shebit tribe or band. So after almost a generation, the full reservation was established.

The process by which the Shivwits Reservation was established reveals much about the lives of Southern Paiutes living in the Virgin River ecoscape in the late 1800s. First, even though Southern Paiutes farmed along mainstream waterways like the Virgin River, the Santa Clara River, and Ash Creek and farmed many springs, none of the territorial rights of these Indian people were respected by travelers or settlers. In most cases the farmers at a location, when first observed, hung on to whatever land they could despite encroachment. For example in 1776 Father Escalante observed maize fields with well-dug irrigation ditches on Ash Creek, which according to Warner and Chavez (1995:95) was just a short distance south of the town of Toquerville. Remnants of this band, headed by Chief Toquer in the mid-1800s, were reduced to poverty and finally went down to Shivwits after the reservation was established. According to a local account:

In Toquerville, there was an Indian camp quite a long way out of town. It was there for years and years. It just had teepees and camping. They would come into Toquerville every day with their little sacks over their shoulders begging. . . [The Mormons] tried to teach them different, but finally they (the Paiutes) left. I think they went down to the Shivwits, down below St. George, to that reservation (I. DeMille 1982:12).

In many places in the Virgin River ecosystem there are similar stories of Indian camps persisting on the edge of the Mormon communities that had assumed control of Indian land and water. Often the Mormon settlers, like those on the Santa Clara River, did not extinguish Indian title to the land, instead it was taken by force and the Paiutes were moved to a more marginal location.

When the Shivwits Reservation was established as official Indian land, Southern Paiutes from throughout the Virgin River ecoscape relocated there. According to the Government Supervisor of the Shivwits Reservation in 1939, the population of that reservation included families from throughout southwestern Utah and adjacent portions of Arizona and Nevada (Anonymous 1939). At that time, the term Shivwits referred to the Indian population of the entire Virgin River ecoscape.

Though Zion N.P. was largely inaccessible to Southern Paiutes because of the presence of Mormon settlers and the establishment of Zion National Monument and later the national park, the significance of Zion lands and resources was remembered through stories and legends that were passed down orally. Some of these stories were recorded during the early 1900s by Dr. William R. Palmer, a Mormon merchant and banker who worked to secure land near Cedar City for other Southern Paiutes living in southern Utah (Palmer 1978 [1946]). Where possible, Southern Paiutes continued to enter Zion, although many were unable or unwilling to pay entrance fees (see Chapters Two and Eight).

5.3 Specific Places and Resources within Zion N.P.

Southern Paiutes recognize all the land and resources within Zion N.P. to be culturally significant. Nevertheless, certain places and resources within the park have special meaning and significance. These places and resources will be discussed in the following sections.

5.3.1 Zion Canyon

The Southern Paiutes referred to the canyon formed by the north fork of the Virgin River by several names. According to Tony Tillahash, the entire canyon from the site where Springdale now sits to the headwaters of the Virgin River under the Pink Cliff was called Mauoweap, meaning "brushy canyon," and its lower portion was named Muhuntuweap, after his maternal grandfather (Presnall 1936). Tillahash specifically refuted Palmer's (1928a) identification of the Zion Canyon as I-oo-gune and the river flowing through that canyon as Mukunt-o-weap; instead Tillahash used Mukuntuweap to refer to the lower portion of Parunuweap Canyon. In any case, because John Wesley Powell believed that the Paiutes called the canyon Mu-koon-tu-weap (Powell 1875), so Munkuntuweap National Monument was the first name given to the canyon when it was set aside by presidential proclamation in 1909. The name was changed to Zion National Monument when the monument was enlarged in 1918 (see Chapter Two). The other major canyon of the Virgin River, Parunuweap, has retained the original Paiute name for the canyon itself. Both branches of the Virgin River the one flowing through Zion Canyon, known today as the North Fork Virgin River, and the one flowing through Parunuweap Canyon called the East Fork Virgin River, were called Pa'russ by the Southern Paiutes.

Zion Canyon is the principal canyon in Zion National Park, surrounding the north fork of the Virgin River. The first recorded Euroamerican visit to the canyon was made by Nephi Johnson, a Mormon scout, in 1858. Johnson was guided into the canyon by a Paiute guide who reportedly insisted he could not remain in the canyon after dark (Woodbury 1950; Crawford 1950:345-346, Bleak 1928). Stories about Paiute fear of the canyon were commonly told by park personnel for many years, and even recorded as "truth" in two brass interpretative plaques, one of which was displayed for years just before the Narrows walk and the other which is still in place below the Great White Throne. As early as 1928 it had been argued that "they [these stories of Paiute fears of Zion Canyon] seem to have no foundation in fact" (Palmer 1928a:17; see also Presnall 1936:6). Instead, Muhun and his family lived and raised crops such as corn and squash within the canyon (Palmer 1928a:17; Presnall 1936:6). In Southern Paiute stories, Zion Canyon is an important meeting place for Southern Paiutes and their tribal leaders (Palmer 1946:14, 29-30). Paiute people today perceive of these "fear" stories as attempts by "White people" to stereotype Paiute people as "savages" who would be ignorant enough to scare themselves away from places of religious importance, agriculture, hunting, and gathering.

Southern Paiutes were completely extirpated from Zion Canyon in 1862, as Mormon settlers established farms deep within the canyon and named their new settlement Zion. According to one early settler, the Virgin River "flowed through a narrow meandering channel through the timber, brush and grass and that much of the valley bottom was timbered (ash, boxelder, cottonwood, squawbush and rosebushes) and that it was such hard work to clear out the brush so that they could cultivate..." (Woodbury 1927). In addition to those who lived within Zion, settlers from the towns down river from the canyon began to cultivate land and harvest timber in the upper portion of Zion Canyon (Woodbury 1950:158, R. DeMille 1982:1):

Yes, all they had to do was just go plow it and decide that it is theirs. They didn't own any of it. They raised pretty good corn up there. Grandfather Hirschi was noted for corn up in Zion (R. DeMille 1982:2).

A road was built up into the canyon to enable settlers to transport goods.

Most of the small towns around Zion Canyon were abandoned within a few years. For instance, during the Ute Black Hawk War, residents of Duncan, Shunesburg, Grafton, Northrop, Springdale, and Zion were given orders from the church leaders to consolidate their population by moving into the larger settlement of Rockville. After the conflict ended, most of the villages, including Zion, were reoccupied (Deseret News April 18, 1868).

In 1872, John Wesley Powell explored the area in and around Zion. He recorded Southern Paiutes still farming along the Virgin River near what is today the town of Hurricane, but the Paiutes no longer had access to the canyon. The town of Zion, located at the mouth of Behunin Canyon and having about a dozen Mormon families at its peak, was abandoned by 1875. Nevertheless, several of the individuals who had established farms within the canyon continued to return there to farm and raise livestock, so Paiute use was still restricted. The combined timber cutting and livestock operations denuded the area of vegetation and also contributed to the Virgin River floods. An early settler described such impacts:

The thing is, before the Park was in there, they ran cattle in that country and there wasn't the vegetation in that place that there is now. It was all eaten off. They had that place fenced and there just wasn't any vegetation in it, because these old hungry cows would eat everything off. When the Park came in, why they just stopped all that. . . they had big sheep herds back on top. They didn't have the foliage in there to hold the water back that they have at the present time. They get floods now, but they don't get them like they used to, because there's more undergrowth to keep this water there, to keep it from running off (Crawford 1982:11, 13).

In the early 1900s, a Mormon settler purchased a sawmill and constructed a cable on the rim of Zion Canyon to lower sawed lumber into the canyon for use by settlers in the towns below (DeMille 1982:10). A shingle mill was established in Zion near the foot of the Great White Throne, using first cottonwood logs and later pine logs brought into the canyon by the cable. The Cable Mountain Draw Works continued in use after the designation of Zion as Munkuntuweap National Monument in 1909; it was operated, albeit sporadically, until 1927. In addition, although some areas were closed after the park was created, settlers were issued permits to run cattle, sheep, and horses within the park boundaries:

At one time we had a permit to run some [cattle] on the Park area. That was on the west side of the Park where there were no tourists. I don't believe that there are very many people who ever went in where we had those cattle. We would run them up in there and broke trail, like the slopes are in Zion. There would be a little crease and we drilled holes down in the rock below. We put iron pegs in and dirt and rocks in there. We made the trail to get in there. It opened up into a big valley. There were a lot of cougar tracks in there (C. DeMille 1982:5).

They used to run horses up on top of Zion, where the Cable comes down, what they call the Cave Creeks up there...I trapped out on the mountains south of here

(Rockville) where they had about 3,500 head of Angoria [sic] goats in the wintertime on what they call Little Creek Mountain. I'd go from there to Kolob in the summertime and the sheep men would furnish me a pasture for my horses and they also gave me \$15 a month for gasoline for my car (F. DeMille 1982:4, 6).

Construction of buildings and roads for the national park eliminated all evidence of the town of Zion (Carr 1972).

Quitch-o-wer

One of the largest peaks in Zion Canyon was called Quitch-o-wer by the Southern Paiutes who lived there. According to Palmer (1928a), this name means sharp pointed. This peak, which rises above the canyon, is the setting for a Paiute story. The story explains that the cliff at the foot of Quitch-o-wer is a stone image of a fearless Paiute hunter (Palmer 1946:33).

Pa-ron-tink-an

In the vicinity of Zion Canyon is a great escarpment called Pa-ron-tink-an, which Palmer (1928a) translates to mean "Shelter Mountain." The mountain was so named because of the many overhanging rocks, holes, and shallow caves that were used for shelter during stormy weather.

Mah-want

The White Throne in Zion Canyon is named after Mah-want. One Southern Paiute consultant talked about this geological feature when she was in Zion:

I hear them people say, "Let's go down to Zion," you know like that, and it means a whole, whole area here at Zion. But if they say "White Throne," it's a different, just one. And he's that rock is named after mah-want. A lot of them call it our father's name, Sinavawa or something like that, but in my way, the way I understand it, it's mah-want because it's white you know, the way it's formed. (CG4).

5.3.2 Parunuweap Canyon

Southern Paiutes referred to the eastern fork of the Virgin River in its upper narrow gorge as Parunuweap, meaning "water in narrow canyon" (Presnall 1936:5). Below Parunuweap, the canyon was called Mukuntuweap, meaning "straight canyon" (Presnall 1936:4). Today, the entire canyon containing the east fork of the Virgin River is called Parunuweap Canyon.

In Parunuweap Canyon, evidence of Southern Paiute occupation, including the people referred to by archaeologists as Virgin River Anasazi, dates back to at least 1250 AD. On his 1858 scouting visit to Zion, Nephi Johnson also visited Parunuweap Canyon and reported that a settlement could be made there (Woodbury 1950). One of the best known Southern Paiute

farmers in Zion country was a man called "Shunes," after whom the town of Shunesburg was named. Several accounts tell the story of Oliver DeMille's purchase of Shunes' farm in 1861. According to settlers' accounts, the purchase of Paiute farms was not unusual. For example, the Sullivan Ranch, thirty miles south of St. George was bought from Indians (Fawcett 1950). Although there is no legal record of Shunes' sale, there appears to be no question that DeMille did not pay much for the land. For example, Carr (1972:136) states:

The settlers didn't pay Shunes very much, so he accepted it as down payment and continued living among the pioneers...

Jones (1956) claims:

According to Julius Madsen, a Springdale resident and former LDS bishop who possesses many old letters and records, one legend has the purchase price as being one horse. However, there are no records to substantiate this account.

According to Mormon accounts, Shunes remained in the vicinity of his former farm after it passed into Mormon hands. He and other Paiutes continued to interact with the settlers. One of the descendants of the early Mormons talked of an individual whose grandparents were among the first settlers at Shunesburg:

He was telling me how many whites would turn over rifles and ammunition to the Indians to help them get food, deer and game. It helped them both. He said that if it hadn't been for that, he's sure that some of them couldn't have survived, because it's so hard to grow crops in an area where it's not an agricultural area (D. DeMille 1982:15).

Woodbury (1950) noted that Shunesburg was built on the site of an abandoned Paiute village (see photo 5.5). He notes that the reasons for the abandonment were never recorded, but inquiry about the region apparently prompted Paiutes to talk about supernatural beings, among them "Wai- no-pits, "who lurked in gloomy shadows and was always intent on evil" (Woodbury 1950:113). Furthermore, "Wai-no-pits might visit a camp and bring sickness to it. He might cause an accident or waylay the Indians with all sorts of dire calamities. Wherever his presence was suspected it was best to run away" (Woodbury 1950:113). Woodbury's suggestion that Paiute people abandoned a village based on irrigated agriculture because there were evil spirits in the area is similar to the Paiute- Never-Stayed-Overnight-In-Zion canyon story. Neither address more telling arguments based on causes like depopulation from diseases (Stoffle, Jones, and Dobyns 1995). Whatever the reason for the abandonment of this village, by the time the Mormon settlers arrived to establish their new town, they found some Paiutes remaining in the area and laying claim to the land and water.



Figure 5.4 Parunuweap Canyon



Figure 5.5 Shunesburg

The town of Shunesburg was deserted in 1866-1867 during the Black Hawk Indian wars, but settlers moved back into the area and added new buildings in 1868. The settlers built elaborate irrigation canals along the river. During the early 1870s, mail from St. George to Kanab traveled through Shunesburg via a set of wires installed at the 1,500 foot cliff at the head of Shunesburg canyon (Woodbury 1950:162). John Wesley Powell's geographical surveys led him through Parunuweap Canyon and down the Wriggle Trail in 1872, and the explorers visited the town of Shunesburg (Wheeler 1889:51).

Irrigated farming in Parunuweap Canyon dates to at least 1200 AD. At Shunesburg, the Mormon settlers constructed ditches to divert water from both Shunes Creek and the east fork of the Virgin River, and by 1864 five irrigation canals had been dug there. The grandson of one of the original Shunesburg settlers gave this account:

They had no engineering or anything for making these ditches, but they were really good at it. Their grades on the ditches and everything worked. It went for miles up into Parunuweap. The ditches are still in that country. You can still see the outlines of the ditches and a few cottonwood trees that are still standing along the bank or they've fallen over. But that's when they had those big floods...It got so bad that they could hardly do anything there because all the large floods from all the drains started cutting all the farms away. Most all of the people moved away (D. DeMille 1982:2).

According to recent geomorphological studies, the east fork of the Virgin River experienced two major downcutting episodes, one in 1300 A.D. (Hereford, Jacoby, and McCord 1995) and another in 1892-1893. These episodes were likely caused by climatic factors and certainly caused negative effects on the irrigation canals. For example, Gummerman (1988) argues that the downcutting probably caused the Anasazi abandonment of the area by lowering the water table and destroying farmland. In addition, the overgrazing by Mormon cattle may have worsened the problems the settlers experienced.

Virgin River flooding caused hardships for the Shunesburg settlers, and by 1900 only the DeMille family remained in Parunuweap Canyon. Eventually, farming was no longer viable in the canyon. Nevertheless, in the 1940s and 1950s, settlers were using the Canyon to transport sheep up to the rim:

We were bringing some sheep up this other fork of the canyon, Parunuweap, I guess they call it. They'd built a trail up there for the sheep to go up on the right hand side, but the horses, they thought it a lot better to go up the old trail on the left...(F. DeMille 1982:3).

Parunuweap Canyon has been nominated as an Archaeological District because of the prehistoric features found there (see Shunesburg and Parunuweap Canyonsite below). According to Mormon oral histories, the Mormon settlers did not become aware of the presence of these features until the 1920s or 1930s, after Zion National Park had been established (DeMille 1976). At that time, Parunuweap was not within the park boundaries. Shortly after the discovery, an archaeological investigation in Zion and Parunuweap Canyons was led by Ben Wetherill through

funding from the Civil Works Administration (Wetherill 1934a, 1934b, Schroeder 1955). Recent investigations of sedimentary terraces within the canyon have indicated that major deposition episodes occurred around 1300 and the late 1800s (Hereford, Jacoby, and McCord 1995). The links between these episodes, the occupation of the canyon, and subsequent downcutting require further investigation (see Naylor 1995).

5.3.3 Trails, Travel, and Trade

Another important aspect of Southern Paiute, and other Native American, occupation of the Zion and Parunuweap Canyons was the trail system that allowed individuals to move from one place to another. Southern Paiutes traveled to gather plants, hunt, collect minerals, and trade. In his diary, Escalante mentioned the sulphur springs located on the Virgin River between La Verkin and Hurricane that was an important healing site for Southern Paiutes from throughout the region (see Pah Tempe Hot Springs below).

Despite some early claims that Mormons "made" trails through Zion (Deseret News 1866), Mormons who lived in the area described traveling to places like Long Valley, taking cattle up on the mountains for summer grazing, and carrying mail between settlements by using old Indian trails (Crampton 1965, Woodbury 1957, Gillette 1970, DeMille 1977). The East and West Rim Trails, and the "Wiggle Trail" at the head of Shunes Creek Canyon, for example, were all Indian trails:

In Jesse N. Smith's account of the exploration he gives no names but it seems clear that the explorers had happened upon the trail, undoubtedly first used by the Indians, which dropped over the south rim of Shunes Mountain to the bed of Shunes Creek, a trail used later to a considerable extent as a route between Mormon settlements along the upper Virgin River and those in the Zion Canyon areas. A party of the Wheeler Survey in 1872 traversed approximately the same route...(Crampton 1965:86).

The trip from the Kolob Terrace to Springdale was accomplished by traveling through Zion Narrows. The use of Indian trails contributed to the disruption Paiute life in the region. For example, the "Wriggle Trail" that climbs the walls of southern Zion became the mail route from the lower Virgin River communities to the Long Valley settlements during the 1870s. The mail route covered a distance of 65 to 70 miles and was traveled regularly.

When asked if the canyons were connected with other places, Southern Paiute consultants described travel between all places of cultural significance by established trails. The presence of trails was a clear indications of the interconnections between places within and between riverine ecosystems.

5.3.4 Resource Use

Zion also is recognized as a source of important plant, animal, and mineral resources. Southern Paiute resource use has been documented in historic and contemporary studies. This ethnographic overview and assessment did not provide sufficient time or resources for

conducting comprehensive ethnographic studies of resource use within Zion or the Virgin River ecoscape. Instead, places were visited as representative examples of Southern Paiute interactions with the land and resources of the park and the surrounding ecoscape. To determine the significance of specific resources at particular locations within the park, to gain information for use in planning, for example, specific studies are needed. However, a summary of known resources that are culturally significant to Southern Paiutes can provide guidance about how to plan future work. Therefore, this section presents information, from historic and contemporary sources, about plants, animals, and minerals that are found within Zion and are or have been recognized by Southern Paiutes.

A first measure, albeit limited, of cultural significance is whether or not a thing is named (Berlin 1978, Hunn 1982, Hays 1982). Things that are named are recognized. Selective recognition is critical to survival in environments that contain far more information than can be perceived or processed by human perceptual and cognitive systems. In addition, the degree of specificity of a name, whether that name refers to any of a variety of similar things such as cacti or whether that name refers to only one type of cactus, provides additional information about what is being named. For example, local species of animals that have limited cultural importance tend to be lumped together while those with greater significance are given separate names.

Southern Paiutes show a general tendency for naming animals generically in fairly broad categories that do not distinguish among species or sometimes even *genera* (Stoffle et al. 1995). For example, they use deer, fish, eagle, duck, and squirrel to name groups of similar animals. This tendency also has been observed in the naming of plants and is consistent with the practices of many cultural groups that have been the subject of ethnobiological studies. The grouping of animals and plants into genus was devised during the development of a global classification system as a means of organizing an unmanageable number of organisms. People perceive differences among organisms based on characteristics such as appearance and taste, and in many cases animals and plants cannot be perceptually distinguished at the species or even the *genus* level. When only one species within a genus exists within any given local community, there is no need to distinguish between genus and species (Atran 1990). Often, in cases where species are distinguished, they are separated by ecological or geographical variation.

The following sections provide tables of the plants and animals known to live within Zion that are also known to be or have been significant to Southern Paiutes. The information in these tables has been taken from historic and contemporary sources, and the sources of information about each plant or animal is provided. In the tables, plants and animals are generally listed alphabetically by scientific name. Representatives of the same genus have been grouped together. In addition, where Southern Paiutes recognize genera to be related, these genera have been grouped together and listed alphabetically. For example, the pinyon jay (*Gymnorhinus cyanocephala*) and Steller's jay (*Cyanocitta stelleri*) have been listed directly under the scrub jay (*Aphelocoma coerulescens*). In each case, all Southern Paiute names for a plant or animal within a particular genus (e.g., *Cyanocitta*) have been listed next to the genus name. When a name is known to be used only for one species of that genus, then it is included by the particular species name. The table organization thus responds to the Southern Paiute tendency to group plants and animals together for naming and also the uncertainty regarding the species that were the subjects of historic studies.

Plants

A comprehensive list of vascular plants that are found in Zion and also recognized by Southern Paiutes was created (see Table 5.2). Using historic and contemporary sources, it was found that approximately 157 of the 379 genera listed in the "Vascular Plant List for Zion National Park" are currently known to be culturally significant to Southern Paiutes. More detailed information about these Southern Paiute plants is available in the general resources directory located in Chapter Seven.

Animals

A comprehensive list of vertebrate animals that are found in Zion and also recognized by Southern Paiutes was created (see Table 5.2). Twenty-nine of the fifty-two genera included on "Selected Mammal List for Zion National Park" (55.8%) are included in Table 5.2 because either historic or contemporary information, or both, has been collected about them. In addition, the table includes eight of the twenty-one genera of reptiles (38%), seventy-three of the 172 genera of birds (42.4%), two of the five genera of amphibians (40%), and one of the six genera of fish (16.7%) named on the respective animal lists for the park. A general resources directory located in Chapter Seven contains additional information, when available, about the significance of certain animals to Southern Paiutes.

Minerals

Zion and the Virgin River ecoscape provided minerals that were used by Southern Paiutes. Salt was available in a cave located downstream from Zion Canyon near what was St. Thomas, Nevada prior to its flooding by Lake Mead. Reports of Paiute use of the St. Thomas salt cave date back to 1827 when Jedediah Smith noticed it. Likewise, in 1830 when George Yount and William Wolfskill attempted to follow Smith's route, they followed the Virgin River and "within twenty-five miles of its mouth some Indians brought them salt" (Camp 1923:39). The salt cave was officially recorded during an 1869 reconnaissance through the region by U. S. army engineers (Wheeler 1875).

5.4 Site-by-Site Discussion

Southern Paiutes describe culturally significant places according to the archeological features, water, plants, animals, minerals, and traditional cultural properties located there. A sample of the places within Zion National Park and other locations that were outside the park but critical to the interpretation of park significance were visited by Southern Paiute tribal elders. These individuals, representing the Paiute Indian Tribe of Utah and the Kaibab Paiute Tribe, talked about all aspects of the site during their visits, so, for each site included in this chapter, information about whatever features they perceived to be significant to the site is presented.

This section documents the results of the onsite visits with Southern Paiute tribal elders to places in the Virgin River ecoscape. The majority of locations visited are in Zion National Park. The key Virgin River water source cuts through Zion Canyon, a very significant area to Southern Paiute people. The site visits were conducted between June 4-9, 1995. The visits were conducted

with the assistance of Mr. Jack Burns, Cultural Resource Specialist at Zion N.P.

Place discussions for Zion are arranged in an order that best reflects the Virgin River ecoscape. That is, places are generally presented from highest to lowest elevation. Places around the perimeter of Zion are discussed first, from northeast to northwest in clockwise fashion, followed by a north-south discussion of sites in the Zion Canyon Corridor.

Each of the places visited and the Southern Paiute cultural resource concerns at each place in the Zion-Virgin portion of the study area are discussed. Following a general site description that includes an overview of (a) general ecology, (b) soils, (c) plant communities and vegetative associations, a list of Southern Paiute plants observed and/or collected by the project botanist is presented in the overall species inventory for each place. The plant inventory list for each place is followed by a botanical interpretation that assesses the health of the plant communities and general microenvironment. This general site description is then followed by archaeological site descriptions where applicable. These site descriptions are taken largely from the archaeological site forms and archaeological reports on sites in Zion N.P.

Following the overviews for each place, the discussion turns to the Southern Paiute interpretations of the place and the features present at each place. For purposes of this report, features are categories comprised of particular cultural resources. Features of places are divided into (1) *water sources*, whether river, spring, waterfall, seep or some combination thereof, (2) *plants* traditionally used for various purposes, (3) *animals* traditionally used for various purposes, (4) *evidence of previous Paiute occupation and use*, consisting of archaeology sites, artifacts, rock art and other material remains, and (5) *physical and geologic features* on the landscape such as mountain peaks and rock formations that were traditionally visited for various purposes. The culturally significant Paiute plants can be found in the species lists for each site in bold print.

The discussion at each site includes (1) Southern Paiute use and occupation of the place, (2) the features observed by Southern Paiute consultants at the place, (3) consultants' perceptions of condition and effects caused by natural and human factors on the features at the place, and (4) recommendations for protection of features and the place as a whole. For each feature identified as being an important component of the place, ethnographic data on traditional use and perceived condition and impact of various factors is presented. Finally, recommendations for the protection and management of each place and its features are discussed.

Although this study was designed as a cultural resources overview rather than in-depth ethnographic study of particular resources, such as plants and animals, in some locations Southern Paiute consultants identified resources that were previously unrecorded as significant to Southern Paiutes. Where that occurred, it is noted in the site discussion.

5.4.1 Upper Virgin River, East Fork-Site #3

This place was visited on June 2, 1995. Four elders from the Kaibab Paiute Tribe evaluated the place and the cultural resources there. Four interviews were conducted at the place.



Figure 5.6 Upper Virgin River

Site Description

The upstream Virgin River study site is located on the east bank of the East Fork Virgin River about 1.5 miles south of Mt. Carmel Junction, Kane County, Utah. The site is at an elevation of 5,250 feet along a gravel road about 0.5 mile south of its junction with US 89 at the point where the main highway crosses the Virgin River. (Legal description of the location is T41S R8W Sec. 36

NE4). The interview site is within the floodplain of the river, on alluvial soils near the road. On the west side of the river are steep slopes and bedrock outcrop cliffs reaching to the riverbed; on the east side, slopes are gentler and the transition from soils and plant communities along the canyon floor to upland woodland is more gradual. Although all interviews took place along the floor, adjacent upland areas were easily visible.

Soils in the floodplain are of alluvial origin, and consist of sand, silt, and gravels of undetermined depth. Bedrock outcrops along the west bank are sandstone of undetermined formation, probably Navajo Sandstone. High above the river and above the sandstone are layers of limestone.

Botanical Interpretation

The general flora of the area is Great Basin Conifer Woodland, dominated by Colorado pinyon and Utah juniper. The woodland with its associated shrubs is present on the slopes above the alluvial valley floor. The floodplain is a complex of vegetation types dependent upon the

height above the river, kinds of material deposited by the last flood, and the amount of time since a given area has been inundated. upper portions of the floodplain have a well-developed Great Basin Desertscrub dominated by big sagebrush. Sandy areas in the floodplain support sand sagebrush (*Artemisia filifolia*). A few large, old cottonwoods (*Populus fremontii*) are present in the upper part of the floodplain, probably signifying an old river channel or upper margin of a flood. Along the present river banks are a scattering of sapling cottonwoods along with coyote willow and arroyo willow (*Salix laevigata*) and tamarisk (*Tamarix chinensis*). The Indian plants found in this location are listed in bold print below along with other plants observed at this location.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientifican Name</u>	<u>Common Name</u>
<i>Amelanchier utahensis</i>	Utah serviceberry	<i>Penstemon lentus</i>	Abajo Penstemon
<i>Artemisia filifolia</i>	Sand sagebrush	<i>Pinus edulis</i>	Colorado Pinyon
<i>Artemisia tridentata</i>	Big sagebrush	<i>Populus fremontii</i>	Fremont Cottonwood
<i>Atriplex canescens</i>	Four-wing saltbush	<i>Psoralea</i>	Dune Scurfpea
<i>Bromus tectorum</i>	Cheatgrass	<i>Purshia tridentata</i>	Bitterbrush, Buckbrush
<i>Cercocarpus montanus</i>	Birch-leaf Mountain Mahogany	<i>Rhus trilobata</i>	Squawbush
<i>Chrysothamnus nauseosus</i>	Rubber Rabbitbrush	<i>Salix exigua</i>	Coyote Willow
<i>Descurainia pinnata</i>	Tansy mustard	<i>Salix laevigata</i>	Red Willow
<i>Eleagnus angustifolium</i>	Russian Olive	<i>Senecio multilobatus</i>	Unita Groundsel
<i>Juniperus osteosperma</i>	Utah Juniper	<i>Sisymbrium altissimum</i>	Tumble Mustard
<i>Melilotus indicus</i>	Yellow Sweet-Clover	<i>Sphaeralcea sp</i>	Globemallow
<i>Oryzopsis hymenoides</i>	Indian Ricegrass	<i>Tamarix chinensis</i>	Tamarisk, Saltcedar
<i>Penstemon eatonii</i>	Eaton beardtongue	<i>Typha sp</i>	Cattail

Southern Paiute Interpretation

All of the elders agreed that the place was traditionally used by Southern Paiute people. The place was used for permanent settlements with irrigated gardens along the river, hunting, camping, plant collecting--especially squawbush (suuv) and willows (kanav) for baskets and medicinal plants, as well as food plants such as squawbush berries (i'is)--and perhaps ceremonial dances. Elders recall that there once were dense concentrations of Indian people and settlements in this portion of the East Fork Virgin corridor.

In Southern Paiute history, this place is also along a former migration route for intergroup travel from Richfield and Alton in the north and Kanab and Kaibab in the south. It was also recalled that many Paiute people died from disease, hardship and newcomer atrocities during the forced eviction from Long Valley that accompanied Mormon settlement of the area. Despite this forced abandonment, Paiute people continued to occupy the area at the time the highway was built, and many Paiute people worked on the construction of the road. One elder's family lived alongside the highway. They came to the area to work construction and spend the winter when it was cold and when agricultural production was low at Kaibab. According to one elder, San Juan Paiute people continue to travel to this area to collect squawbush and willows for basketmaking because the availability of these plants is low in the Willow Springs area.

In recent times, Paiute people have come to this place for family outings and picnics. One elder noted that on several occasions, Navajo people are seen camping at the location as well.

Features

The river, numerous plants, animals, trails, and the geologic features were identified as being traditionally used and key components of the importance of this place.

Water. As with most Southern Paiute places, water is a key resource. At the location between Orderville and Mt. Carmel, the Virgin River was key to Paiute irrigated horticultural settlement all along the corridor. Water is also used for human and animal consumption.

Plants. Plants identified by the elders include squawbush berries (i'is), cattail (to-oiv) and acorns (kwiav) for food; sage (sangwav), cedar (wa'ap), and snapdragon for medicine and ceremony, a species of sage for seasoning rabbit meat, and squawbush (suuv) and willow (kanav) for making baskets.

Animals. Animals identified as being important components of this place include deer, rabbit, cottontail, squirrel, and coyote. All of these animals except the coyote were traditionally hunted for food and clothing. Animals were also used in ceremony, medicine, and manufacture of implements. The habitat was viewed as being optimal for animal populations, given the abundant water and feed present at the location.

Evidence of Previous Paiute Occupation/Use. Paiute people would have traveled along a trail above the river. Paiute people moved back and forth through the corridor to visit relatives and harvest seasonally available resources:

. . . He done most of his living, my grandfather, up in Orderville. He used to just live there, and he'd go about his Indian ways. Where we had been to the Johnson road, we used to go over there too with. . . a whole group of the people from home. They would all travel over that way because some older people used to live in Orderville, long ago. Before, with Johnson and Orderville, and all that, is all in one group that the Indians used to gather their things at. They would start from Kanab and go around. . . and for certain days you would camp certain place and they would gather some things, some other fruits and vegetables, and then they

would move on and gather something else at another place. They were very busy people, 'cause I used to travel and [another individual] used to travel quite a bit too with her grandparents. But I used to go with my aunt because my mother and father were too busy at home with their own farming. (CG003)

Hunting campsites may be located in the uplands.

Physical/Geologic Features. The mountains and rock formations are important in ceremony. One practice mentioned involves the ceremonial disposal of a newborn baby's umbilical cord.

[A] lot of Indian people are interested in the rock formations that they see. When your baby or your child is born, you know the belly button of the child comes off, an Indian person will get the little child's belly button and put in a buckskin and sew it. [They will even] put a little bead work on it if they want to. Then they go find a favorite place like the mountains or the valleys, [where] they hope that their child will create into something. Some kind of a place like that I was thinking of that when I was looking at those [rocks], that that would be a good place for a baby's thing to be put away, so that she could inherit whatever's there for their lifetime. That's old belief that the Indian had when they did that, they took their child's belly button, then they go put it away for them, so when they put it safe, the child will always remember where he puts his things, and where he left his things and he will never have to dig through everything to go look for things (CG003).

Perceived Impacts

The development of roads and towns in the area have affected the place in terms of aesthetics. The river water is seen as being adversely affected by pollution in the forms of agricultural runoff from local and upstream farms as well as sewage disposal into the river by Glendale and Orderville. Elders said the water was clearer and cleaner during the period of Paiute occupation. Contaminated water is seen as adversely affecting the animal populations, despite good forage for feed. It is believed that many may be being poisoned from drinking river water. Another factor affecting the animals is indiscriminate hunting by non-Indians. Killing of female deer, for example, has served to thin herds. Elders noted that at one time deer were plentiful at this spot.

Primary impacts on plants include lack of rainfall as well as grazing by local livestock. The area has a history of livestock grazing and ranching, including sheep, horses, and cattle. Most of these properties were owned by the Esplin family. One elder mentioned that he used to work as a cook for Navajo herders who ran cattle through this area. Beginning in 1959, he worked for the Esplin family, herding sheep and cattle.

Another significant impact to plants is the fact that Indian people are no longer there to manage them. Plants such as squawbush require pruning to encourage straight branch growth the following season. This is a traditional practice of Paiute people, especially basket makers, who

rely on collecting young, straight shoots of squawbush for use in making baskets. The absence of Indian managers has resulted in the squawbush community becoming overgrown and becoming tangled.

Recommendations

Paiute people desire to have continued access to the place to have family outings and picnics without being disturbed by outsiders. The place should be protected as it is without further disturbance. Strategies to eliminate agricultural and sewage inputs to the river should be formulated and efforts to clean up the river should be undertaken.

5.4.2 Shunesburg and Parunuweap Canyon site #s 9a and 9b Site Description

Site Description

The ruins of the 1860s settlement of Shunesburg are on private land which is crossed between the end of the road and the Zion National Park boundary. Interviews for the Parunuweap area were conducted in two areas, in the vicinity of the Shunesburg ruin (9a) and on NPS land up to about one mile east of Shunesburg in Parunuweap Canyon (9b).

The Shunesburg site includes the terrace high above the East Fork Virgin River with the still standing home and extends for a few hundred meters to the east along a ridge to a lower part of the terrace, which ends abruptly with a steep, unstable bank down to a wash at floodplain level. The Shunesburg "castle" is at the higher, west end of the terrace at an elevation of 4350 feet, 0.1 mile north of the river, in Washington County, Utah, legal description T42S R10W Sec. 3 SW4 SW4.

The NPS boundary is about 0.5 mile east of Shunesburg, and the study site extends from the boundary across two terraces to the east side of Stevens Canyon. Archeological sites are present on the tops of the terraces and in rock shelters provided by boulders at the upper part of the terraces. These boulders have eroded from the Springdale Formation sandstone cliffs above and are embedded in the terraces. Average elevation of the terraces is 4,400 feet, and the legal description of the location is T42S R10W Sec. 3 SE4.

Soils on the Parunuweap Canyon terraces are generally red and sandy, originating, along with sandstone rocks on the terraces, mostly from the cliffs above. The outer edges of the terraces are truncated, and the steep, unstable cliffs fall about 50 feet to the present base level of the floodplain.

Botanical Interpretation

The site is on a terrace about 100 feet above the river at its highest point. Similar terraces are present on the north side of East Fork Virgin River throughout the Site 9 a and b study area. They are probably of Pleistocene alluvial origin, and are sharply truncated at the outer edge by the downcut Virgin River floodplain. The terraces alternate with recently incised drainages which lead from the steep Springdale and Navajo sandstone cliffs less than 1/4 mile to the north to the present level of the floodplain, separating the terraces with sharply incised, rocky

drainages and unstable, actively eroding sides. Soils at the Shunesburg site are sandy-silty on the upper part of the terrace, sandy with sandstone rocks on the ridge, and mostly sandy on the lower, eastern terrace.

The area around the townsite is dominated by four-wing saltbush, snakeweed, and pale wolfberry (*Lycium pallidum*), all indicative of its previous disturbance. The lower terrace has dense four-wing saltbush, while the ridge connecting it with the higher terrace has a greater diversity of shrubs, including blackbrush (*Coleogyne ramosissima*), narrowleaf yucca (*Yucca angustissima*), and Utah juniper.

Scattered singleleaf pinyon and Utah juniper trees are present mostly in the upper portion of the terraces, while the flat, sandier areas are dominated by blackbrush and four-wing saltbush typical of low elevation Great Basin Desertscrub. A wide variety of other desert shrubs is present. Below the terraces, sand sagebrush and arrowweed (*Tessaria sericea*) occur on the upper floodplain, and cottonwoods and coyote willow are continuous along the river. The Paiute plants at the Shunesburg townsite are listed in bold print below along other plants observed at this site.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Astragalus nuttallianus</i>	Small-Flowered milkvetch	<i>Hilaria jamesii</i>	Galleta
<i>Astragalus praelongus</i>	Rattleweed locoweed	<i>Juniperus osteosperma</i>	Utah juniper
<i>Atriplex canescens</i>	Four-wing saltbush	<i>Langloisia setosissima</i>	Mohave langloisia
<i>Bromus tectorum</i>	Cheatgrass	<i>Lycium pallidum</i>	Pale wolfberry
<i>Chrysothamnus nauseosus</i>	Rubber rabbitbrush	<i>Marrubium vulgare</i>	Common horehound
<i>Coleogyne ramosissima</i>	Blackbrush	<i>Mirabilis multiflora</i>	Colorado four-o'clock
<i>Cucurbita foetidissima</i>	Coyote gourd	<i>Opuntia basilaris</i>	Beavertail cactus
<i>Datura meteloides</i>	Sacred datura	<i>Opuntia erinacea</i>	Mohave prickly pear
<i>Encelia frutescens</i>	Bush encelia	<i>Opuntia phaeacantha</i>	Engelmann prickly pear
<i>Eriogonum inflatum</i>	Desert Trumpet	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	Torrey mesquite
<i>Erioneuron pulchellum</i>	Fluffgrass	<i>Psoralea</i> <i>fremontii</i>	Indigo bush
<i>Erodium cicutarium</i>	Storksbill, heronbill	<i>Sisymbrium altissimum</i>	Tumble mustard

<i>Euphorbia albomarginata</i>	Rattlesnake weed	<i>Yucca angustissima</i>	Narrowleaf yucca
<i>Gaillardia pinnatifida</i>	Hopi blanketflower	<i>Yucca baccata</i>	Banana yucca
<i>Gutierrezia sarothrae</i>	Snakeweed		

The species list for Parunuweap Canyon includes the plants listed below. Paiute plants are bolded.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Amelanchier utahensis</i>	Utah serviceberry	<i>Lepidium lasiocarpum</i>	Desert pepperweed
<i>Artemisia dracunculus</i>	Tarragon	<i>Lycium andersonii</i>	Anderson wolfberry
<i>Artemisia filifolia</i>	Sand sagebrush	<i>Lycium pallidum</i>	Pale wolfberry
<i>Artemisia ludoviciana</i>	Water sage	<i>Melilotus indicus</i>	Yellow sweet-clover
<i>Astragalus nuttallianus</i>	Small-flowered milkvetch	<i>Mirabilis multiflora</i>	Colorado Four-o'clock
<i>Astragalus praelongus</i>	Rattleweed locoweed	<i>Oenothera pallida</i>	Pale evening-primrose
<i>Atriplex canescens</i>	Four-wing saltbush	<i>Opuntia basilaris</i>	Beavertail cactus
<i>Baileya multiradiata</i>	Desert marigold	<i>Opuntia erinacea</i>	Mohave prickly pear
<i>Bromus tectorum</i>	Cheatgrass	<i>Opuntia phaeacantha</i>	Engelmann prickly pear
<i>Castilleja chromosa</i>	Early Indian paintbrush	<i>Oryzopsis hymenoides</i>	Indian ricegrass
<i>Chrysothamnus nauseosus</i>	Rubber rabbitbrush	<i>Penstemon palmeri</i>	Palmer beardtongue
<i>Coleogyne ramosissima</i>	Blackbrush	<i>Petalostemon searlsiae</i>	Searls prairie-clover
<i>Datura meteloides</i>	Sacred datura	<i>Pinus monophylla</i>	Singleleaf pinyon
<i>Echinocereus engelmannii</i>	Engelmann hedgehog	<i>Plantago patagonica</i>	Pursh's plantain
<i>Elymus elymoides</i>	Squirreltail grass	<i>Populus fremontii</i>	Fremont cottenwood

<i>Encelia frutescens</i>	Bush encelia	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	Torrey mesquite
<i>Ephedra nevadensis</i>	Nevada Indian tea	<i>Psoralea</i> <i>fremontii</i>	Indigo bush
<i>Equisetum leavigatum</i>	Smooth scouring rush	<i>Rhus trilobata</i> var. <i>simplicifolia</i>	Squawbush
<i>Eriastrum eremicum</i>	Desert eriastrum	<i>Rumex hymenosepalus</i>	Wild rhubarb
<i>Eriogonum inflatum</i>	Desert trumpet	<i>Salix exigua</i>	Coyote willow
<i>Erodium cicutarium</i>	Storksbill, heronbill	<i>Salsola iberica</i>	Russian thistle
<i>Euphorbia</i> <i>albomarginata</i>	Rattlesnakeweed	<i>Salvia dorrii</i>	Purple sage
<i>Gaillardia pinnatifida</i>	Hopi blanketflower	<i>Sphaeralcea</i> <i>grossulariaefolia</i>	Globemallow
<i>Gutierrezia sarothrae</i>	Snakeweed	<i>Stanleya pinnata</i>	Prince's-plume
<i>Heterotheca villosa</i>	Hairy goldenaster	<i>Stipa comata</i>	Needle-and-thread grass
<i>Hilaria jamesii</i>	Galleta	<i>Tessaria sericea</i>	Arrowweed
<i>Juniperus osteosperma</i>	Utah juniper	<i>Yucca angustissima</i>	Narrowleaf yucca
<i>Langloisia setosissima</i>	Mohave langloisia	<i>Yucca baccata</i>	Banana yucca

Archaeological Site Descriptions

Four archaeological sites were visited during the trip to Parunuweap Canyon. A fifth site was photographed by an ethnographer, accompanied by the Zion Cultural Resource Specialist. All sites visited were on the north side of the canyon. Sites on the south side of the river were pointed out by the Zion N.P. cultural resource specialist. Three sites are located on terraces below the talus slopes. The terraces are interspersed by drainages on the north side of the canyon. These sites are potentially adversely affected by erosion by recent flooding episodes (1993; Naylor 1995). The fourth site consists of a rockshelter or overhang near the edge of a rock outcrop. Immediately northwest of this rockshelter is a boulder overhang from which a burial was excavated in 1934 by Ben Wetherill. The fifth site contains significant rock art.

In addition, interviews were conducted with elders at the Shunesburg town site immediately west of the park boundary at the head of the canyon. The remnants of the 1860s settlement include the house frame and the rock walls of the irrigation canal system constructed in the canyon.

The canyon is currently being nominated to the National Register of Historic Places. It is being nominated as an archaeological district because of its prehistoric and historic archaeological value.

Southern Paiute Interpretation

Parunuweap Canyon was clearly a major locus of Southern Paiute irrigated agricultural settlement. According to one elder, the name derives from a Paiute term (Parunu'uip) that describes the shape of the canyon and the fact that the water from the east Fork Virgin flows through it. Settlements were likely located on the benches and terraces above the floodplain that appear to have been more or less continually occupied from prehistoric times by people known to archaeologists as Anasazi up through the historic period by Southern Paiutes. Archaeological remains attest to such occupation and use.

Features

Water. All of the elders agreed that the river served to provide irrigation water to Paiute fields on the sandy riverbanks and bottomlands, as well as in the floodplain. River water was also harvested and used to pot irrigate crops of corn, squash and watermelon.

Plants. A wide variety of plants was identified by elders as being traditionally used for various purposes. Yucca, squawbush, sacred datura, horehound, wild gourd, wild rhubarb, mesquite, sagebrush, buckbrush and Indian ricegrass were specifically mentioned. The roots of yucca (uusiv) were used for soap and shampoo, and the fruits (uus) were eaten. Squawbush shoots and young branches (suuv) were used to make baskets; the berries (i'is) were eaten or mashed and made into a punch-like beverage. Jimsonweed or sacred datura (momomp) was a ceremonial plant used by medicine men; one elder stated that small doses were also given to difficult children as a punishment for the purpose of making them obey their elders and behave. The leaves of horehound were brewed into a tea for curing stomach disorders. The seeds of Indian ricegrass were collected and ground for eating. The leaves of wild rhubarb were eaten as greens. Mesquite beans ('op, 'opimp) Wild gourd was important for making ceremonial rattles. Sagebrush (sangwav) was used both for medicine and in ceremonies. Buckbrush (unap) was used for medicine and fuelwood.

Animals. Elders named a number of animals that would have been present and hunted by Paiute people. Foremost among these was mountain sheep. Others include rabbit, cottontail, deer, coyote, squirrel, gopher, and birds such as mourning doves and hummingbirds. Insects such as grasshoppers and fish were also mentioned. Besides being used mainly for food and clothing, deer antler and mountain sheep horn were important in ceremonies. One elder pointed out that this place may have been a location where the mountain sheep dance was held. Animal bone was used to make a variety of tools. Animals would have been hunted on the ledges above the Springdale formation and on the rims of the canyon walls on both sides of the river.

Evidence of Previous Paiute Occupation/Use. The archaeological sites and artifacts indicate former Southern Paiute presence and use of the Parunuweap Canyon environment. Elders observed grinding stones, mortars, remnants of rock-walled rooms, rock art on a free-

standing boulder, flakes, ceramic sherds, arrowpoints, and rockshelters--one of which contained a burial that was excavated in the 1930s.

Physical/Geologic Features. The mountains were important features of this place. One set of mountains located to the south and west of Parunuweap Canyon, Eagle Crags, was specifically mentioned by one elder as having the name "Three Indian Sisters" (see photo 5.7). The name stems from the time that Mormon settlers stole or kidnapped Indian women. It is recalled that three women escaped into the mountains where the named peaks are located. One elder commented on the mountains

It seems like, it's just like their human, you know, maybe some of them got names, like that one over there, across from us, that's what they call tee-he-nam-butzn, that means some kind of sisters, "three Indian sisters" (mountain). I think long time, when white settlers came and they were taking the Indian ladies, and three of them they took off and went up that way with their children, I think that's where they call it that name, I think my uncle was telling me that, they done that so they turn into that kind in the legend. (CG008)

Mountains in general are a focus of worship. The canyon walls themselves provided protection from natural elements such as wind and from enemies.

Perceived Impacts

The primary impacts to Parunuweap Canyon as perceived by the elders are environmental and human. Some perceive the environment as more desiccated and dry than in the past, and they are aware that the risks of fire and flood exist. Erosion threatens some of the archaeological sites on the terraces. The other major impact is the early excavation of some of the sites throughout the canyon, particularly the removal of the burial by Wetherill. As one elder put it:

. . . white people have come in and taken things out--pottery, burial. . . the burial should be returned to the Paiute Nation.

The canyon has been closed to public access for the past two years. Despite this, elders perceive that tourists may be entering the canyon somehow and taking other surface archaeological materials.



Figure 5.7. “Three Indian Sisters” (Eagle Crags)

Recommendations

Elders stated that Paiute people would like to come back to this place to visit, camp and teach younger Paiute people about traditional lifeways and the kinds of environments in which their ancestors lived, without having to pay entrance fees. They would also like to harvest resources such as willows for basketmaking and the wild gourd to make ceremonial rattles because the gourd plant is rarer in availability further up north. The elders commend the NPS for their protection efforts and recommend that access to the public remain closed. The place and the features it contains should be left as they are. The elders would, however, like to be more closely involved in a co-management situation with the NPS rangers (see Chapter 8).

5.4.3 Crater Hill-Site #5

Crater Hill is a volcanic cinder cone located in the southwestern portion of Zion National Park. This place contains abundant evidence of Southern Paiute occupation and use. The place is situated at approximately 4000 feet in a pinyon-juniper environment.

Site Description

The Crater Hills site is located in the southwestern part of Zion National Park in Washington County, Utah, at an elevation of 4340-4400 feet. The study extends along a little-used trail about 0.5 mile north of the northern base of Crater Hill extending from the Park boundary eastward for about 0.75 mile along an unnamed tributary of Coalpits Wash south of a

ridge in the center of Sec. 16, T41N R11W. Interviews were conducted at a point about 0.25 mile east of the Park boundary in NE4 SW4 Sec. 16, and at a point in SE4 NE4 Sec. 16.

Archeological sites including remnants of walls, grinding stones, and lithic scatters, were encountered throughout the study area and were the stimulus for the selection of the site as a study area.

The site has relatively flat topography dissected by steep, narrow drainages. The drainages are 4-10 feet in depth and have flat slabs of Shinarump formation sandstone along the floor. Soils through most of the area are deep and sandy. In places there is a strong gray clay component to the soil, probably Shinarump shales, and Shinarump conglomerate gravels and petrified wood are abundant, especially in areas with clay soils. There is some active erosion along the drainages and some archeological materials are apparently being lost as the washes widen and erode upstream. General drainage in the area is gently eastward toward Coalpits Wash.

Botanical Interpretation

The area represents a transition from Great Basin Desertscrub to Great Basin Conifer Woodland. Old growth singleleaf pinyon (*Pinus monophylla*) and Utah juniper dominate and the woodland increases in density eastward through the area, with big sagebrush in openings and especially abundant in the western portion of the area. For the first few hundred meters the trail passes through disturbed old-field habitat with dense cheat grass and few shrubs and trees. Annuals and herbaceous perennials are fairly abundant and of numerous species; except for big sagebrush, shrubs are scattered. Squawbush and one occurrence of purple sage (*Salvia dorrii*) are most notable. There is considerable open ground, both in sandy and shaley portions of the area. Paiute plants are listed in bold print below along with other plants observed at this location.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Artemisia tridentata</i>	Big sagebrush	<i>Opuntia phaeacantha</i>	Engelmann prickly-pear
<i>Asclepias asperula</i>	Antelope horns milkweed	<i>Opuntia whipplei</i>	Whipple cholla
<i>Bromus tectorum</i>	Cheatgrass	<i>Orobanche ludoviciana</i>	Broomrape, wild asparagus
<i>Calochortus flexuosus</i>	Weakstem mariposa	<i>Penstemon pachyphyllus</i>	Thickleaf beardtongue
<i>Calochortus nuttallii</i>	Sego lily	<i>Penstemon palmeri</i>	Palmer beardtongue
<i>Castilleja chromosa</i>	Early Indian paintbrush	<i>Physaria newberryi</i>	Newberry twinpod
<i>Chaenactis macrantha</i>	Showy dusty-maiden	<i>Pinus monophylla</i>	Singleleaf pinyon
<i>Cryptantha fendleri</i>	Fendler cryptanth	<i>Purshia tridentata</i>	Bitterbrush, buckbrush

<i>Descurainia pinnata</i>	Tansy mustard	<i>Rhus trilobata</i> var. <i>simplicifolia</i>	Squawbush
<i>Echinocereus triglochidiatus</i>	Claretcup cactus	<i>Salvia dorrii</i>	Purple sage
<i>Euphorbia albomarginata</i>	Rattlesnake weed	<i>Senecio multilobatus</i>	Uinta groundsel
<i>Gilia scopulorum</i>	Rock gilia	<i>Sisymbrium altissimum</i>	Tumble mustard
<i>Gutierrezia sarothrae</i>	Snakeweed	<i>Sonchus oleraceus</i>	Common sow-thistle
<i>Helianthus annuus</i>	Common sunflower	<i>Sphaeralcea grossulariaefolia</i>	Globemallow
<i>Hilaria jamesii</i>	Galleta	<i>Stanleya pinnata</i>	Prince's-plume
<i>Hymenoxys cooperi</i>	Cooper's hymenoxys	<i>Streptanthus cordatus</i>	Heartleaf twistflower
<i>Juniperus osteosperma</i>	Utah juniper	<i>Swertia albomarginata</i>	White-margined swertia
<i>Lupinus flavoculatus</i>	Yellow-eye lupine	<i>Tragopogon dubius</i>	Goatsbeard
<i>Mirabilis multiflora</i>	Colorado Four-o'clock	<i>Vulpia octoflora</i>	Sixweeks fescue
<i>Opuntia erinacea</i>	Mohave prickly pear	<i>Zigadenus paniculatis</i>	Foothills death camas

Archaeological Site Description

A series of archaeological sites were visited by Southern Paiute elders near Crater Hill. The sites are located in pinyon-juniper woodland approximately one-half mile north of Crater Hill itself. The sites are situated on a flat plain between two ridges. The sites appear to be temporary hunting camps with associated food processing. The sites are characterized by ceramic and lithic scatters. The presence of metates suggests that food processing also occurred at the sites. Hunting is evidenced by lithic debitage. Two projectile points were recovered from a surface survey conducted at one site. Paiute grayware utility vessels with thumbnail impressions are among the ceramic remains.

Southern Paiute Interpretation

Elders stated that the Crater Hill area was used by Paiute people, primarily for hunting, camping, and collecting plant foods. It was suggested that Paiute people may also have planted irrigated gardens along Coalpits Wash and tributary drainages. The area appears to be an ideal location in which Paiute people hunted and harvested pinenuts.

Features

Water. The Coalpits Wash drainage and an unnamed spring were mentioned as important sources of water for humans and animals. Water was also important in ceremonies and dances related to hunting in this area. As with other important natural resources, Paiute people prayed prior to and while harvesting water to give thanks for its availability.

Plants. Numerous plants were mentioned by elders at Crater Hill. These include pinenuts, purple sage, squawbush, cedar, sagebrush, Indian ricegrass, sego lily, and Palmer's penstemon, known by Indian people as "grandmother's nightcap." Berries, bulbs, roots, seeds, and nuts were processed and eaten. Sagebrush, cedar, and purple sage were used for medicinal purposes as well as in ceremony. Purple sage was smoked. The grandmother's nightcap plant was used as a medicine for sore throat. Squawbush shoots were used for basketmaking, and cedar bark was used for making hunting clothes and cradleboards.

Animals. Elders mentioned several animals as being important to Paiute people in this area. These include deer, porcupine, rabbit, cottontail, quail, mountain sheep, and woodchuck. Eagles were also mentioned as possibly being present. Insects mentioned include cicada and beetles. Other than uses for food and clothing, deer bones were used to make tools and antlers were used in ceremonies. Horns and hooves were also used for ceremonial purposes. Porcupine fat was boiled and used for medicinal purposes. Leg bones of eagles were fashioned into whistles for use in the Sun Dance.

Evidence of Previous Paiute Occupation/Use. The flakes, points, grinding stones, ceramic sherds, and cores are solid evidence that Paiute people camped in the area and used its resources. Such camps are ideal for hunting and food processing. Winter storage of foodstuffs may also have occurred here.

Physical/Geologic Features. Crater Hill and the surrounding mountains were likely important in religious terms. Volcanic cinder cones frequently have religious significance. Burials may be located in the mountains. In addition, the owner of the deer, kainasav, is a spiritual being that is present in areas such as these. He has the power to call the animals together, appear and disappear, move very fast, and change form. The area left elders with a spiritual feeling.

Perceived Impacts

The major impacts to the area mentioned by elders are the recent lack of water, erosion, and perceived pothunting by tourists. Elders noted that the plants did not look well-watered. The dry conditions are perceived to place the area at risk of fire damage. It is clear that tourists and others have disturbed the area. A No Hunting sign has been shot full of holes at the hiker's gate (see photo 8.3). Based on long experience, elders realize that tourists and others remove artifacts from the surface to keep as souvenirs or sell. Such removal of artifacts by outsiders is contrary to Paiute beliefs that such items were intentionally left for other Indian people to use, as well as for the spirit of the owners to come back and use.

Recommendations

Paiute people would like to have access rights to hunt game and harvest plant resources, especially pinenuts, from this area without having to pay fees for entry and harvesting. They recommend that access be restricted and the place left as it is. Erosion is seen as a largely uncontrollable natural process that should be allowed to take its course.



Figure 5.8. Crater Hill

5.4.4 Cave Valley-Site #11

Cave Valley is located in the north-northwest portion of Zion N.P. Actually, the southern part of the valley is within park boundaries. The valley is southwest of the Kolob Reservoir and the Lower Kolob Plateau. Hop Valley extends to the north of Cave Valley.

Site Description

This site is in the northwestern portion of Zion National Park on the Lower Kolob Plateau, at an elevation of 6000 feet. The site is in a shallow cave in a highly dissected sandstone knoll projecting into Cave Valley and contains elaborate petroglyphs and pictographs. Legal description of the locality is T40S R11W Sec. 16 NE4 NE4 NW4.

The site is in an area of rounded, highly eroded Navajo Sandstone outcrops formed along the eastern edge of the escarpment marking the eastern side of Cave Valley. The escarpment is very irregular, with outliers of intricately shaped sandstone projecting west from the main

escarpment. The site is on the north side of one of these projections. The cave is at the western end of a north-facing alcove with sculptured sandstone knobs, approximately 200 feet above the sandy flats that form the floor of the valley. Soils are poorly developed and sandy throughout the area; they are wind blown when dry, and sand which has drifted up to the cave provides access to the site.



Photo 5.9. Southern Paiute elder standing in the entrance to the cave

Botanical Interpretation

Great Basin Desert Scrub strongly dominated by big sagebrush is the natural vegetation on the valley floor where clearing for agriculture has not occurred. Groves of Gambel oak are scattered near the sandstone knolls, especially in shaded north-facing sites. Directly below the cave, at the upper edge of the alcove, is a dense grove of chokecherry (*Prunus virginiana*) and boxelder; these are replaced by Gambel oak in more exposed sites directly below. Various shrubs and herbs not found on the flats below occur among the trees and on outlying small sandstone outcrops. Paiute plants are listed in bold print below along with other plants observed at this location.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Abronia fragrans</i>	Fragrant sand- verbena	<i>Heuchera rubescens</i>	Red alumroot
<i>Acer negundo</i>	Boxelder	<i>Oenothera pallida</i>	Pale evening-primrose

<i>Allium biceptrum</i>	Palmer's onion	<i>Opuntia basilaris</i>	Beavertail cactus
<i>Artemisia dracunculus</i>	Tarragon	<i>Penstemon eatonii</i>	Eaton beardtongue
<i>Artemisia tridentata</i>	Big sagebrush	<i>Penstemon humilis</i>	Low penstemon
<i>Brickellia californica</i>	California brickell-bush	<i>Phacelia heterophylla</i>	Varileaf phacelia
<i>Bromus tectorum</i>	Cheatgrass	<i>Prunus virginiana</i>	Choke cherry
<i>Castilleja chromosa</i>	Early indian-paintbrush	<i>Quercus gambelii</i>	Gambel oak
<i>Celtis reticulata</i>	Netleaf hackberry	<i>Rubus leucodermis</i>	Black raspberry
<i>Cercocarpus intricatus</i>	Littleleaf mountain-mahogany	<i>Senecio multilobatus</i>	Unita groundsel
<i>Chrysothamnus nauseosus</i>	Rubber rabbitbrush	<i>Sisymbrium altissimum</i>	Tumble mustard
<i>Cirsium arizonicum</i>	Arizona thistle	<i>Tradescantia occidentalis</i>	Spiderwort
<i>Desurainia pinnata</i>	Tansy mustard	<i>Yucca angustissima</i>	Narrowleaf yucca
<i>Fraxinus anomala</i>	Singleleaf ash		

Southern Paiute Interpretation

Cave Valley (Paiute tukani yuax/yuak) was interpreted to have been a multipurpose place that was occupied and used for a variety of purposes. People would have lived and collected plants in the upland valley, camped and hunted animals on the ridges and in the hills, and conducted ceremonies in or near the caves in the location. Paiute people may have planted fields in the washes. Cave Valley is along a travel route from Indian Peak and other areas which Indian people used when travelling to and from Zion Canyon and points south.

Features

Water. The unnamed spring at the base of the hills, southeast of Cave Knoll along Pine Spring Wash, was mentioned as an important component of the place. People and animals obtained their water from this spring. Spring water was also used in mixing medicines.

Plants. A variety of plants were mentioned at this place as being important resources. Pinenuts, Indian ricegrass, wild onions, and chokecherry were eaten. Sagebrush was used as a medicine and in ceremonies as an incense. Wood from various bushy plants was used for fuel and construction.

Animals. This upland valley would have been optimal for game hunting. A number of animals were mentioned by elders as being important game animals that were hunted in this area. Mountain lion, coyote, and deer tracks were observed. Deer, antelope, mountain sheep, bobcat, hummingbird, rabbits, raccoon, lizards, and perhaps eagles were mentioned as being important. All but the coyote, hummingbird, and eagle were hunted for food. Hides were used for clothing. Antlers, horns, hooves, and bones (particularly eagle) were used for medicinal purposes as well as in ceremonies. Bones were used to make tools as well.

Evidence of Previous Paiute Occupation/Use. The most prominent archaeological feature visited in Cave Valley is a large cave with abundant rock art (42WS69) on the north side of a rock outcrop south of Cave Knoll (see photo 5.10). This cave is the type site for the Cave Valley rock art style studied by archaeologists. Evidence of fire, food processing, and food storage or rooms (mortar) is also present in the alcove at the rear of the cave. A chert biface and two points were also documented by archaeologists.



Figure 5.10. Cave Valley style pictographs

The rock art consists of red, yellow, green, black and white figures in what archaeologists have enumerated as five panels made at different times. The vast majority of figures are human, with some animal figures as well. Some of the panels have been subjected to vandalism in the form of graffiti. There was no detailed interpretation of figure sets or individual figures due to the darkness of the cave and the obscure nature of the pictographs. Elders simply interpreted the series of panels as telling a story that informed subsequent visitors that they had been there.

Elders interpret the cave as having been used either by a group of people or a solitary medicine man. One elder believed the cave was inhabited and used by the ancient Paiute (hinum). Based on what she observed, another elder provided an extended interpretation on the use of pigments and the function of the cave:

They probably did that [camp and have ceremonies] too, because of the things we see around here, you can see the rock writings and where they have been. For instance, the different colors of drawing, they probably been to a place where it had that coloring of the dirt. You know they used to make medicine out of the colors they gathered and they used those for their ceremonies. They danced and they gave thanks to the creator, that they used a lot of the paints for their ceremony use and their medicine use. Wherever you go, they have always spread the land in four ways, to the south, and the north, and the west and the east, so that there's the reason why they had plenty of food. They fed the earth and (?) food was given back to them in a way that they could gather it and make use out of it. Like I was telling them, perhaps if we followed that drawing on there, perhaps we'd follow that to (?) or a different kind of animal or a different kind of (?) or colors that we use for medicine.

Ceremony use, I was telling them, this thing here, this big old rock, sometimes, when a woman has a child, a brand new child, they don't allow them with their family because you know how women bleed. After their child is born they should live separately, away from their family, that they need to be by themselves until the bleeding stops. I was telling them perhaps that this looks like it was that kind of rock, that we're sitting on.

They stayed here because of bleeding, you know, it's very sacred among the Paiutes, that bleeding is something that on a woman, they should be alone with it, and not let any young people be around because of the blood that comes from them might spoil the man hunting. His aim and things like that. They will never be any good anymore if they go with a woman that's bleeding. Even today it's like that among the Indians, that you shouldn't be among medicine people when they're on, when they got, when they're menstruating. . . they light these fires that they had in here, you can see they had fire in here, where the rocks were heated. They were warmed for the child and the woman. It seems like from these rocks that it could've been like that; of course, when she gets better then the family could join her in here or either in another cave, that's what my grandfather used to tell us. He had that cave himself and you know his wife, when she was menstruating she had to go home and not stay there with her husband when she was bleeding. This kind of a rock was something that was sacred for the woman was what he told my sister, my sister was acquainted with it, with my grandfather, and that kind of advice and what they did was among all the Indian people (CG009).

Physical/Geologic Features. The mountains and caves were the focus of ceremony and worship in the area. The pointed sandstone rock columns at the head of the outcrop are

interpreted to be trail guides used by travelers to chart their route of travel or as a landmark pointing out a place to stop. Indian people relied on such geologic features and incorporated them into their mental maps of a region through which they traveled.

Perceived Impacts

The Cave Valley area is a mix of private property and National Park transects or parcels. Private property is mainly livestock farms and ranches. Tourists do hike to the Cave Valley site in park boundaries. There have been incidences of RVs driving right up to the outcrop. In addition, a 300+ foot well shaft has been drilled at the outcrop around the bend from the cave. Elders pointed out the impacts of cattle grazing, tourist hiking and camping, and well drilling as adversely affecting the place. Weather and vandalism are seen as the main impacts to the rock art cave. They expressed concern over increasing tourism potentially impacting the cave and the rock art it contains. Houses and the boundary fence adversely impact the aesthetics and viewshed of the place. Cattle grazing is seen as adversely affecting the plant communities. Well drilling will result in the spring being shut down.

Recommendations

Elders stated that Paiute people would like to have access to this place to teach younger people about traditional lifeways, conduct religious ceremonies, hunt, and gather plants. One elder recommended that a special time be set aside for Indian access and use of the area without the fee requirement because the place once belonged to Paiute people. Because the site is located in a backcountry section of the park, all visitors can access it without paying a fee. Elders commented on the difficulty in protecting a relatively isolated area such as Cave Valley, although they perceive the NPS is doing the best that it can. One elder recommended that the area be closed off to public access to avoid future vandalism and destruction observed at other locations in the Zion Canyon corridor.

5.4.5 Lamb's Knoll-Site #12

Lamb's Knoll is located on the west side of the road, southwest of the Cave Valley location visited. The elder's site visit was focused on a rock art panel and two caves that also contain rock art.

Site Description

This site is on the southeast face of Lamb's Knoll, less than a mile southwest of the previous site. Rock art is located on a free-standing boulder and in two alcoves or shallow caves at an elevation of 5920 feet in T40S R11W Sec. 16 SW4 NW4 SW4. Lamb's Knoll is an isolated monolith of Navajo Sandstone which is highly dissected with vertical cracks, rounded projections, and caves. South of the base of the hill are rounded sand hills with sandstone boulders that have eroded from the monolith; the sand hills are dissected by well-defined drainages. Soils are very sandy.

Botanical Interpretation

At the base of the knoll, where moisture availability is somewhat increased by runoff from the bare sandstone slopes, shrub live oak is abundant, forming thickets in places. Singleleaf pinyon and several species of shrubs also occur at the cliff base. Shrub live oak and squawbush predominate on the sand hills away from the cliff, with big sagebrush in open areas and sand sage on tops of hills and in some drainages. Narrowleaf yucca and Utah serviceberry are abundant in places. In general, vegetation at the Lamb's Knoll is more xerophytic than at the Cave Valley site. This is a result of the south-facing aspect of the Lamb's Knoll site as opposed to the shaded, cooler north-facing aspect of the Cave Valley site. Paiute plants are listed in bold print below along with other plants observed at this location.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Adiantum capillus-veneris</i>	Maidenhair fern	<i>Opuntia basilaris</i>	Beavertail cactus
<i>Amelanchier utahensis</i>	Utah serviceberry	<i>Opuntia phaeacantha</i>	Engelmann prickly-pear
<i>Artemisia filifolia</i>	Sand sagebrush	<i>Penstemon eatonii</i>	Eaton beardtongue
<i>Artemisia ludoviciana</i>	Water sage	<i>Penstemon palmeri</i>	Palmer beardtongue
<i>Artemisia tridentata</i>	Big sagebrush	<i>Perityle tenella</i>	Jones' rock-daisy
<i>Brickellia californica</i>	California brickell-bush	<i>Phacelia heterophylla</i>	Varileaf phacelia
<i>Bromus rubens</i>	Red brome	<i>Pinus monophylla</i>	Singleleaf pinyon
<i>Bromus tectorum</i>	Cheatgrass	<i>Purshia tridentata</i>	Bitterbrush, buckbrush
<i>Celtis reticulata</i>	Netleaf hackberry	<i>Quercus turbinella</i>	Shrub live oak
<i>Chrysothamnus nauseosus</i>	Rubber rabbitbrush	<i>Rhus trilobata</i> var. <i>simplicifolia</i>	Squawbush
<i>Ephedra viridis</i>	Indian tea	<i>Senecio multilobatus</i>	Uinta groundsel
<i>Gutierrezia sarothrae</i>	Snakeweed	<i>Stipa speciosa</i>	Desert needlegrass
<i>Juniperus osteosperma</i>	Utah juniper	<i>Tradescantia occidentalis</i>	Spiderwort
<i>Marrubium vulgare</i>	Common horehound	<i>Yucca angustissima</i>	Narrowleaf yucca

Archaeological Site Description

The rock art sites visited at Lamb's Knoll are numbered 42WS202, 42WS203, and 42WS2248. The first panel is a partially fractured slab of a large boulder with numerous figures made in red pigment. The first cave (42WS202) contains cultural materials such as mortar remnants from rooms or structures, grinding stones, and incised petroglyphs (human and animal figures, as well as undetermined images). The second cave contains materials associated with habitation such as a grinding stone fragment, mortar remnants of rooms or storage cists, and an indiscernible pictograph.

Southern Paiute Interpretation

Lamb's Knoll was used by Paiute people in similar fashion to the Cave Valley location. People lived and collected plants in the upland valley, camped and hunted animals on the ridges and in the hills, and conducted ceremonies in or near the caves in the location. Paiute people may have planted fields in the washes. Lamb's Knoll is also along a travel route from Indian Peak and other areas which Indian people used when travelling to and from Zion Canyon and points south.

Features

Water. The seep in the second cave as well as the springs across the road were mentioned as important water sources.

Plants. Several plants were mentioned as being important at the location. Yucca and cactus fruits were eaten, as were the berries of squawbush and chokecherry. Pinenuts and various unnamed roots were also eaten. Squawbush shoots were collected for making baskets. Yucca roots were also used as soap. Sagebrush was collected for use in medicine and ceremony.

Animals. Deer, coyote, mountain lion, and rabbits were mentioned as important animals. All except the coyote were hunted for food and clothing.

Evidence of Previous Paiute Occupation/Use. The rock art panel and caves are interpreted as evidence that Paiute people occupied and used the area. One elder perceived the rock art at the Lamb's Knoll locations to be identical to that at the Cave Valley location. The similarity suggested to him that all of the caves in the region were used by Paiute people. Another elder stated that people would move from cave to cave when travelling through the area. The rock art would have been produced as a part of a ceremony, especially those made with red hematite (ompi). No detailed interpretations of the figures were elicited.

Physical\Geologic Features. As with Cave Valley, the pointed sandstone columnar outcrops and buttes served as landmarks in the mental maps of Paiute travelers. One elder mentioned that such features talked to travelers so that they would know in which direction to proceed.

Perceived Impacts

The hematite rock art panel is being impacted by its open exposure to the elements (rain, wind, dust). The first cave visited has been subjected to extensive vandalism, pothunting, and target shooting. The vegetation at the entire location has been subjected to grazing by sheep and cattle. Paiute elders were acutely aware of the natural and especially the human impacts on the location. In their view, these impacts have had a severely negative affect on the condition of the location.

Recommendations

Paiute people would like to have access to this place to teach younger generations about traditional lifeways. Elders recommended that access to the caves be permitted, but entry into them be prohibited. One elder suggested constructing iron gates at the cave entrances to prevent tourists and other outsiders from entering and continuing to vandalize the caves and the rock art they contain. Another suggested that signs at the entrances which point out the sacred nature of the caves be put up. There should be no trail construction or improvement to the social trails that exist. Any plans to post signs on or near the road directing potential visitors to the caves should be discarded.

5.4.6 Weeping Rock-Site #7

This place is located at the northern end of the Zion Canyon corridor, north of Hidden Canyon and east of the Virgin River, Angels Landing and the Organ. Paiute elders visited Weeping Rock on June 5, 1995 and commented on its importance to Paiute people.

Site Description

Weeping Rock is a large hanging garden in a Navajo Sandstone grotto on the east side of Zion Canyon about 2 miles by road north of Zion Lodge. The site is at an elevation of 4400 feet in lower Echo Canyon, about 0.2 mile from its confluence with North Fork Virgin River. The site is a popular developed NPS attraction site.

Hanging gardens form where seeps and springs issue forth from cracks in the porous Navajo sandstone at places where water percolating through the sandstone encounters a harder layer. The moist sandstone flakes off around the seep, eroding the cliff faster in the moist area and developing a grotto, often with an arched overhang of resistant rock layers above. At Weeping Rock there is also a waterfall above the overhang, where Echo Canyon Creek falls to Zion Canyon. The seep is active throughout the year, allowing the assemblage of hanging garden plants to develop and persist.

Botanical Interpretation

The hanging garden itself supports maidenhair fern (*Adiantum capillus-veneris*), two species of columbine (*Aquilegia chrysantha* and *A. formosa*), and other species characteristic of these specialized habitats. Along the creek below the waterfall is a dense grove of velvet ash and

other deciduous trees. Common reed (*Phragmites australis*) was present at the outer edge of the grotto, just beyond the drip line from the falls. Paiute plants are listed in bold print below along with other plants observed at this location.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Acer grandidentatum</i>	Rocky Mountain maple	<i>Linum lewisii</i>	Blue flax
<i>Acer negundo</i>	Boxelder	<i>Melilotus indicus</i>	Yellow sweet-clover
<i>Adiantum capillus-veneris</i>	Maidenhair fern	<i>Mimulus cardinalis</i>	Cardinal monkeyflower
<i>Apocynum suksdorfii</i>	Indian hemp	<i>Penstemon palmeri</i>	Palmeri beardtongue
<i>Aquilegia chrysantha</i>	Golden columbine	<i>Phragmites australis</i>	Common reed
<i>Aquilegia formosa</i>	Western columbine	<i>Quercus gambelii</i>	Gambel oak
<i>Artemisia ludoviciana</i>	Water sage	<i>Rhus trilobata</i>	Squawbush
<i>Celtis reticulata</i>	Netleaf hackberry	<i>Rosa woodsii</i>	Woods wild rose
<i>Cirsium arizonicum</i>	Arizona thistle	<i>Salix exigua</i>	Coyote willow
<i>Epipactis gigantea</i>	Helleborine orchid	<i>Smilacina stellata</i>	Solomon's seal
<i>Equisetum laevigatum</i>	Smooth scouring rush	<i>Tamarix chinensis</i>	Saltcedar, Tamarisk
<i>Fraxinus pennsylvanica</i> ssp. <i>velutina</i>	Velvet ash	<i>Toxicodendron rydbergii</i>	Poison-ivy
<i>Juniperus scopulorum</i>	Rocky Mountain juniper	<i>Vitis arizonica</i>	Canyon grape

Southern Paiute Interpretation

Weeping Rock can best be described as a Southern Paiute shrine. Weeping Rock is a holy place. Paiute people traditionally used Weeping Rock to visit and pray and heal illness with water from the spring. In this way, Paiute people received the blessing of the spring and the spirits associated with it and the Great White Throne. Paiute people from Cedar Mountain to Kaibab visited this place for various medicinal and ceremonial purposes.

Features

Water. The spring water is believed to have medicinal and ceremonial properties, in

addition to being used for drinking. People used the waters to wash themselves or bathe.

Plants. Plants associated with the spring at Weeping Rock were collected for food, medicine, ceremony, and manufacture. Moss was specifically mentioned as being used for medicinal and ceremonial purposes. It can be chewed like a gum. Berries were also mentioned as being used for food.

Animals. Animals mentioned as important to the place include woodchuck. Other animals were hunted near the spring in the winter. Animals were used for food, medicine, ceremony, clothing and tools. Animals may have been washed in the spring water in preparation for cooking.

Evidence of Previous Paiute Occupation/Use. There is little if any archaeological evidence of previous Paiute occupation and use at this place. Therefore, due to its traditional significance and ongoing importance in Paiute culture, it may qualify for designation as a Traditional Cultural Property (TCP). One feature at the place is a series of steps, leading up from the spring, which have been described as Anasazi/Paiute steps.

Physical/Geologic Features. Weeping Rock itself, along with peaks and formations such as the Great White Throne and Angel's Landing are important religious features associated with the place. The Great White Throne is a kind of formation that was used for worship, seeking power, and teaching younger people about the importance of the place.



Figure 5.11 Southern Paiute elders at Weeping Rock

Perceived Impacts

Other than tourist traffic, the place was described as being in generally good condition. Elders recognize the effort of NPS rangers to protect and preserve the integrity of the place despite growing tourist traffic to the location. One concern is potential efforts to increase or make access to the place easier.

Recommendations

Paiute people would like the NPS to allow them free access to this place for worship and ceremony. They recommend that the place continue to be protected and preserved as is currently being done, with caution taken that increased tourism not jeopardize the integrity of the place. Paiute people support visitation by others, as long as they are careful to respect and preserve the place. They recommend, however, that Weeping Rock be closed to the public during the time that Paiute people are there conducting ceremonies or other traditional religious practices.

5.4.7 Middle and Lower Emerald Pools-Site #s 10a and 10b

The Emerald Pools are located in the north-central portion of the Zion Canyon corridor, southwest of Weeping Rock. They are situated in a tributary alcove west of the North Fork Virgin. From the rim of the ledge, there are a series of three pools at the bottom of ledges in step-like fashion, fed by several springs and waterfalls. The upper pool was not visited. The middle pool and the lower pool below it were visited on June 7, 1995.

Site Description

The Emerald Pools are about 3 miles north of the Visitor Center along the Zion Canyon road in Zion National Park. The area is on the west side of Zion Canyon across the river from Zion Lodge, from which it is accessible by a foot bridge. It consists of three separate sites, Upper, Middle, and Lower. Hiking trails lead to all of them. Visits with different Southern Paiute Elders were made to Middle and Lower Emerald Pools, the former designated as Site 10a and the latter as Site 10b.

Middle Emerald Pool is located at an elevation of 5200 feet, along Heaps Canyon. It is near the precipice at the top of the waterfall that forms Lower Emerald Pool. The study site includes an area along the trail near the middle pool and a distance of about 200 meters upstream along the narrow, rocky canyon. The site has a narrow, moist, shaded canyon which flows east through an area of rugged topography and high Navajo Sandstone cliffs. The canyon floor has large sandstone boulders that have eroded from the high walls above. Soils in the canyon are predominantly sandy and secondarily silty.

Lower Emerald Pool, located at the base of a waterfall, has a large grotto within which is a hanging garden. This lower pool is quite different from the middle pool above. There are actually two falls cascading over the precipice, from Heaps Canyon and Behunin Canyon, joining at the base of the falls as a single creek flowing about 1/4 mile to North Fork Virgin River.



Figure 5.12. Lower Emerald Pool

The predominant feature of the site is the large Navajo Sandstone amphitheater, about 500 feet across and 100 feet high from the edge of the overhang to the creek bed below. The walkway, where interviews were conducted, passes behind the falls along the base of the grotto adjacent to seepage lines with hanging gardens. Below the walkway is a rubble slope of sandstone boulders leading down to the creek bed, which is also strewn with large boulders. The site is somewhat open except for the shady grotto, and the canyon is much sunnier than Middle Pool, which also lacks the falls and amphitheater. Moisture at the Lower Emerald Pool comes from seeps, springs, rainfall, and the creek. The hanging gardens, under the overhang, receive no rainfall or creek moisture and are supported solely by seepage. The slopes beyond the overhang and the trees along the creek receive rainfall and water from springs and the creek coming over the falls.

Botanical Interpretation

The opposite walls of the canyon at Middle Emerald Pool are strikingly different. The south wall, cooler and shadier due to its north-facing aspect, supports a lush, deep Mixed Conifer forest of Douglas fir and white fir (*Abies concolor*), occurring lower than its normal elevational range due to the cool microclimate of the canyon. The north side, more open because of its more gradual slope and sunnier due to its south-facing aspect, has a Great Basin Conifer Woodland with Rocky Mountain juniper (*Juniperus scopulorum*) and shrub live oak. Along the creek, boxelder, bigtooth maple, velvet ash, and water birch (*Betula occidentalis*) predominate.

The hanging gardens are notable for the abundance of the nearly endemic Zion shooting star (*Dodecatheon pulchellum* var. *zionense*). Also present are golden columbine, maidenhair fern, and helleborine orchid (*Epipactis gigantea*). Boxelder, bigtooth maple, and velvet ash grow along the creek below the waterfalls. Paiute plants are listed in bold print below along with other plants observed at the Middle Emerald Pool.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Abies concolor</i>	White fir	<i>Heterotheca villosa</i>	Hairy goldenaster
<i>Acer grandidentatum</i>	Rocky Mountain maple	<i>Heuchera rubescens</i>	Red alumroot
<i>Acer negundo</i>	Boxelder	<i>Holodiscus dumosus</i>	Mountain spray
<i>Amelanchier utahensis</i>	Utah serviceberry	<i>Juniperus scopulorum</i>	Rocky Mountain juniper
<i>Apocynum sukسدorfii</i>	Indian hemp	<i>Leptodactylon pungens</i>	Sharp slenderlobe
<i>Aquilegia chrysantha</i>	Golden columbine	<i>Opuntia basilaris</i>	Beavertail cactus
<i>Aquilegia formosa</i>	Western columbine	<i>Pachystima myrsinites</i>	Mountain lover
<i>Artemisia ludoviciana</i>	Water sage	<i>Phacelia heterophylla</i>	Varileaf phacelia
<i>Berberis repens</i>	Creeping barberry	<i>Poa fendleriana</i>	Mutton grass
<i>Betula occidentalis</i>	Water birch	<i>Pseudotsuga menziesii</i>	Douglas-fir
<i>Bromus tectorum</i>	Cheatgrass	<i>Quercus gambelii</i>	Gambel oak
<i>Castilleja chromosa</i>	Early Indian paintbrush	<i>Salix exigua</i>	Coyote willow
<i>Cercocarpus intricatus</i>	Littleleaf mountain-mahogany	<i>Salix laevigata</i>	Red willow
<i>Cirsium arizonicum</i>	Arizona thistle	<i>Smilacina stellata</i>	Solomon-seal
<i>Claytonia perfoliata</i>	Miners' lettuce	<i>Thermopsis montana</i>	Golden pea
<i>Equisetum arvense</i>	Meadow horsetail	<i>Thysanocarpus curvipes</i>	Fringepod
<i>Equisetum hyemale</i>	Common scouring rush	<i>Toxicodendron rydbergii</i>	Poison-ivy

<i>Eriogonum racemosum</i> var. <i>zionis</i>	Zion buckwheat	<i>Vitis arizonica</i>	Canyon grape
<i>Fraxinus pennsylvanica</i> ssp. <i>velutina</i>	Velvet ash		

The plant list for the Lower Emerald Pool includes the following:

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Acer grandidentatum</i>	Rocky Mountain maple	<i>Eriogonum racemosum</i> var. <i>zionis</i>	Zion buckwheat
<i>Acer negundo</i>	Boxelder	<i>Fraxinus pennsylvanica</i> ssp. <i>velutina</i>	Velvet ash
<i>Adiantum capillus-veneris</i>	Maidenhair fern	<i>Juniperus scopulorum</i>	Rocky Mountain juniper
<i>Aquilegia chrysantha</i>	Golden columbine	<i>Leptodactylon pungens</i>	Sharp slenderlobe
<i>Artemisia ludoviciana</i>	Water sage	<i>Penstemon eatonii</i>	Eaton beardtongue
<i>Baccharis salicifolia</i>	Seepwillow	<i>Phacelia heterophylla</i>	Varileaf phacelia
<i>Berberis repens</i>	Creeping barberry	<i>Poa fendleriana</i>	Mutton grass
<i>Betula occidentalis</i>	Water birch	<i>Populus fremontii</i>	Fremont cottonwood
<i>Brickellia longifolia</i>	Long-leaf brickell-bush	<i>Quercus gambelii</i>	Gambel oak
<i>Bromus tectorum</i>	Cheatgrass	<i>Smilacina stellata</i>	Solomon-seal
<i>Cercocarpus intricatus</i>	Littleleaf mountain-mahogany	<i>Thysanocarpus curvipes</i>	Fringepod
<i>Claytonia perfoliata</i>	Miners' lettuce	<i>Toxicodendron rydbergii</i>	Poison-ivy
<i>Dodecatheon pulchellum</i> var. <i>zionense</i>	Zion shooting star	<i>Vitis arizonica</i>	Canyon grape
<i>Epipactis gigantea</i>	Helleborine orchid	<i>Yucca angustissima</i>	Narrowleaf yucca

Archaeological Site Description

The archaeological site near the Emerald pools is numbered 42Ws1167. The site includes a rock shelter and rock art panel. This site was not visited by Southern Paiute consultants during the June 7 visit to the Emerald Pools, but the rockshelter was pointed out to one of the researchers by Jack Burns, Zion's Cultural Resource Specialist. The consultants were informed of its presence.

Southern Paiute Interpretation

Paiute people living in Zion Canyon along the Virgin River traditionally used the Emerald Pools and the resources surrounding them for a variety of purposes. Paiute people camped near the pools, hunted animals who fed and drank at the pools, and gathered plants surrounding the pools. The pools may also have been used for ceremony and prayer, especially related to hunting activities.

Features

Water. The pools (Paiute pahkaru, pool) and waterfalls are the primary components of this place. In addition to providing drinking water for animals and humans, the pools may have ceremonial significance, both on an individual and group basis.

Plants. Plants surrounding the spring were important sources of food for people and animals. Various berries and lily roots and pinenuts were eaten. Paiute people also collected willows to make baskets and cradles, and wood was used to make other utilitarian items.

Animals. Animals that lived near the spring were hunted by Paiute people living in the area. Hunting occurred on the ridgetops. Animals hunted include mountain lion, deer, elk and smaller game such as squirrels and birds. These animals were used for food, clothing, and making tools and shelter. Eagles that may have been present were possibly used for medicine and ceremony.

Evidence of Previous Paiute Occupation/Use. No archaeological sites were visited at this location. There are, however, a rock art panel and a rock shelter along the trail from the lower pool to the middle pool. The panel may have been produced to tell stories about the canyon. It is believed that Paiute people visited and used the panel.

Physical/Geologic Features. The mountains in the area around the pools were visited and used for ceremony and for praying.

Perceived Impacts

The condition of the middle pool is seen as fair. The condition of the lower pool is seen as good. Overall, evaluation of the place as a whole varies based upon where one is located at the time of the evaluation. The lower pool appears to be adequately preserved despite heavy tourist traffic; however, construction and tours are seen as having a deleterious effect on the condition

of the place as a whole. The middle pool environment is perceived as deteriorated because of heavy tourist traffic. It may be that plants and animal habitat are in better condition around the lower pool than at the middle pool.

Recommendations

Paiute people wish to come back and visit the pools to pray and be out in nature without the constraint of having to pay fees. According to one elder:

Now, Indian people have to pay to get through the gates. . . [It's] not right for people who were born here to pay to worship [the] mountains. . . should be free.

This location could be a candidate area for setting aside for Indian use. The Emerald Pools should continue to be preserved by the NPS. However, there should not be any more improvements made to the location. Nature should be allowed to take its course, even if it means a landslide blocks the pools. This simply means that nature will select another location for the pools. Animals should be left alone, not fed by tourists. Plants appear to be adequately protected.

5.4.8 Birch Creek-Site #6 (Scoping Visit)

Birch Creek is located in the central portion of the Zion Canyon Corridor, in a tributary stream canyon west of the Virgin River. The general area in which it is located is known as the Court of the Patriarchs. The sites visited in Birch Creek are actually located on a south-facing talus slope covered in dense scrub oak thicket west of the Sand Bench Horse Trail. Birch Creek was visited on June 5, 1995 at the request of the Zion Cultural Resource Specialist, who is currently in the latter stages of preparing an Environmental Assessment (EA) of this area to assess potential impacts of development in Birch Creek. Because of the lateness of the EA process, and the fact that only two elders were able to make a brief visit to the place, this should be considered only as a scoping visit not to be used for mitigative purposes. More systematic research and fieldwork is necessary to adequately assess the cultural significance of Birch Creek and its resources to Southern Paiute people, as well as to adequately assess potential impacts of proposed development activities.

Site Description

The Birch Creek site is in Zion Canyon, Zion National Park, Washington County, Utah, about 2 miles north of the Zion NPS Visitor Center. It is about 0.5 mile west of North Fork Virgin River on the north side of Birch Creek, at the top of a steep, brushy slope and base of a low cliff of Springdale or Navajo Sandstone formation. The site is reached by following the Sand Bench Trail on a foot bridge over the North Fork Virgin River, continuing on the trail leading up Birch Creek, and heading up the steep slope from a point near a low concrete tank along the Park water system. Elevation ranges from 4340 feet along the creek to about 4500 feet at the top of the slope. The Court of the Patriarchs is an amphitheater about one mile long and one-half mile wide at the base of 2000-foot high Navajo Sandstone cliffs.

The focal point of the site is rock writing on vertical panels at the base of the cliff. The sandstone cliff is eroded into blocks and slabs which are falling off, making a very steep, rocky, sandy slope for about 200 feet down to the Birch Creek flood plain. The open, south-facing slope is dry and exposed. Interviews were conducted on the floodplain at the base of the slope after a visit to the panels had been completed; thus, the study site is considered to extend from the panels to the shore of Birch Creek. The floodplain is sandy and open, with a few large, old cottonwood trees and patches of other deciduous tree species, especially in the lower part near the stream.

Botanical Interpretation

The slope is strongly dominated by dense thickets of shrub live oak, which in places forms impenetrable thickets. On the floodplain, groves of Gambel oak are scattered in the upper, drier locations while velvet ash (*Fraxinus pennsylvanica* ssp. *velutina*) grows along the creek. Horsetails (*Equisetum laevigatum*) are scattered throughout the floodplain, even in drier areas. An open gallery forest of large, mature cottonwoods is present throughout the valley floor, and canyon grape (*Vitis arizonica*) grows on a few trees near the creek.

On the south side of the amphitheater the north-facing slopes have much more mesophytic vegetation, including window boxes with Douglas fir (*Pseudotsuga menziesii*) in shaded alcoves at the base of the cliffs. There are a few springs at the base of these cliffs; one is large enough to support a line of cottonwoods along the slope below it. Larger springs upstream along Birch Creek are one source of water for the Park and also contribute to the culinary water system for the town of Springdale. Paiute plants are listed in bold print below along with other plants observed at this location.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Acer negundo</i>	Boxelder	<i>Lepidium montanum</i>	Mountain pepperplant
<i>Arctostaphylos pungens</i>	Pointleaf manzanita	<i>Linum lewisii</i>	Blue flax
<i>Artemisia dracuncululus</i>	Tarragon	<i>Opuntia basilaris</i>	Beavertail cactus
<i>Artemisia ludoviciana</i>	Water sage	<i>Opuntia phaeacantha</i>	Engelmann prickly-pear
<i>Bromus tectorum</i>	Cheatgrass	<i>Penstemon palmeri</i>	Palmer penstemon
<i>Celtis reticulata</i>	Netleaf hackberry	<i>Pinus monophylla</i>	Singleleaf pinyon
<i>Cirsium neomexicanum</i> var. <i>utahense</i>	Utah thistle	<i>Populus fremontii</i>	Fremont cottonwood
<i>Ephedra viridis</i>	Indian tea	<i>Quercus turbinella</i>	Shrub live oak

<i>Equisetum laevigatum</i>	Smooth scouring rush	<i>Rhus trilobata</i> var. <i>simplicifolia</i>	Squawbush
<i>Erigeron concinnus</i>	Hairy fleabane	<i>Rumex hymenosepalus</i>	Wild rhubarb
<i>Erodium cicutarium</i>	Storksbill, heronbill	<i>Sphaeralcea grossulariaefolia</i>	Globemallow
<i>Fraxinus anomala</i>	Single-leaf ash	<i>Stipa comata</i>	Needle-and-thread grass
<i>Fraxinus pennsylvanica</i> ssp. <i>velutina</i>	Velvet ash	<i>Tamarix chinensis</i>	Saltcedar, tamarisk
<i>Gutierrezia sarothrae</i>	Snakeweed	<i>Vicia americana</i>	American vetch
<i>Heterotheca villosa</i>	Hairy goldenaster	<i>Vitis arizonica</i>	Canyon grape
<i>Juniperus osteosperma</i>	Utah juniper		

Archaeological Site Description

The archaeological site visited at Birch Creek is numbered 42WS108. The site has three panels of incised grooves. The first panel (Panel A) is the westernmost and largest panel. It has 51 grooves, a diamond-shaped figure and one anthropomorph. The diamond-shaped image may be of historic origin. Two incised grooves are present on the ceiling. No cultural materials were present on the floor of the overhang. The second panel (Panel B) is on a sandstone boulder at the base of the cliff. This panel has eleven incised grooves and two ground areas. Five grooves and two ground areas are present across the boulder on the cliff face. The third panel (Panel C) is 20 meters to the east. It has sixteen grooves, some of which may have been caused by branches from the dense scrub oak thicket rubbing against the sandstone. South of the escarpment, in the valley, is the location where the proposed development is to occur.

Southern Paiute Interpretation

Paiute people resided in Birch Creek valley and cultivated gardens along the side stream tributary to the Virgin River. The place was also used for hunting, gathering plants, and conducting ceremonies, as evidenced from the rock art panels on the talus slope (see Chapter 1).

Features

Water. Water from the springs in the talus slope and Birch Creek itself were important for irrigation and human consumption. They also served as a source of water for animals in the area.

Plants. Plants were collected for food and medicine. These plants include wild rhubarb, squawbush berries, acorns from the scrub oak, wild currants, wild strawberries, and prickly pear cactus fruits. At the time of the visit, many of the plants were not quite ready for harvesting. One

elder pointed out that in the past, oak trees were burned, danced around, and used for ceremonies and meetings. Squawbush branches were collected for basketmaking.

Animals. A variety of animals was hunted by Paiute people in this area for food, medicine, ceremony, clothing, and making tools. Animals include quail, deer, rabbit, cottontail, porcupine, squirrel, and perhaps owls and wild turkeys.

Evidence of Previous Paiute Occupation/Use. The rock art incised into the Navajo sandstone indicates previous Paiute ceremonial activity in Birch Creek. The presence of the rock art may also indicate the presence of a burial at the spot or nearby.

Physical/Geologic Features. The mountains surrounding the location serve as a kind of temple in that they were the objects of worship, ceremony and prayer. This suggests that they have special meaning to Paiute people.

Perceived Impacts

This location is perceived to be adversely affected by modernization, development, and tourism. The springs have been capped. Still, the location is perceived currently to be in good condition, owing to NPS protection. This includes plants, animal habitat, the archaeological site itself, and the surrounding mountains.

Recommendations

The location should be left the way it is, and it should continue to be protected by NPS rangers as is currently being done. The absence of vandalism at the panels suggests a low visitation rate by tourists. The perception of the site as a potential burial area suggests that the site is better avoided and restricted from tourist access. If this is not possible, elders recommend that rangers should escort and guide tourists to the panels for visitation along established trails.

5.4.9 Petroglyph Canyonsite #8

Petroglyph Canyon is located about one mile east of the small tunnel. The site was visited on June 5, 1995.

Site Description

This is a rock art site along the east entrance road about 1.3 miles by road east of the eastern or shorter tunnel. The site is about 0.1 mile north of the road in a small drainage with a vertical wall on the west side and sloping slickrock on the east; elevation is about 5450 feet. The distance across the narrow canyon floor is generally less than 100 feet.

The wall and slickrock are both Navajo Sandstone. The canyon floor is of deep sand, and the current creek bed crosses back and forth from wall to slickrock within the study area. Higher parts of the canyon floor are stabilized by vegetation. Rock art is located at several places along the base of the vertical (western) wall of the canyon.

Botanical Interpretation

This is a shaded site which receives little direct sunlight, and along the canyon floor are plants normally found at higher elevations. Scattered old-growth ponderosa pines (*Pinus ponderosa*) line the canyon floor, and there is a dense understory of small deciduous trees, principally bigtooth maple (*Acer grandidentatum*) and secondarily Gambel oak and boxelder ponderosa pines, Utah juniper, shrub live oak, mountain spray (*Holodiscus dumosus*), some of which are characteristic of slickrock habitats. Paiute plants are listed in bold print along with other plants observed at this location.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Acer grandidentatum</i>	Rocky Mountain maple	<i>Oenothera longissima</i>	Tall yellow evening-primrose
<i>Acer negundo</i>	Boxelder	<i>Oenothera pallida</i>	Pale evening-primrose
<i>Amelanchier utahensis</i>	Utah serviceberry	<i>Opuntia basilaris</i>	Beavertail cactus
<i>Arctostaphylos pungens</i>	Pointleaf manzanita	<i>Oryzopsis hymenoides</i>	Indian ricegrass
<i>Artemisia ludoviciana</i>	Water sage	<i>Pachystima myrsinites</i>	Mountain lover
<i>Bromus tectorum</i>	Cheatgrass	<i>Penstemon humilis</i>	Low penstemon
<i>Castilleja chromosa</i>	Early Indian paintbrush	<i>Penstemon laevis</i>	Smooth penstemon
<i>Cercocarpus intricatus</i>	Littleleaf mountain-mahogany	<i>Penstemon pachyphyllus</i>	Thickleaf penstemon
<i>Chaenactis douglasii</i>	Douglas dusty-maiden	<i>Petrophytum caespitosum</i>	Rockmat
<i>Chrysothamnus nauseosus</i>	Rubber rabbitbrush	<i>Phacelia heterophylla</i>	Varileaf phacelia
<i>Cirsium arizonicum</i>	Arizona thistle	<i>Phlox longifolia</i>	Longleaf phlox
<i>Claytonia perfoliata</i>	Miners' lettuce	<i>Pinus ponderosa</i>	Ponderosa pine
<i>Eriogonum umbellatum</i>	Sulfur buckwheat	<i>Poa fendleriana</i>	Mutton grass
<i>Eriogonum racemosum</i> var. <i>zionis</i>	Zion buckwheat	<i>Quercus gambelii</i>	Gambel oak
<i>Erysimum asperum</i>	Western wallflower	<i>Quercus turbinella</i>	Shrub live oak

<i>Fraxinus anomala</i>	Singleleaf ash	<i>Senecio multilobatus</i>	Uinta groundsel
<i>Heterotheca villosa</i>	Hairy goldenaster	<i>Smilacina stellata</i>	Solomon's seal
<i>Holodiscus dumosus</i>	Mountain spray	<i>Thysanocarpus curvipes</i>	Fringepod
<i>Juniperus osteosperma</i>	Utah juniper	<i>Tradescantia occidentalis</i>	Spiderwort
<i>Juniperus scopulorum</i>	Rocky Mountain juniper	<i>Yucca angustissima</i>	Narrowleaf yucca
<i>Oenothera caespitosa</i>	Tufted evening-primrose		



Figure 5.13. Southern Paiute elder gazing at petroglyphs, Site # 8

Archaeological Site Description

The site visited in Petroglyph Canyon is numbered 42WS153. It consists of two panels on an east facing canyon wall 150 meters up in the canyon on the north side of the road. The two panels are about 65 meters apart. The first, northernmost panel has human figures, including one triangular shaped red ochre pictograph. The second panel to the south contains mostly animal figures including bighorn sheep and insects. In addition, there are pecked areas, a human figure and pecked spirals. The total number of figures on the second panel is 77.

Southern Paiute Interpretation

Petroglyph Canyon was traditionally used by Paiute people for a variety of purposes. Most likely Paiute people camped at this location on their way to somewhere else. Hunting and gathering were important activities, as was ceremony, judging from the numerous animal figures on the rock art panel and the presence of red hematite (ompi), respectively. Some of the images were interpreted to signify trails to and from the area.

Features

Water. Water pockets (picavu) were important sources of water at this location for animal and human consumption. They were likely seasonal, much like tinajas or water tanks. The water pockets are perceived to have dried up.

Plants. A number of plants were identified as being used by Paiute people at this location for a variety of purposes. These plants include squawbush, oak, sage, cedar, pine, cacti, wild rhubarb, and Indian ricegrass. Squawbush berries were eaten and the straight young shoots used to make baskets and cradles. Acorns from the oak were eaten. Sage and cedar were burned for ceremonial purposes as well as medicine. Pinenuts were eaten.

Animals. Numerous animals were hunted in the area. Deer, sage hen, porcupine woodchuck, squirrel, mountain sheep, and rabbit were all hunted. The meat was used for food, hides for clothing, bones for tools. Animal parts such as deer antler and mountain sheep horn were used for medicine and ceremony, as were porcupine quills for use on dance clothing.

Evidence of Previous Paiute Occupation/Use. The rock art panels are perceived to have been made by Paiute people. The presence of a red paint pictograph suggests that a hematite source may have been present at one time. The panels are seen to have ceremonial functions due to the presence of ompi (red paint). The presence of the ompi in the context of an overhang also suggests the potential of a burial being present there or nearby. Ceremonies were religious in nature and related to hunting activities. The presence of numerous sheep on the panels attests to the hunting ability of the people.

Physical/Geologic Features. Ompi and the mountains are the key physical components of this place. The mountains are worshipped and used to communicate with spiritual beings. Ompi is a key component in ceremony and must be prayed to in order to be effective. It is also used to protect oneself from ghosts and evil spirits. Paiute people may have worn the ompi while dancing during ceremony. These aspects of the place imbue it with sacred significance.

Perceived Impacts

The major impacts to this location are the lack of water for animals and plants and vandalism by tourists to the rock art panels. The site receives heavy visitation. Elders suspect that tourists have engaged in pot hunting as well as chipping of portions of the rock art panels which is evident.

Recommendations

Paiute people with close ties to the area would like to have access to the place to visit with younger people and pray without having to pay entrance fees and being disturbed by others. Rangers should intensify existing efforts to protect and preserve the place in its current state.

5.4.10 Pah Tempe Hot Springs-Site #13

Pah Tempe Hot Springs is located 20 miles west of Zion N.P. in the town of Hurricane, Utah. The name Pah Tempe derives from the Paiute tumpipah or pahtumpi (rock water or water rock). Paiute people refer to it as kwachungupah (hot water). The warm water, mineral springs emerge from a rock wall into what was once a series of natural pools adjacent to the Virgin River. The springs are currently the site of what is advertised as a commercial resort oasis for natural healing and relaxation. The hot springs were visited on June 9, 1995.

The La Verkin-Hurricane area was a central area of dense Southern Paiute settlement and irrigated horticulture at the time of first contact with Europeans in 1776. Traditionally, local Paiutes and those from as far away as Moapa traveled to visit the hot springs.



Figure 5.14. Impacts of public and private development at Pah Tempe Hot Springs



Figure 5.15. Southern Paiute Elders

Site Description

Pah Tempe Hot Springs is located on the eastern edge of Hurricane, Washington County, Utah, at the base of the Hurricane Cliffs near the western end of the Virgin River Canyon at an elevation of 3000 feet. It was used by Southern Paiutes for many centuries. The site is in T41S R13W Sec. 25 SW4.

This is a geologically complex site where hot mineralized water issues forth from springs at 105oF. The largest flow is from a spring at the base of the south wall which has been excavated back for some 20 feet. Large springs apparently also occur in the river bed. The hot water originates from deep within the earth, and its presence at the surface is associated with faulting which has upturned strata on the west side of the fault to nearly vertical position, and fractured strata on the east side of the fault allowing water to percolate upwards through cracks to the surface. Travertine has been deposited at the outer edge of the pools above the river.

Botanical Interpretation

Natural vegetation at the site has been considerably altered by development. On the steep slopes, a mixture of Mohave and Great Basin Desert shrubs is present, along with some woodland shrubs in shaded or moist places. Princes plume (*Stanleya pinnata*) and galleta grass (*Hilaria jamesii*) appear to predominate. Along the river are scattered tamarisk, seepwillow (*Baccharis salicifolia*), and Emory seepwillow (*Baccharis emoryi*), and cottonwood and Goodding willow (*Salix gooddingii*) trees have been planted along the walkway from the cabins

to the springs. Recent floods have probably reduced the amount of riparian vegetation present along the river. Paiute plants are listed in bold print below along with other plants observed at this location.

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Amelanchier utahensis</i>	Utah serviceberry	<i>Leptodactylon pungens</i>	Sharp slenderlobe
<i>Artemisia ludoviciana</i>	Water sage	<i>Malcomia africana</i>	African mustard
<i>Baccharis emoryi</i>	Emory seepwillow	<i>Melilotus alba</i>	White sweet-clover
<i>Baccharis salicifolia</i>	Seepwillow	<i>Melilotus indicus</i>	Yellow sweet-clover
<i>Brickellia longifolia</i>	Long-leaf brickell-bush	<i>Perityle tenella</i>	Jones' rock-daisy
<i>Castilleja chromosa</i>	Early Indian paintbrush	<i>Plantago major</i>	Common plantain
<i>Eleagnus angustifolia</i>	Russian olive	<i>Salix gooddingii</i>	Goodding willow
<i>Ephedra viridis</i>	Indian tea	<i>Salsola iberica</i>	Russian thistle
<i>Fraxinus pennsylvanica</i> ssp. <i>velutina</i>	Velvet ash	<i>Sonchus oleraceus</i>	Common sow-thistle
<i>Galium stellatum</i>	Shrubby bedstraw	<i>Stanleya pinnata</i>	Prince's-plume
<i>Hilaria jamesii</i>	Galleta	<i>Tamarix chinensis</i>	Saltcedar, tamarisk
<i>Lepidium montanum</i>	Mountain pepperplant	<i>Ulmus sp.</i>	Elm

Southern Paiute Interpretation

There may be no place along the Virgin River corridor that is more sacred to the Southern Paiute people. The hot springs were visited by Paiute people from all regions of traditional territory for medicinal and ceremonial purposes. It is well known even today that the hot springs are a Southern Paiute sacred site. Elders have a fond and vivid memory of traditional use of the hot springs. Visiting the contemporary resort elicited a quite poignant and emotional response on the part of the elders. The following quote illustrates:

. . . it's not the same place I came to years ago. Since the white people have made the trails, what they call improvements on it. In the old days it was natural, you didn't have no trails you just had to be careful to walk to it, and the spring itself wasn't fixed like it is and it just came out of the hole and the people sat under that

and sat in it and talked to it. Those that were sick came from far and near to this area, but since it has been remodeled and fixed now hardly anybody ever comes, and it costs money now so I never heard of them come here no more, but way in the old days they came, lot of people came. They say they come here to doctor their body, doctor themselves when they talk it's like a prayer they said. They told the spring they were hurt and they were sick and they had come to it for help and then when they went back they said they were alright. They felt better after sitting in there, some of them camped around the area to come back here on the days they thought it was good they'd come sit in there. It wasn't fixed like that it was just like [that] way in the old days. It has changed since my grandfather's day, because my grandfather and his wife used come here all the [time]. I was just growing up then, but I noticed later on when we were walking around the area, we were picking peaches, and we'd come here once in a while, that's when they started doing the trails and that thing was all fixed up with cement and that's the way it looks today. I mean it looked a little better than this, but after floods had come and ruined it so it doesn't look the same. It's a different story now, that way in the old days, when I was growing up I used to come with my grandfather, and we used to see sick people come and they used to talk to the spring there, then, when they got well, they felt much better. They came from far and near, all the people knew about it, then they say there's another one in Nevada like this, that's where they go, and I guess they have 'em all over, in different areas, but it has changed now. It's [a] lot different than when I first saw it, before the white man fixed it with a sidewalk. I mean trails, it was just. . . it had no cement work or anything like that and the old people used to talk for long time to the spring, then some of them went back feeling a lot better, that's all I know about this, but in recent years I haven't been here, so that's all I know. (RS010)

Features

Water. The warm waters of the mineral springs have healing properties. Paiute people have visited these springs since aboriginal times to bathe in them to soothe various body ailments and cure a variety of illnesses. The springs need to be talked and prayed to in order to be effective. Patients came either at the instruction of medicine men, or were accompanied by the medicine men to the springs. Elders commented on the medicinal properties of the mineral water based on their personal experience:

. . . that was one of the main things that the Indians looked at, like you know when your child gets a real fever then you wash it up with warm water, in them days the Indians used to [use] this real sagebrush, they would boil that kind or either cedar berries, they would boil the berries and the water gets brown and they would bathe the child in that and that would clean, cleanse their body of whatever sickness they had carried.

Sometimes they would travel to, like being paralyzed, they would go to hot springs, in La Verkin, and they would bring the water home or they would bring. . . my grandmother. . . she was becoming paralyzed. . . so my father took her to that

hot springs in La Verkin, and he would carry her down into the water and she would spend so many hours there, maybe an hour in the water, and they would bathe her from head to toe, and try to help move her limbs. . . they made her drink some medicine. . . that chaparral, they gave her a little of that. . . diluted with water all day. (CG003)

. . . [I] enjoyed coming here because I had arthritis, still got it. . . We used to live in Hurricane. . . and we used to come up here about every week, take a bath. (DH013)

[Indian people go there] to get health, if your bones are aching or something like that, or you got sores, even a headache. . . drink some of that water, then when you're coming out you have to give it a token. . . my grandma used to pick up some rocks, pretty rocks, you know somewhere, and she was talking and she said, "Here, I'm giving this to you my mother, dad, grandpa, grandma," talking as if it was a human, that's the way she used to be. (CG006)

Plants. Food, medicine, and ceremonial plants were mentioned only because of their conspicuous absence. Chokecherry still grows on the river bank. Sage was gathered on the way to the springs, presumably to burn as part of ceremonies. Elders also stated that people often bathed with chaparral as part of the curing process. Many of the trees and plants currently present have been planted as ornamentation.

Animals. Up on the ledges small game was hunted by Southern Paiute people who camped near the hot springs. Rabbits and small antelope were taken. In the summer months, grasshoppers and beetles were gathered and roasted. Bones of small game were ground and used to apply with medicine as a part of ceremonies. Hides were used for clothing.

Evidence of Previous Paiute Occupation/Use. According to one elder, there was once an old Indian camp downstream from the springs under a tree. The same or another camp was located in what is now Hurricane. The elder recalls that her family traveled to the springs from Kaibab frequently in wagons and stayed at the Indian camp. Another elder stated that his grandmother, who suffered from arthritis, traveled from Kaibab to the hot springs on a daily basis to soak in the mineral waters. At that time, there were two cave-like alcoves in which people could sit.

Perceived Impacts

Paiute elders perceive the hot springs and surroundings as being impacted by private and public development. Native plants have been largely removed. The spring is currently piped at its source in the limestone wall, with tributary piping to pools some distance away. The pools themselves have been continually shifted around, lined with cement and plastic liners. Rock walls and platforms have been built at their margins. Cement sidewalks lighted with electricity lead to the pools:

You know about a year and a half ago, two years ago, I was here, everything was OK...that time, you know, they charged us to come in, I think it was \$15 or \$12. . . one of these days the whole thing's gonna close. . . One of these days you'll here about the whole mountain caved in, just like it up to Zions. (DH013)

Recommendations

Paiute people would like to have free access to the hot springs to continue their traditional practice of soaking in the pools to relieve aches and cure illness, as well as holding ceremonies. Like access to Zion National Park, elders feel that it is an injustice to make Indian people pay to use a traditional sacred site that they owned and controlled before the arrival of Euroamericans. Some recommend that the NPS should take control of the hot springs to afford greater protection. Others suggest that NPS and the tribes should co-manage the springs to protect and preserve them. Elders say that the springs area should be made to look more natural like it was in the old days when Indian people visited and used them. It was suggested by one elder that perhaps a special time could be set aside for Indian use of the springs. Overall, the elders do not oppose shared use with non-Indians as long as the latter respect the place.

5.5 Summary

Southern Paiutes utilized the resources of Zion and the Virgin River ecoscape to support their life and culture. They derived benefit from the environment around them and were expected to reciprocate by harvesting plants or making offerings to the creator. In addition to the information the Southern Paiute consultants provided about specific places and resources within the park and ecoscape, their discussions more broadly described their way of viewing the world around them. Several themes emerged from their discussions and are discussed in this chapter summary.

CHAPTER SIX

PIPE SPRING NATIONAL MONUMENT-KANAB CREEK ECOSCAPE SITE ANALYSIS

Southern Paiutes have lived in and around Pipe Spring National Monument since they were created. The purpose of this chapter is to describe the results of the ethnohistoric and ethnographic overview of Pipe Spring. Because Pipe Spring is a relatively small environmental feature, information about the ecoscape of which it is a part is included to help clarify the significance and meaning of the spring for Southern Paiutes. This significance has varied during these time periods described in Chapter One: (1) the creation period, (2) the encroachment period, (3) the early reservation period, and (4) the modern reservation period. Therefore, this chapter is organized into these time periods.

6.1 Pipe Spring's Significance

Pipe Spring is culturally significant for Southern Paiutes in part because it is representative of the lifestyle common to Paiutes in the region before Euro-American encroachment and because it is located within the Kaibab Paiute Reservation. Most of the other springs in the area have passed into private ownership; Pipe Spring provides one of few focal points for demonstrating Paiute life in the region. The significance of Pipe Spring changed when Euro-American settlers took control of the spring and the area surrounding it. As Southern Paiute lifestyles were increasingly threatened by Euro-Americans, the Southern Paiute relationship with Pipe Spring and other places, such as the Kaibab Plateau and the Grand Canyon, changed. The conversion of Southern Paiute lands to Mormon ranches and farms significantly reduced the opportunities for traditional ecological relationships among the Paiutes, plants, and other animals in the region. Pipe Spring was the site of a major cattle operation, and it exemplifies regional impacts of such operations. In addition, Pipe Spring became a key Mormon settlement and a symbol of the effect of Euro-Americans on traditional Paiute lifestyles. It is an appropriate place to explore the interactions between the Paiutes and the Mormons. Finally, the establishment of the Kaibab Paiute Reservation and the designation of Pipe Spring as a national monument within its borders altered the legal relationship with the Southern Paiutes. Although the monument continued to be operated as a private enterprise for many years, eventually the effects of National Park Service (NPS) control over the monument became noticeable. Because of both its location and its history, Pipe Spring remains a very significant place in Southern Paiute culture.



Figure 6.1 Elder next to trough at Pipe Spring

6.2 Study Methodology

Documents were reviewed to obtain information about the historical and current relationships between Pipe Spring and the Southern Paiute people. Documents were collected from (1) the Pipe Spring National Monument natural and cultural resource library and the park archives, (2) the University of Arizona library, and (3) the Southern Paiute files of the researchers.

6.2.1 Onsite Visits

The on-site visit fieldwork at places in the Kanab Creek ecoscape, including Pipe Spring National Monument, was conducted to elicit Southern Paiute concerns for places and the cultural resources those places contain. The fieldwork was also designed to obtain recommendations from tribal elders about how the NPS can best protect these places and resources in consultation with Pipe Spring National Monument personnel. Data are drawn from the in-field ethnographic interviews conducted with tribal elders.

At Pipe Spring, the entire National Monument was considered to be the study site. At Muuputs Canyon, the site included the area traversed by the group from the trail head to the rock art sites in the amphitheater of the canyon.

Once the study site was defined, the botanist covered the study site as completely as possible. The project botanist prepared a list of all plant species observed, noting particularly all culturally significant species encountered, as identified by SPC consultants on previous projects in the region. New culturally significant species identified during this project were noted, and common and scientific names were provided to ethnographers. Welsh et al. (1993) is used as a standard reference for nomenclature for the lists; other references used to identify plants in the field are Kearney and Peebles (1960), Nelson (1976), and Welsh (1990). The botanist also prepared an overview environmental description of the study sites, including the exact location, elevation, general habitat description, geologic setting and history as far as could be ascertained, and brief description of the vegetation association and most important species. Finally, the botanist collected herbarium specimens of culturally significant plants. Specimens of each species were collected once or twice, either the first time encountered or as collectable specimens were found. Time constraints prevented collecting each Indian plant at every site, or all species encountered, including those having no known significance. Plants were pressed in a standard plant press at the first opportunity, at least every evening. Three or four sheets of each species were collected, for deposit at the SPC Cultural Resources office, Pipe Spring National Monument and the Northern Arizona University Herbarium. Collecting permits were provided by the National Park Service for collecting at Pipe Spring.



Figure 6.2 Pipe Spring Meeting Participants

6.3 Ethnographic Overview of Pipe Spring

Pipe Spring National Monument lies at the edge of the Kanab Creek ecoscape defined by Southern Paiutes (see Chapter Four). The monument includes Pipe Spring, the Mormon fort built over the spring, and the edge of the Vermillion Cliffs immediately west of the spring. Southern Paiute occupation of the lower elevations of the Colorado Plateau was determined by the availability of water. Springs occurring along the base of the Vermillion Cliffs and the western slopes of the Kaibab Plateau were chief factors controlling the location of settlements.

Although European explorers passed near Pipe Spring in the 1500s, the region did not experience significant encroachment until 1858 when Mormon scouts were sent to establish settlements on the Arizona Strip. Written documentation of Southern Paiute occupation and use comes primarily from Mormon accounts but also from the reports and diaries of explorers (e.g.; Powell 1875).

6.3.1 General Overview

A brief chronology of Southern Paiute Ethnohistory in Northern Arizona is provided in Chapter One. The Mormon occupation of Pipe and Moccasin Springs and the creation of the national monument were the events causing the greatest impact at Pipe Spring. Table 6.1 identifies the four significant periods in Southern Paiute history at Pipe Spring.

Table 6.1. Significant Periods of Ethnohistory at Pipe Spring National Monument

Time Period	European and Euro-American Activities	Southern Paiute Response
Creation		
pre-1520	None recorded.	Aboriginal period.
1520-1857	Escalante expedition passes through the region and notes lush grasslands. Spanish, Mexican, and Native American traders begin the spread of disease.	Southern Paiutes occupy core areas of primary residence within an extensive territory of seasonal use areas. They farm along Kanab Creek and its tributaries and near springs. They harvest wild cultigens and hunt game in the nearby uplands and go into the Grand Canyon to gather agave.
Encroachment		

1858-1905	Mormon cattlemen dominate activity on the Arizona Strip. Pipe Spring fort is built to ensure water for cattle. Lush grasslands become overgrazed. Kanab Creek becomes a deep gully through what was once a marshland.	Southern Paiutes escape to "regions of refuge" in lower Kanab Creek and the Grand Canyon. Some remain near Moccasin to help Mormon farmers.
Early Reservation		
1906-1953	The U.S. government began providing resources to the Kaibab Paiutes and designated a reservation for the tribe that surrounded Pipe Spring. That reservation was reduced when land was removed for the Mormon town of Moccasin and when forty acres were redesignated as Pipe Spring National Monument. A CCC camp was located at PISP during the 1930s.	Southern Paiutes were given official control over the land and resources surrounding, and at one time including, Pipe Spring, but the political strength of local Mormons prevented their use of those resources. The creation of the National Monument reestablished Mormon control over the spring.
Modern Reservation		
1954-1992	The NPS began to work with Southern Paiutes on issues involving Pipe Spring.	Southern Paiutes asserted traditional use rights and requested that the NPS interpretive program reflect Southern Paiute views.
		The Kaibab Paiute Tribe formally notified the NPS of its interest in the co-management of PISP.

The Creation Period

Archaeological evidence of Southern Paiute occupation of Pipe Spring is not unique. For example, two ceramic sherds, identified as "Paiute Brownware," were discovered in the vicinity of Pipe Spring in 1993 (Fox 1993). Ethnographic research has specified more explicitly the relationship between the Paiutes and the spring. Important springs were controlled by individuals and families (Kelly 1964). Pipe Spring was one of many such springs, named Mi?tiawava (Kelly 1964:8), M̄it̄inwa, or M̄it̄inwa (Sapir 1930:570). Together with Moccasin Spring and another spring located nearby, Pipe Spring was owned by a local chief. That individual, his family, and neighbors used the springs when camping nearby. All along the foot of the Vermillion Cliffs, springs were a key factor in how the local population was distributed. Drinking water, fuel from juniper trees, and food from

rabbit hunting, seed collecting, and farming were available at or near the springs. Higher plateaus were nearby for additional hunting and gathering. In general, Paiute camps moved at the same time, in response to changes in the season.

The Encroachment Period

Although some have speculated that Father Escalante stopped at Pipe Spring during his expedition in the 1540s (e.g. Peterson 1957), evidence of European or Euro-American knowledge of the spring was not documented until 1868 when a party of Mormon scouts led by Jacob Hamblin were camped there. Unlike Zion, Pipe Spring was located away from major trading routes, so the Southern Paiutes living in the region were first forced out of their homeland by the Mormon settlers who arrived there in the 1860s. Numerous accounts describe the region surrounding Pipe Spring when the Mormons arrived.

The treasure was grass - stirrup high, the older cowboys claim. And Indians add that the antelope which darted through it were as thick as jackrabbits are today (McKown 1960:6).

How the country has changed in 40 years. My grandparents and my parents as well as others could turn their mile cows out, get them in with full stomachs and udders at night. Grass everywhere. Now our range cows sometimes come in in the fall so poor they have to be hauled in (Winsor 1959:41).

The grass was so plentiful that good fat beef were supplied every month of the year (Cook 1949:43).

Located in the midst of a grassy plain at a significant source of water, Pipe Spring was an ideal place for Mormon cattle.

(T)he purpose of the call was to build up a church herd of cattle by gathering the tithing and donation cattle from Fillmore souther - these to be fattened and ready to furnish beef cattle to feed the temple herds during the construction of the St. George Temple. From Fillmore to Pipe Springs he gathered 2,000 head of tithing and donation cattle (Cook 1949).

The area was surveyed by a Church member from St. George in 1863. That individual and another man formed a livestock company and used Pipe Spring as their headquarters (Bleak 1928). Moccasin Spring, the other major water source in the area, was first claimed by a Euro-American in 1865. No Federal land survey was conducted to establish the formal description of the land until well past the turn of the century, so neither the settlers nor the Mormon Church were able to acquire legal title to the land (Knack 1993).

In the spring and early summer, in response to Navajo depredations, the U.S. Army began rounding up Navajos in northern Arizona to move them to Fort Sumner, New Mexico in what was to become known as the "Long Walk." That effort was a general failure, and it had serious impacts on both the Navajos and other people remaining on the Arizona Strip. Only approximately half the

Navajos were forced to leave, and the remaining ones were left with little means for feeding themselves. In 1865, Navajo raiding parties began to cross the Colorado River and steal Mormon stock (Olsen 1965). Conflict between the Mormons and the Navajos continued for five years. Paiutes generally were recognized by the Mormons as "friendly Indians" and were called in to help the Mormons. Yet, because a few joined the Navajo raiders, Paiutes were killed as retribution for Navajo actions.

In 1866, the two men who established the ranch at Pipe Spring were killed, probably by Navajos, during the period of fear and unrest motivated by the Ute Black Hawk Indian Wars. The Mormons killed a person from a local band of Southern Paiutes in retaliation for the killing. When the Mormon authorities instructed settlers to abandon small towns and concentrate in a few places, the Mormons living throughout the region left their homes:

In this part of the country the people have been forced to abandon settlements in Mound, Long and Scutempah valleys, at Paria, Kanab, Mocosuc, Pipe Springs, Grapevine Springs, Short Creek, Alexander Ranche, Grafton and Springdale, and have been obliged to seek stronger places of refuge (Musser 1870).

Although Long Valley remained abandoned, Pipe Spring was quickly reoccupied and became the cattle "bank" of the Mormon church. Church members frequently paid their tithing with cattle, and the herd, known as the Canaan Co-op Stock Company grew quickly. In 1869, Brigham Young instructed a Church member, Anson Perry Winsor, to buy the Pipe Spring property and construct a fort around the spring to ensure that the tithing herd would have a constant source of fresh water (Peterson 1957, Winsor nd).

Disease continued to take its toll among both the Mormons and the Paiutes. For example, records of the St. George Stake for 1866 read:

At this time, the dispatch stated there was considerable sickness at Kanab, which weakened the force to build the fort, take care of the stock, etc. There being but eleven men fit for duty.

The fort was completed in 1870. In 1871, the first telegraph station in Arizona was opened at Pipe Spring (Peterson 1957), and, from 1871-1872, John Wesley Powell maintained his headquarters there while exploring the region.

Powell's occupation was one of many events occurring within the Kanab Creek ecoscape that impacted Pipe Spring and the Paiutes remaining in the area. For example, the 1872 discovery of gold brought many outsiders into the region.

In 1872 some small gold deposits were discovered on gravel bars where Kanab Creek enters the Grand Canyon. For a few weeks Pipe Spring did a lively business in groceries as miners rushed to the new bonanza (Farnsworth 1993:12).

Though the gold rush was very short-lived, the sudden arrival of many newcomers pushed the Paiutes farther away from the springs. The presence of settlers throughout the ecoscape also restricted the Paiutes' ability to utilize their traditional transhumant strategies for survival. As settlers established towns, they also took control of the nearby resources. For example, in upper Kanab, the Asay brothers became known for catching and salting fish which they distributed to other Mormon families.

They caught enough fine fish, mostly trout, to fill a twenty-five gallon barrel (Cook 1949:45).

In 1872 the Church herd at Pipe Spring had 1,000 - 2,000 head of cattle (McKown 1960). The Church sold its cattle herd in 1876, and the herd passed through several owners. In 1879, 2,269 head of cattle and 162 horses were reported at Pipe Spring, with over 50,000 head of cattle and large herds of sheep grazing on the surrounding grasslands (Farnsworth 1993). Pinyon trees were frequently removed from the rangelands, and sensitive plants such as Indian rice grass were quickly destroyed. Pipe Spring also became a major stop for travelers. After completion of the Mormon temple in St. George, Pipe Spring became an important stopover for couples from Arizona and southern Utah who were traveling to St. George to have their marriages "sealed for time and eternity" in the temple (Farnsworth 1993). Many couples followed the route, nicknamed the Honeymoon Trail, that passed southwest through Pipe Spring from what is now the northeast corner of the monument, on both sides of where ponds are presently located, and out the western boundary of the monument (Farnsworth 1993, Fox 1993:53).

The spread of Mormon settlers into Paiute territory in the 1860s meant loss of water sources and disruption of the local ecology from which the Southern Paiutes acquired their traditional food sources as well as outright loss of access to their land. One of the purposes of an ecoscape approach to understanding the significance of Pipe Spring is to put the activities that were happening in and around the fort into a broader Southern Paiute perspective. When the Mormons took control of major springs, such as Pipe Spring, they also moved themselves and their cattle into the major surface water of the region, Kanab Creek. The following excerpt illustrates the regional significance of Mormon lifestyles and cattle grazing:

Ever since the first settlers arrived, the entire valley [Johnson Wash] had been covered with meadow grass, which they always cut for hay. But the 1880s were extremely wet years in Johnson. One year the meadows were so wet they could not get onto them to cut grass. So Hyrum S. Shumway took his big blue team and plowed a furrow through the center of the valley. The furrow did its job well. It drained off the excess water so the hay could be gathered. But alas, the protective covering of sod had been broken and every rainstorm thereafter took its load of sandy soil from beneath the meadow grass (Robinson 1972:17).

In 1874, the meadow in [Kanab] canyon was thrown open to livestock, by which the vegetation was gradually destroyed. The creek was thus concentrated in fewer channels and its flow was increased more than half (Davis 1903:10).

The loss of resources had a dramatic effect on the Southern Paiutes living in the region. An estimated pre-contact population of 1,175 Kaibab Paiutes declined to 207 in 1873, primarily due to starvation (Stoffle and Evans 1976). By the 1880s, large cattle herds had caused extensive overgrazing and significantly altered the region's environment:

But today the cattlemen have gone, leaving nothing to tell of their stay but a bit of lavender grass and the sound of wind through a deserted bunkhouse. These and a desolate land. For the grass is gone too (McKown 1960).

As the land could no longer sustain a large herd of cattle, many of the ranchers moved on, leaving behind damaged grasslands that have never recovered. The Mormon Church decided to sell Pipe Spring in 1888 (Farnsworth 1993:13). The site [within Pipe Spring National Monument] was overgrazed during the cattle ranching period and has suffered severe impacts to the A horizon to the point where that soil horizon is basically missing (Fox 1993:15). When the soil's top (A) horizon is disturbed, invasive plant species can become established. When a severe drought was followed by heavy rains in 1882 and 1883, intense flooding exacerbated existing erosion.

As Davis describes:

The first great flood... swept away all of the farms and meadow lands in the canyon, as well as the field crops just south of the village, and scoured out a broad channel beneath the former valley floor. In passing Kanab, the flood was pronounced "as wide as the Missouri River," a rushing stream of liquid mud, bearing cedars, willows, and great lumps of earth... As a result of three years washing, the stream bed was cut down about sixty feet beneath its former level, with a breadth of some seventy feet, for a distance of fifteen miles (Davis 1903:11).

Masses of earth as large as common house floated down [Kanab Creek] with willows still standing. Extensive damage to crops, and all farming land in the canyon was destroyed. Some cattle killed. Canyon near old city dam was cut 50 feet down and 16 rods wide. Flood lasted 7 to 8 hours. Fresh cutting in the channel opened up several new springs (*Deseret News*, July 30, 1883).

Though the Pipe Spring fort was never required for protection against marauding Indians, one source has argued that it was used in as an across-the-line refuge for as many as 40 plural wife families following the 1884 edict banning plural marriages in Utah (Dodge 1960:85).



Figure 6.3 Mormon Settlers Took Control of Pipe Spring and Guided the Water in Troughs from its Source Under the Fort to this Pond.

By 1888, the natural vegetation around Pipe Spring had been denuded and profits from cattle raising was greatly diminished. The Mormon Church decided to sell Pipe Spring and two-thirds of Moccasin Spring to a local stock-raising cooperative. The remaining third of Moccasin Spring was given to the Paiutes. Although this may have been a goodwill gesture, one Mormon account suggests that it was an attempt to keep Paiutes away from the Mormon towns along Kanab Creek (Chubbuck in Knack 1993:216). The remaining property passed through a number of hands over the next twenty years (Heaton 1936:1; Olsen 1965:17-19, Seegmiller 1939:179). During this time, cattle continued to be the primary industry on the Arizona Strip, and the Paiutes were largely excluded from these ventures. Instead, they survived by hunting and gathering, where possible, and through wage work and begging in Mormon towns (Knack 1991 cited in Knack 1993:216). Their access to resources for hunting and gathering continued to be reduced by Euro-American encroachment and then by the withdrawal of land into forest reserves, preserves, and parks (see Stoffle, Halmo, Evans, and Austin 1994). State deer hunting laws that required licenses and restricted numbers impacted Paiutes who had neither a reservation nor off-reservation hunting rights. Mormon Church officials responded to the severity of the Paiute situation by turning to their congressional representatives and seeking Federal assistance (Knack 1993).

The Early Reservation Period

Although individual Mormons resisted the proposed establishment of a reservation for the Kaibab Paiutes in 1907 (see Chapter Two), there was no overt resistance from the Church. In 1908, the property that includes Pipe Spring was acquired by Leonard Heaton. Heaton built his house near Moccasin Spring, and Paiutes continued to farm and camp nearby (Heaton 1973). Heaton and settlers from the town of Fredonia became vocal in their protests of the reservation, and they gained the support of some Church leaders (see Knack 1993). As a result, the town of Moccasin was removed from the reservation. In addition, settlers continued to ignore the reservation boundaries to run cattle, remove timber, and use springs (Knack 1993). Early efforts by the Paiutes to enforce their boundaries were unsuccessful.

The Heaton family attempted to purchase Pipe Spring as unappropriated land, but they were unsuccessful. The family then encouraged the National Park Service to purchase the land as a National Monument in 1923. With the creation of the National Monument, the legal ownership of Pipe Spring changed. However, the actual impact of the transfer of ownership, other than an opportunity to get Federal funding, was negligible. The fort and spring were operated first as a private commercial enterprise and then as a Mormon monument (Knack 1993). Cattle continued to be a prominent feature in the monument's landscape. The water flow from Pipe Spring was allocated in equal thirds to the Kaibab Paiutes, to the cattlemen's association, and to the Park Service, but the Paiutes had considerable difficulty getting their portion of the water. NPS activities continued to disturb the site.

During the early years of the monument, the custodian/superintendent was allowed to continue with various commercial agricultural pursuits (gardening/cattle grazing) without regard for the integrity of the monument... The commercial pursuits of the superintendent ceased sometime around 1933 when water rights for the spring were divided into thirds. However, cattle continued to graze the monument, and gardening did not cease. These activities were continued into the present as part of a living-history component of the interpretive program at the monument (Fox 1993:52).

A fenced cattle runway paralleled the monument's eastern fence and was noted on the monument's planning maps in the 1930s (Fox 1993). During the 1993 archaeological survey, it was discovered that the cattle runway had gone through an archaeological site.

The concentration of cattle has probably further increased the rate of adverse impacts to the surface expression of the site. Regardless, the site's surface consists entirely of active, recent erosional channels (Fox 1993:15).

Leonard Heaton also ran a service station and store at Pipe Spring that became a draw for both Paiute and Mormon children. Frank Harris, a Paiute man who lived just above Pipe Spring, was well-known for his willingness to buy treats for the reservation children.

I ran a service station and a little store at the time, and every mail day which was three times a week he (Frank Harris) would walk down to the store where the mail was left by the carrier, and we would vusut [sic] for a while and if children were arould [sic], and they were there, as they soon learned Frank would byt [sic] them gum or candy or crackers and tell them stories. Some i [sic] think he made up just to entertain them. He seemed to like the children around (Heaton 1967:3).

Between 1935 and 1937, a Civilian Conservation Corps (CCC) camp was established at Pipe Spring. In addition, the Kaibab Paiute reservation was the site of an Indian CCC project.

The Modern Reservation Period

Until 1969, the Paiutes' allocation of water from the spring was dominated by the NPS. When it became clear that the Paiutes would use their water and that use would threaten activity at the monument, the NPS drilled a well on Kaibab Paiute land above the Mormon town of Moccasin and piped water from Pipe Spring to make it available to the tribe.

In 1972, in a cooperative effort between the NPS and the tribe, NPS engineers and architects from the Indian Assistance Division worked in cooperation with tribal members to design a structure that was architecturally compatible with the existing visitor center and employee housing units at the monument. The tribe then leased approximately half the building from the NPS so members could set up a snack bar and gift shop.

In 1993, an archaeological inventory of Pipe Spring was conducted to locate, record, and map all prehistoric and historical-period cultural resources within the monument (Fox 1993). One finding of the report was:

Historical-period ground disturbances can best be described as catastrophic to surface soils through the monument. Cattle grazing, land modifications, flooding, gardening, CCC-related construction, and NPS developments have all contributed to the near total loss of any stable A horizons in the monument. Review of historic photographs at the monument headquarters illustrates a virtually denuded landscape, particularly in the southwestern quadrant of the monument, throughout much of the fort's history... a significant portion of the floral species documented in the monument are invasive species which prefer disturbed soils. (Fox 1993:51).

6.3.2 Resource Use

Pipe Spring is also recognized as a source of important plant, animal, and mineral resources. Southern Paiute resource use has been documented in historic and contemporary studies. This ethnographic overview and assessment did not provide sufficient time or resources for conducting comprehensive ethnographic studies of resource use within Pipe Spring and the greater Kanab Creek ecoscape. Instead, places were visited as representative examples of Southern Paiute interactions with the land and resources of the monument and surrounding ecoscape. To determine the

significance of specific resources at any particular location within the monument, specific studies are needed. Still, a summary of known resources that are culturally significant to Southern Paiutes can provide guidance about how to plan future work. Therefore, this section presents information, from historic and contemporary sources, about plants, animals, and minerals that are found within Pipe Spring and are or have been recognized by Southern Paiutes.

A first measure, albeit limited, of cultural significance is whether or not a thing is named (Berlin 1978, Hunn 1982, Hays 1982). Things that are named are recognized. Selective recognition is critical to survival in environments that contain far more information than can be perceived or processed by human perceptual and cognitive systems. In addition, the degree of specificity of a name, whether that name refers to any of a variety of similar things such as cacti or whether that name refers to only one type of cactus, provides additional information about what is being named.

Plants

A comprehensive list of vascular plants that are found in Pipe Spring and also recognized by Southern Paiutes was created (see Table 6.1). Using historic and contemporary sources, it was found that approximately seventy-two of the seventy-two genera listed in the "Vascular Plant List for Pipe Spring National Monument" (approximately 100%) are currently known to be culturally significant to Southern Paiutes. The plants in the table for which additional information is known about their significance to Southern Paiutes are also included in a general resources directory located in Chapter Seven.

For example, local species of animals that have limited cultural importance tend to be lumped together while those with greater significance are given separate names. Southern Paiutes show a general tendency for giving animals generic names, fairly broad categories that do not distinguish among species or sometimes even genera (Stoffle et al. 1995). For example, they use deer, fish, eagle, duck, and squirrel to name groups of similar animals. This tendency also has been observed in the naming of plants and is consistent with the practices of many cultural groups that have been the subject of ethnobiological studies. The grouping of animals and plants into *genus* was devised during the development of a global classification system as a means of organizing an unmanageable number of organisms. People perceive differences among organisms based on characteristics such as appearance and taste, and in many cases animals and plants cannot be perceptually distinguished at the species or even the genus level. When only one species within a genus exists within any given local community, there is no need to distinguish between genus and species (Atran 1990). Often, in cases where species are distinguished, they are separated by ecological or geographical variation.

The following sections provide tables of the plants and animals known to live within Pipe Spring that are also known to be or have been significant to Southern Paiutes. The information in these tables has been taken from historic and contemporary sources, and the sources of information about each plant or animal are provided. In the tables, plants and animals are generally listed alphabetically by scientific name. Representatives of the same genus have been grouped together. In addition, where Southern Paiutes recognize genera to be related, these genera have been grouped together and listed alphabetically. For example, the pinyon jay (*Gymnorhinus cyanocephala*) and

Steller's jay (*Cyanocitta stelleri*) have been listed directly under the scrub jay (*Aphelocoma coerulescens*). In each case, all Southern Paiute names for a plant or animal within a particular genus (e.g., *Cyanocitta*) have been listed next to the genus name. When a name is known to be used only for one species of that genus, then it is included by the particular species name. The table organization thus responds to the Southern Paiute tendency to group plants and animals together for naming and also the uncertainty regarding the species that were the subjects of historic studies.

Animals

A comprehensive list of vertebrate animals that are found in Pipe Spring and also recognized by Southern Paiutes was created (see Table 6.2). Eleven of the eleven genera included on "Selected Mammal List for Pipe Spring National Monument" (100%) are included in the table because either historic or contemporary information, or both, has been collected about them. In addition, the table includes seven of the nineteen genera of reptiles (36.8%), fifty-five of the 124 genera of birds (44.4%), two of the five genus of amphibians (40%), and zero of the one genus of fish (0%) named on the respective animal lists for the monument. A general resources directory located in Chapter Seven contains additional information, when available, about the significance of certain animals to Southern Paiutes.



Figure 6.4: Southern Paiute Elder

Water

Water is a central feature of Pipe Spring. Springs at the base of the Vermillion Cliffs and along the Colorado Plateau are critical to the distribution of plants and animals, and Southern Paiutes depended on them for their survival. This dependence was heightened further when the lands along Kanab Creek were occupied by Euro-Americans. One season's movement, during which Pipe Spring was used only intermittently, was described by Kelly (1964). The general pattern included staying in the winter camps near the springs and then traveling to the Grand Canyon in the springtime to live in caves while collecting mescal. During the springtime, some individuals also began planting their crops near the springs. By summertime, most people returned to their camps near the springs. Seeds were harvested and additional fields planted at this time.

In the fall, the Paiutes traveled to the top of the Vermilion Cliffs to gather pinenuts and then gathered with individuals from many nearby camps on the Kaibab Plateau to hunt deer. The Paiutes from this region sometimes traveled to the Panguitch area to hunt fish and to the Cedar City area to gather berries. These visits were reciprocated. However, such travel was not part of the normal seasonal cycle. Today, regionwide travel continues to be important for gathering specific resources, attending ceremonies, and visiting relatives, as described in the following sections.

[My father's] area was above Kanab Creek near Mt. Carmel and to Orderville, going all the way on to Cedar and all through the Cedar Mountains. [We moved all around there] and through down here [near Alton] where they gathered pinyon nuts. And, down south among the antelopes, they gathered their antelope meat, and, through the big mountains, they got their deer meat.

6.4 Site-By-Site Discussion

This section of the chapter documents the results of the on-site visits with Southern Paiute tribal elders to places in the Kanab Creek ecoscape. As in the previous chapter, place discussions for Pipe Spring are arranged in an order that best reflects the Kanab Creek ecoscape.

At each place in the Kanab Creek-Pipe Spring portion of the study area the Southern Paiute cultural resource concerns are discussed. Following a general site description that includes an overview of (a) general ecology, (b) soils, (c) plant communities and vegetative associations, a list of Southern Paiute plants observed and/or collected by the project botanist is presented in the overall species inventory for each place. The plant inventory list for each place is followed by a botanical interpretation that assesses the health of the plant communities and general microenvironment. This general site description is then followed by archaeological site descriptions where applicable.

Following the overviews for each place, the discussion turns to the Southern Paiute interpretations of the place and the features present at each place. For purposes of this report, *features* are categories comprised of particular cultural resources. Features of places are divided into (1) *water sources*, whether river, spring, waterfall, seep or some combination thereof, (2) *plants* traditionally used for various purposes, (3) *animals* traditionally used for various purposes, (4) *evidence of previous Paiute occupation and use*, consisting of archaeology sites, artifacts, rock art

and other material remains, and (5) *physical and geologic features* on the landscape such as mountain peaks and rock formations that were traditionally visited for various purposes.

These discussions present information on (1) Southern Paiute use and occupation of the place, (2) the features observed by Southern Paiute consultants at the place, (3) consultants' perceptions of condition and effects caused by natural and human factors on landscape features, and (4) recommendations for protection of features and the place as a whole. For each feature identified as being an important component of the place, ethnographic data is presented on traditional use, perceived condition, and the impact of various factors on identified features. Finally, recommendations for the protection and management of each place and its features are discussed.

Although this study was designed as a cultural resources overview rather than in-depth ethnographic study of particular resources, such as plants and animals, in some locations Southern Paiute consultants identified resources that were previously unrecorded as significant to Southern Paiutes. Where that has occurred, it is noted in the site discussion.

6.4.1 Upper Kanab Creek-Site #2

Site Description

This site is located on an east-facing slope above the broad alluvial valley on the west side of upper Kanab Creek on private lands about 1.3 miles northeast of Alton, Kane County, Utah. The site is located along Dixie National Forest route 087 at an elevation of approximately 7200 feet. The legal location of the site is T39S R5W Sec. 6 NE4. The interview site was along the west side of the road at the upper edge of the valley floor. The road is the approximate boundary between Great Basin Conifer Woodland (Pinyon-juniper) vegetation upslope and Great Basin Desertscrub (Big sagebrush, *Artemisia tridentata*) across the floodplain of Kanab Creek. Most of the valley floor is cultivated and natural vegetation is a minor component of its habitat.

Soils along the valley floor are of alluvial origin from Kanab Creek. They are deep and consist of sand and silt. On the slopes, soils are a heavy, dark gray clay-shale with sandstone rocks and rocks of volcanic origin embedded. The slopes alternate between rounded ridges and shallow, steep-sided drainages. The geologic formation of these slopes is unknown.

Botanical Interpretation

The slopes are dominated by Colorado pinyon, Utah juniper, and groves of Gambel oak (*Quercus gambelii*). Buckbrush (*Purshia tridentata*), snowberry (*Symphoricarpos longiflora*), and American plum (*Prunus americana*), an escaped cultivated shrub, are important shrubby plants in the understory. Herbaceous ground cover is scattered, and there is much bare soil between trees and shrubs. One elder recognized twinpod (*Physaria newberryi*), a perennial herb of the Mustard family, as having cultural significance at this site; this species had not been noted previously. Paiute plants are listed in bold print below along with other plants observed at this location.



Figure 6.5 Results of historic channelization of Johnson Canyon

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Amelanchier utahensis</i>	Utah serviceberry	<i>Phlox austromontana</i>	Desert phlox
<i>Arctium minus</i>	Burdock	<i>Physaria newberryi</i>	Newberry twinpod
<i>Artemisia tridentata</i>	Big sagebrush	<i>Pinus edulis</i>	Colorado pinyon
<i>Berberis repens</i>	Creeping barberry	<i>Plantago major</i>	Common plantain
<i>Bromus tectorum</i>	Cheatgrass	<i>Populus alba</i>	White poplar
<i>Cercocarpus montanus</i>	Alder-leaf mountain-mahogany	<i>Prunus americana</i>	American plum
<i>Chrysothamnus nauseosus</i>	Rubber rabbitbrush	<i>Purshia tridentata</i>	Bitterbrush, buckbrush
<i>Chrysothamnus viscidiflorus</i>	Viscid rabbitbrush	<i>Quercus gambelii</i>	Gambel oak

<i>Juniperus osteosperma</i>	Utah juniper	<i>Ribes cereum</i>	Wax currant, white squaw currant
<i>Juniperus scopulorum</i>	Rocky Mountain juniper	<i>Rosa woodsii</i>	Woods wild rose
<i>Lepidium</i> sp.	Peppergrass	<i>Senecio multilobatus</i>	Uinta groundsel
<i>Malcomia africana</i>	African mustard	<i>Symphoricarpos longiflorus</i>	Long-flower snowberry
<i>Pedicularis centranthera</i>	Pinyon-juniper lousewort	<i>Taraxacum officinale</i>	Common dandelion
<i>Penstemon linarioides</i>	Siler's penstemon	<i>Zigadenus paniculatus</i>	Foothills death camas

Southern Paiute Interpretation

Upper Kanab Creek near the town of Alton was at one time an area of Paiute summer residence and camping. At this location Paiute people cultivated irrigated gardens using the water from Kanab Creek. In addition, Paiute people would collect plant resources and hunt animals. Primarily people from Orderville and Johnson Canyon would migrate back and forth to the lakes and this location as part of their transhumant adaptive strategy. Well watered higher elevation locations were preferred for summer residence.

Kelly (1964) noted that Southern Paiutes from Kanab, Johnson Canyon, and Navajo Well sometimes visited Alton from summer to fall to collect berries and highland seeds (*Artemisia* sp. and *Balsamorhiza sagittata*). Such areas provided a rich diversity of plant and animal resources. From this location, people would travel to Indian Peak to collect pinenuts for winter storage and provision. Locations such as these were used not only for resource harvesting purposes, but also for religious and social activities, including exchange and reciprocal use rights between intermarried groups or district members. Networks would have extended through this area from Kaibab in the south to Richfield in the north. Trade was also conducted between Paiute residents at this spot and kinsmen from the west. One elder noted:

Whoever was passing by could tell them where to go next [to hunt or gather. They would] collect certain willows in spring before sap came, and clay....share it with people who didn't have that material, and in return they would also trade them for something else. That way they would bring things to other people and sharing it, you know they were together like that in sharing the land... They were doing that in the old days, they would move to Kaibab Mountains. That was mostly went down there to gather elderberries, and pinyon nuts, and cactus fruit, all kinds of cactus fruit that they gathered on Kaibab. And in the winter when they traded with people that had different kind of, like that choke cherries, the people from West brought that over towards Kaibab, so the Kaibab people could trade with them for whatever kind of fruit they had and it seemed that they lived such good life, they had vegetables, and they had everything they wanted...(CG002).



Figure 6.6 Upper Kanab Creek

Features

Water. The waters of Kanab Creek were pointed out as being important for irrigation all through Johnson Canyon and human and animal consumption. Water pockets may also have been important sources of water. The water from Kanab Creek was also used in ceremonies held at the location.

Plants. Squawbush, pinenut, acorns, yucca, and gooseberries were mentioned as being used for food and manufacture. Medicinal plants in the area were sagebrush, which was brewed for colds, and buckbrush. The newly identified Newberry twin pod, a member of the mustard family (Paiute name not remembered), was pointed out as having a useful bright yellow flower which was used in the coloring of baskets.

Animals. The location provided a diversity of large and small game. Deer, elk, mountain lion, wolf, sage hen, rabbit, and cottontail were mentioned as being hunted for food and clothing. Deer parts were also used in ceremonies. One elder commented on the Southern Paiute hunting ethic:

Those were the things that they were really protecting at the time when they had plenty of meat, they didn't want them to be killed just for the joy of killing animals, people weren't allowed to do that...and I think that rule was provided by our chief,

and it's been carried on throughout the years...it was their land, but then the Mormons come and...come and they have to do away with some of the animals...they kill them, they poison them...(CG002)

Evidence of Previous Paiute Occupation/Use. Although no artifacts or sites were observed at this location, one elder noted, "Where there's water, there's artifacts." The elder believed there was probably evidence of food processing (grinding stones), pottery, and arrowpoints present in the area.

Physical/Geologic Features. The mountains were mentioned as places of worship and ceremony. Caves in the area would have been used for the same purposes.

Perceived Impacts

The primary impacts to this location have been increased non-Indian settlement, cattle and sheep grazing, establishment of farms and corporate cattle ranches, and road-building. Elders perceive these processes as having adverse impacts on plants, animal populations, and the quality of the environment in general; especially, the water in Kanab Creek. Too much development could lead to increased risk of flooding. Irrigated farming on a large scale could lead to the drying up of Kanab Creek.

I think, people make homes in the area...too many roads too, and that has never been there and I think that's what spoils the scenery and the conditions of the land. (CG002)

Recommendations

Paiute people believe there should have the right of free access for seasonal use and harvesting of resources at this location. Currently, permission is required as much of the property is either privately owned or is state and Federal land (e.g., BLM land) that may be leased. According to one elder, property rights, laws, and licenses make it difficult to protect an area such as this. Still, efforts should be made to protect the area. Paiute people would return to hunt, gather plants, and teach younger people about traditional land use practices. One elder noted that contemporary Indian life is too confined to reservations because there are too many restrictions on use in lands beyond reservation boundaries.

6.4.2 Pipe Spring National Monument-Site #1

Site Description

The study site at Pipe Spring National Monument included areas with more or less natural vegetation to the west and southwest of the castle and pond area, and along a half-mile trail that begins at the castle and proceeds to the top of the bluff to the north. The site is located in Mohave County, Arizona, at an elevation of 4900-5000 feet; legal description of the site is T40N R4W Sec. 17 SE4 SE4. Although the physical setting and biotic habitat are quite different in these two areas, the entire area was defined as one study area for the purposes of this project. Interviews with Elders

were carried out only around the ponds and along the path leading to the west side of the castle; however, elders were encouraged to observe the general setting and plant life of the entire study area from these vantage points.

Botanical Interpretation

The lower area to the west of and below the spring has sandy and alluvial soils on a gentle south to southwest-facing slope. The area may have been a large marsh prior to development of the springs and channelization of the water; a few marshy areas with sedges remain, and the vegetation in general is salt-tolerant, indicating the presence of alkaline soils. Although the area has largely been disturbed in the past, it supports natural vegetation today and is generally not undergoing further disturbance. A combination of native and exotic plants of the Great Basin Desert Scrub vegetation type occurs in the area, which is dominated by rubber rabbit brush (*Chrysothamnus nauseosus*), four-wing saltbush (*Atriplex canescens*), and snakeweed (*Gutierrezia sarothrae*). One area along a moist channel supports a dense grove of coyote willow (*Salix exigua*); it is not apparent whether this is a remnant of natural vegetation along a pre-disturbance drainage, or whether the willows have been introduced (or re-introduced) post-disturbance.

Above the influence of the springs, the rocky, the south-facing slope of the bluff and the mesa top have sandy soils derived from red Moenkopi formation sandstones. The soils are generally shallow and poorly developed in both areas. In contrast to the lowland, this area supports a well-developed Great Basin Conifer Woodland, or Pinyon-Juniper Woodland typical of large areas of Colorado Plateau and Great Basin uplands.

Dominant plants include Colorado pinyon (*Pinus edulis*) and Utah juniper (*Juniperus osteosperma*), with a diverse mixture of shrubs, including greasewood (*Sarcobatus vermiculatus*), squawbush (*Rhus trilobata* var. *simplicifolia*), Utah serviceberry (*Amelanchier utahensis*), shrub live oak (*Quercus turbinella*), and cliffrose (*Purshia stansburiana*). A high diversity of perennial herbaceous plant species and cacti also occurs on the bluff. There is a marked contrast between the vegetation and flora of the area below the springs and the bluff, caused by differences in soils, substrate type, and hydrologic history of the two areas. Paiute plants are listed in bold print below along with other plants observed at this location.

No archaeological sites were visited within the monument boundaries. There is, however, a large "Pueblo" site located partially on monument property. This site was surveyed by NPS archaeologists only within the bounds of the park unit. Archaeologists were not permitted to survey the portion of the site on Kaibab Paiute tribal lands (Fox 1994).

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Amelanchier utahensis</i>	Utah serviceberry	<i>Marrubium vulgare</i>	Common horehound
<i>Apocynum suksdorfii</i>	Indian hemp	<i>Melilotus indicus</i>	Yellow sweet-clover

<i>Aristida purpurea</i>	Purple three-awn	<i>Mentzelia</i> sp.	Stickleaf
<i>Artemisia ludoviciana</i>	Water sage	<i>Mirabilis multiflora</i>	Colorado four-o'clock
<i>Astragalus praelongus</i>	Rattleweed locoweed	<i>Opuntia basilaris</i>	Beavertail cactus
<i>Atriplex canescens</i>	Four-wing saltbush	<i>Opuntia phaeacantha</i>	Engelmann prickly-pear
<i>Bromus tectorum</i>	Cheatgrass	<i>Oryzopsis hymenoides</i>	Indian ricegrass
<i>Carex</i> ssp.	Sedge	<i>Penstemon palmeri</i>	Palmer beardtongue
<i>Chenopodium</i> ssp.	Goosefoot	<i>Pinus edulis</i>	Colorado pinyon
<i>Chrysothamnus nauseosus</i>	Rubber rabbitbrush	<i>Phoradendron juniperinum</i>	Juniper mistletoe
<i>Cleome lutea</i>	Yellow beeplant	<i>Populus alba</i>	White poplar
<i>Cucurbita foetidissima</i>	Coyote gourd	<i>Purshia stansburiana</i>	Cliffrose
<i>Datura meteloides</i>	Sacred datura	<i>Quercus turbinella</i>	Shrub live oak
<i>Descurainia pinnata</i>	Tansy mustard	<i>Rhus trilobata</i> var. <i>simplicifolia</i>	Squawbush
<i>Descurainia sophia</i>	Tansy mustard	<i>Rosa woodsii</i>	Woods wild rose
<i>Echinocereus engelmannii</i>	Engelmann hedgehog cactus	<i>Salix exigua</i>	Coyote willow
<i>Elymus elymoides</i>	Squirrel-tail	<i>Salsola iberica</i>	Russian thistle
<i>Ephedra nevadensis</i>	Nevada Indian-tea	<i>Sarcobatus vermiculatus</i>	Greasewood
<i>Eriogonum corymbosum</i> var. <i>aureum</i>	Golden buckwheat	<i>Sclerocactus whipplei</i>	Whipple fishhook
<i>Eriogonum inflatum</i>	Desert trumpet	<i>Senecio douglasii</i>	Douglas groundsel
<i>Erodium cicutarium</i>	Storksbill, Heronbill	<i>Shepherdia rotundifolia</i>	Roundleaf buffaloberry
<i>Fallugia paradoxa</i>	Apache-plume	<i>Sisymbrium altissimum</i>	Tumble mustard
<i>Gaura coccinea</i>	Scarlet gaura	<i>Sisyrinchium demissum</i>	Blue-eyed grass

<i>Gutierrezia sarothrae</i>	Snakeweed	<i>Sphaeralcea ambigua</i>	Desert globemallow
<i>Helianthus annuus</i>	Common sunflower	<i>Stanleya pinnata</i>	Prince's-plume, Indian spinach
<i>Hordeum jubatum</i>	Foxtail barley	<i>Stipa comata</i>	Needle-and-thread grass
<i>Juniperus osteosperma</i>	Utah juniper	<i>Swertia albomarginata</i>	White-margined swertia
<i>Lepidium montanum</i>	Mountain pepperplant	<i>Ulmus</i> sp.	Elm
<i>Lepidium perfoliatum</i>	Peppergrass	<i>Yucca baccata</i>	Banana yucca
<i>Lycium pallidum</i>	Pale wolfberry	<i>Yucca kanabensis</i>	Kanab yucca
<i>Machaeranthera.</i>	Purple aster sp.		

Southern Paiute Interpretation

As described in the Ethnographic Overview above, Pipe Spring has been and continues to be an integral part of Southern Paiute history and culture. Prior to Euro-American colonization, Pipe Spring was one of many spring sites of Paiute settlement and farming. Residents planted fields in the early spring. People from neighboring groups would come to Pipe Spring to harvest seasonally available resources such as willow, food and medicinal plants or reside there during the summer because of the available water. Clearly, water was, and continues to be, the key resource at Pipe Spring. A brief summary of the early history of Pipe Spring was described in the Ethnohistorical Overview. Information is also available Evans et al. (1994). Much of the early twentieth century history of resource battles with Mormon settlers and the National Park Service have been documented by Martha Knack (1993). During the site visit, one elder summed it up this way:

...they [Paiutes] lived way up there where I was telling you...and they, the white people came and they told them they no longer could use this area anymore and so, gradually they moved back up the other way to their original spring and the white man told them that they would have to work with the government in order to get water...talk with Superintendent and talk about having some part of the water. (DA001)

Some of the early settlers recalled the Indian agent, A.E. Farrow, responsible for trying to help the Paiutes assert their rights as someone who:

sure didn't like the Mormons, and he was going to do everything for the Indians... We had to fight for everything we've got from him. He would have taken over our

homes. And he told the Indians they could have our homes here, because the government was going to move us out and give it to them (Heaton 1967:28).

The National Monument has been the focus of recent consultations with the Kaibab Paiute Tribe. The UofA research team conducted a case study demonstration of NAGPRA consultation on the Pipe Spring collection in 1993 (Evans et al. 1994).

Features

Water. The water from Pipe Spring (Paiute *matungwa*) was used for irrigation, human and animal consumption, and medicinal and ceremonial purposes such as in the sweat lodge. As one elder stated:

...they still use that with their medicine, like when they have that little sweat house up there they get water, secret water they pray for and do everything, then they sprinkle it on the hot rocks when they're going to do that, and its still used for...sacred things today...it has been for a long time. (DA001)

Plants. There is an abundance of Southern Paiute plants present at Pipe Spring due to the permanent flowing spring water (see Table 6.1). Elders specifically mentioned cactus fruits, squawbush, yucca, mint, Indian tea, Palmer penstemon (known by Indian people as "grandmother's nightcap"), cattails, sagebrush, and pinyon pine. Tea, mint, penstemon, sagebrush, and pine pitch were used as medicines. Pitch was also used to line water jugs to haul water from the spring. The other plants mentioned were used primarily for food and manufacturing purposes.

Animals. Water and plants for forage provided an ideal habitat for a number of animals. Paiute elders mentioned deer, mule deer, antelope, bighorn sheep, coyote, mountain lion, bobcat, rabbit, squirrel, porcupine, cottontail, and a variety of birds as being important both traditionally and today. Porcupine was at one time more abundant and hunted as food. The feathers of many different kinds of birds were used in medicine and ceremony. The pelts of rabbits and cottontails were used to make blankets. One elder mentioned that the old people used to make soups out of snake meat.

Evidence of Previous Paiute Occupation/Use. A number of artifacts and human remains have been excavated, both legally and illegally, from the monument property and adjacent lands. Several objects are currently in the Pipe Spring collection (Evans et. al 1994, Fox 1993). Such artifacts attest to Paiute occupation and use of the area since aboriginal times.

Although Southern Paiute occupation of the area immediately surrounding Pipe Spring was significantly restricted by the construction of the fort and Mormon cattle operations, several individuals remained in the area. Diaries of local residents provide information about Frank Harris, a Kaibab Paiute man who lived at Pipe Spring beginning in the fall of 1926. Frank had come to the reservation after being away many years and, according to Leonard Heaton, had had difficulties with the Paiutes living on the reservation (Heaton 1967:1). Heaton had allowed him to live for about a year in a room of the east cabin on the monument property until he and several other Indians moved a cabin near Pipe Spring for his use. Frank was a cattleman and did business in Kanab (Heaton

1967:2). After Frank died, his log cabin was occupied by Paiutes for two more years before it was taken down (Heaton 1967:5). The consultants also talked about Frank Harris:

He died right there. He had a house there. We lived in his house then after he died. He had corrals and everything like that... and [there's] a place way on the other side of the sand dunes, way back there, where that Elbow Butte is. He had a good place there, too, been there, too, got a good garden, good house... He just went back and forth... He stays up there summertime and comes down here wintertime, I think. He had some horses... (DA4).

Physical/Geologic Features. The mountains surrounding Pipe Spring were mentioned by the elders as being significant. Kaibab Mountain, of course, has always been important for hunting and collecting plants. Two elders mentioned a mountain known as Thunder Mountain (Paiute *tumwavahar*) as a place where Paiute people camp and have ceremonies.

...that big mountain up there...in olden days I guess they were living close to nature and they used to hear that rumble...the one way up there, the biggest...right behind the village. (DA001)

Another elder mentioned a hill that was called *tingwavahant*. This may also refer to Thunder Mountain, in that the names appear to be similar.

Perceived Impacts

Paiute elders explicitly mentioned the deteriorated condition of the Pipe Spring environment. All of the elders mentioned the eutrophicated condition of the spring due to lack of dredging and cleaning.

Black and dirty. Ever since housing and these things came in our water has turned like that. Lack of cleaning. Lack of not being able to come here, red tape for gathering medicine...old people used to say the more you use your water the better it'll get for you. (DA001)

Elders described, and documents report, the history of water diversion and well drilling that has served to siphon off substantial amounts of water from Pipe Spring. These wells service Moccasin and Kaibab Indian village. The presence of a monument fence, other development, and human visitors, the spring water and the vegetation are no longer fully available to wild animals for drinking and foraging.



Figure 6.7 The fort built by Mormons over Pipe Spring

When discussing the plants at Pipe Spring, one elder described changes she had observed during her lifetime. She described gathering plants with her grandmother.

My grandmother used to gather [plants]. There was a little green plant, a little old bush, and she'd whip the seeds into a basket. That was good food. She'd clean it in a basket and then she'd grind the little seeds. Oh, first she'd roast it. That was nice and she knew when it was nice and done, you know. And she said you have to be careful when you're cooking it so it won't burn. And then she used to grind it and it used to make real good soup or stew or sometimes she made it into gravy. Oh, it was really tasty. Tastes good. But these past years I've noticed - one year I was going to take my daughters out into the hills to show them what kind of seeds my mother and grandmother used to gather, and there were some that year. but that following year they got some cattle into that area, and they [the cattle] just loved all of that. They cleaned it out. So there were no more seeds. So the cattle and the horses go for that. Just like the people. I don't think there's any more 'cause they love it. There's animals in the area now (CG1)

When asked about the condition of the plants within Pipe Spring, this individual commented:

I think [we didn't see too many of the Paiute plants] because we don't use it, and they just die off.

Elders also mentioned a long history of pot hunting and collecting surface artifacts from the property. One former superintendent is known to have excavated Paiute burials and keep the remains. Elders remember seeing a skull or a skeleton inside of one of the fort's buildings. Touring the buildings marked the first time one elder had been in them since seeing human remains in the building when he was younger. For another elder, this place that is her home brings back vivid recollections of neighbors like Frank Harris giving coins and candy to children, as well as hearing stories about the more gruesome aspects of the area's history. This elder's testimony best sums up Paiute sentiments toward Pipe Spring, Kaibab, and their history here.

He [Frank Harris] was the, he was the only survivor they had when the white people killed most of the people up around the Kaibab area. The people wanted this land..and the...that's what the old people used to tell me. Killed all of the Indians that lived in the area. And that old man, he was a survivor, and then there was another lady, and she used to come around and she lived in Richville, she'd come down, and she'd say she wanted to come down and see the place where his people had lived, and I...what's his name..Indian name...I can't remember it now...and then she said well a lot of her people that lived up here..and the white people killed them, and then they took all this land, was full of Indians she said, and they killed all of them, and then they chopped their heads off and they took it to Salt Lake for, to sell it for bounty and they were getting money for these Indian heads, they had...you know prove they had killed that many Indians, the more heads they brought in the more money they got...and I never did forget that, I never forgot that that's why I never joined the Mormon Church...I was told they're bad people, they killed your people...I never did forget it for that one reason, they're the ones, especially those that are living in this area now up around the road that goes north. And then there was one man that told me that lived in...Panquich...he had hired an Indian man to work for him for many years, and that Indian man worked for him, and ...so one day he told him that he was going to show him something. And that Indian man was wondering what he wanted to show, so he got his suit out and his dress shoes and his hat, cut his hair and dressed him up like a white man. So they got in his wagon and they had horses and they went to Salt Lake and when they got there he said I want to show you something that these white people did to your people, and then he kept pounding in his head that these people are no good, you might like them but they're no good, deep down they did something bad to your people, so they went to Salt Lake and they went to the temple there and they went into this one building and he said there were shelves and shelves all around in that big building. Then that white man showed him, look at all of these skulls in here, these are your people, they came from down there and these white people killed them and cut their heads off then they sold it to these people here and they got lots of money for it, that's why...the other white people come and look at them, but those are your people he told that Indian man, so he ain't ever forgot that and he came back, he came down this way and he used to tell my grandfather about that story. I heard that from my grandfather. He said that was true..what happened to all the people up in this area. And there was that one lady...she was just little

her people were all killed, then there was that old man that used to live over here he was a...he died and he was small too. And he used to talk to the old people up here, you know R's father...he told me that his father was related to them, and he said, I remember that I was told that and he said the white people took him in, took care of him, and...to become a man, and he worked there all this time and then when he got older, when he knew that this was his where his father came from so he came home here and he bought some stuff to build his house and he built it over there and it used to be there and then...that's when that a...R and them made that house out of...you know the old house they tore it down and they built a little cabin next to where my house is they had the cabin there...and when he died I guess these people burned it down...and they took that old house they burned it, and I remember that I was thinking about this story I was told where that little house came from...and that was a long, long time ago...I was thinking just think that house has a lot of stories...people that went to it were told about what happened to the people in this area and then they used to tell me they was hundreds and hundreds of skulls in that place in Salt Lake, and years later we went up there for something, we all the Indian people were gonna put on a dance. And W's mother and his aunt was with us. I was a big girl then, but I understood...I could, you know...when they went into that place near the temple there was a building. And then these ladies went in there and then they, and somebody had told them about it, that your people's skulls are stored in that building and that Mormons come to look at it and ...ah...so we went in that big building and then W's mother and her sister...they went in there and they were standing there looking at those skulls there were shelves and shelves of skulls then they turn around to a lady that was working there and they got up and said: "You got all those people's heads and bones in here," and they were saying everything to that poor lady. And then she said, she stand went over to them, "Ladies" she said "don't say that to me I didn't do that I just work here," she said, "some people did, not me," she said. So finally they calmed down and that, then they told other people about it, and that was the first time I had been there and I didn't want stay in there and look at those skulls. There are shelves and shelves I've seen'em, I went with W's mother and his aunt. And that's the first time I went in there then I believed what the old people used to tell me about these stories, and I really believed it...I been there. But...that's the way these work...strip down that way a lot of my people there, a lot of Indians, not...nothing but white people live there. And ah, those other people...they get so upset over that incident. And there's another place that I was told about and I guess it had happened all over the country. Some of 'em always tell stories about it...and they always say they are no good, that's why I...I...always tell them "don't say that" 'cause there are too many of 'em...there isn't very many of us. And then they bring back the subject and they say, "well the reason why there isn't that many of us is because they killed our people...so I said, "well there nothing we can do about it now, we just listen to the stories...so, that the way I been...I had, once in a while I think about it, you know some certain things people told me when I was growing up. 'Cause my grandfather had a house where all the old people would come and they would...you know...talk about stories. In the wintertime is the

time to tell stories...about the creation and about, oh, all the animals, how they used to talk a long time ago, and they used, even the little rabbits and the cottontails, they used for stories about...and I used to listen to those stories from my grandfather's house, but I guess through the years I haven't, I haven'ta heard anybody tell stories like those old people used to. When I was growing up I heard a lot of stories...and I...when they want me to tell'em a story, my grandchildren, I always tell'em "you can't tell stories in the summertime. But there are many interesting stories about the area...(RS #1)

Recommendations

Despite the deteriorated nature of the environment, elders generally felt positive about the spring being protected by the NPS. In terms of resource use rights, one elder mentioned that there are too many NPS rules. Paiute people enjoy free access to the monument, and at various times the monument has hired Indian people as employees. These, however, have been mostly as craft producers for displays and sales to tourists. One elder commented at length about false interpretations given to tourists about the history of the monument and surrounding area. The interpretive program focuses on Mormon history. Moreover, that history is inaccurate and misleading because Pipe Spring was literally stolen from Paiute people. One elder recommended that the NPS engage in a true co-management and interpretive program with Paiute people as collaborators and employed colleagues (see Chapter Eight).

6.4.3 Muuputs (Owl), Heart Canyon-Site #4

Site

Description

Muuputs (Owl) or Heart Canyon is on the Kaibab Indian Reservation just north of the boundary of Pipe Spring National Monument. An educational hiking trail leads about 0.5 mile from west side of the highway to Kaibab village (Indian Moccasin) west into *Muuputs* Canyon, ending at pictographs at the base of cliffs. The site is in Mohave County, Arizona at an elevation of approximately 5000-5200 feet; legal description of the location is T40N R4W Sec. 17 NE4 SE4.

The elders walked the entire length of the trail, observing plants, archeology, pictographs, and the habitat of the area. At the start of the trail the terrain is relatively flat and sandy, consisting of small sand hills with some wind-blown sand. The trail follows a small, shallow drainage and becomes rockier toward the cliffs; a silt and clay component to the sandy soils makes the substrate more stable. The cliffs are of red Moenkopi formation sandstones, and the soils are red near the cliffs. Large blocks of sandstone which have eroded from the cliffs make the terrain steeper and more rugged in the amphitheater of the canyon where the trail ends.

Botanical Interpretation

Vegetation throughout the area is a Great Basin Conifer Woodland dominated by Colorado pinyon and Utah juniper. In sandy areas at the beginning of the trail is the type locality of a rare yellow variety of beavertail cactus (*Opuntia basilaris* var. *aureus*), present in large clumps. Kanab yucca (*Yucca kanabensis*) is also present along the first part of the trail. As soils become more stabilized farther in the canyon, a number of shrubs become increasingly common, including buffaloberry (*Shepherdia rotundifolia*), cliffrose, shrub live oak, and squawbush. A number of species of herbaceous plants and bunchgrasses also occur. The canyon supports a wide variety of native plant species, including many that have been identified by Southern Paiute elders as having cultural significance. Paiute plants are listed in bold print below along with other plants observed at this location.



Figure 6.8 Overview of Muuputs Canyon

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<i>Acourtia wrightii</i>	Wright's perezia	<i>Oenothera pallida</i>	Paleevening-primrose
<i>Aristida purpurea</i>	Purple three-awn	<i>Opuntia basilaris</i> var. <i>aureus</i>	Utah beavertail cactus
<i>Artemisia bigelovii</i>	Black sagebrush	<i>Opuntia phaeacantha</i>	Engelmann prickly-pear

<i>Artemisia filifolia</i>	Sand sagebrush	<i>Achnatherum hymenoides</i>	Indian ricegrass
<i>Artemisia ludoviciana</i>	Water sage	<i>Penstemon palmeri</i>	Palmer beardtongue
<i>Astragalus praelongus</i>	Rattleweed locoweed	<i>Penstemon utahensis</i>	Utah beardtongue
<i>Atriplex canescens</i>	Four-wing saltbush	<i>Phoradendron juniperinum</i>	Juniper mistletoe
<i>Bromus tectorum</i>	Cheatgrass	<i>Pinus edulis</i>	Colorado pinyon
<i>Chrysothamnus nauseosus</i>	Rubber rabbitbrush	<i>Purshia stansburiana</i>	Cliffrose
<i>Cryptantha confertiflora</i>	Golden cryptanth	<i>Quercus turbinella</i>	Shrub live oak
<i>Descurainia pinnata</i>	Tansy mustard	<i>Rhus trilobata</i> var. <i>simplicifolia</i>	Squawbush
<i>Ephedra viridis</i>	Indian tea	<i>Salix exigua</i>	Coyote willow
<i>Eriogonum corymbosum</i> var. <i>aureum</i>	Golden buckwheat	<i>Shepherdia rotundifolia</i>	Roundleaf buffaloberry
<i>Erodium cicutarium</i>	Storksbill, Heronbill	<i>Sisymbrium altissimum</i>	Tumble mustard
<i>Fallugia paradoxa</i>	Apache plume	<i>Stanleya pinnata</i>	Prince's-plume, Indian spinach
<i>Gutierrezia sarothrae</i>	Snakeweed	<i>Stephanomeria exigua</i>	Wirelettuce
<i>Hilaria jamesii</i>	Galleta	<i>Stipa comata</i>	Needle-and-thread grass
<i>Hymenopappus filifolia</i>	Hyalineherb, Fineleaf hymenopappus	<i>Stipa speciosa</i>	Desert needlegrass
<i>Juniperus osteosperma</i>	Utah juniper	<i>Streptanthella longirostris</i>	Little twistflower
<i>Lepidium montanum</i>	Mountain pepperplant	<i>Swertia albomarginata</i>	White-margined swertia
<i>Machaeranthera</i> sp.	Purple aster	<i>Yucca baccata</i>	Banana yucca
<i>Mirabilis multiflora</i>	Colorado four-o'clock	<i>Yucca kanabensis</i>	Kanab yucca
<i>Muhlenbergia porteri</i>	Bush muhly		

Archaeological Site Description

At the end of the *Muuputs* trail there are two rock art panels the cliff faces in the amphitheater of the canyon. The trails were constructed in 1978 under the direction of the principal investigator for this project. The goal of the trail project was to assist the Kaibab Paiute tribe in their strategy to construct a camping and tourist attraction on the reservation as part of a long term economic development plan. The rock art panels are typical of the area in terms of figures represented. The research team noted recent graffiti on the panels during the site visit (see photo 6.9).



Figure 6.9 Rock art panel impacted by erosion and graffiti

Southern Paiute Interpretation

Muuputs Canyon is seen as related to Pipe Spring and the area of Southern Paiute permanent settlement there and at Moccasin. Villages were at the bottom of the trail. The area was used for hunting and gathering plant foods. The rock art panels would have been used for ceremonial purposes. Men would primarily visit the canyon; women stayed behind because of abundant snakes. The canyon gets its name from the many owls that used to inhabit the canyon. A visitor trail was built by the Southern Paiutes into the canyon during the 1970s. Some NPS personnel perceived this trail to be in competition with the monument's attractions, being located immediately adjacent to the monument fence. During its construction, each day an NPS employee placed a rattlesnake at the trail's entrance to discourage visitors. This practice was discontinued after a short time. One elder stated:

We used to walk these hills from Moccasin on down over to sandy spots, and we'd go back there little bit north almost to the end of this big mountain here, they have some round rocks...they had built these rock homes up there...for people like my grandma, elders...[the] government built [them]...1903...red paint, that was on the end of this big mountain that lays over that way, it's on those points that one point over there, and it's very hard to get at now, my son and my nephews coming through there and they said it seem like it ah, that red paint seem like it been covered, either by the weather or seem like it's ah, you know people don't use it, that's why it's covered or seems like it's disappearing...it's from the rocks...I guess people walked through here and did all these things and then they would go down to the springs to get some water, before this was the only that was available to them, was the Pipe Springs water and the Moccasin...they said they used to come up here all the time to collect plants like that, for their medicine...and yucca, they don't have that many because people don't collect it...they come up here early in spring and collect all those...roast it...us apples...pitch from pine trees used to seal water jugs [to carry water from Pipe]...pitch gum...cedar and sagebrush...(CG004)

Features

Water. The water from Pipe and Moccasin springs were the water sources at this location. They were important for irrigation, human and animal consumption.

Plants. Several plants were mentioned by the elders as being important to this place. Squawbush was used for food (berries) and manufacture (shoots). Indian ricegrass and pinyon pine nuts were also eaten. The pitch from the pinyon pine was used for manufacturing. Cedar was mentioned as very important because the berries and the limbs were used in ceremonies and for blessings. Sagebrush was mentioned as a medicine. The leaves were boiled and strained and the tea was drunk for colds and congestion. Pine pitch and cedar needles were used in medicine as well. Indian spinach (*Stanleya pinnata*, Paiute *tumar*) was also observed. The leaves were used as greens.

Animals. Elders mentioned deer, owl, bobcat, rabbit, and squirrel as being important here. All but the owl were hunted for food clothing, tools, and medicinal and ceremonial purposes. Paiute people also kept their horses in the canyon.

Evidence of Previous Paiute Occupation/Use. The rock art panels and grinding stone fragments at the bottom of the trail indicate previous Paiute presence. A formal rock art study is necessary to determine whether the rock art panels reflect what has been identified as a Southern Paiute rock art style (see Stoffle et. al 1995a). Two of the rock art figures were interpreted to be an owl and a bobcat. One individual identified a figure of a woman on the panel. The figures indicated to one elder that the site could possibly be a burial site.

Physical/Geologic Features. The canyon is perceived as a sacred place. The amphitheater would have been visited to pray, conduct ceremonies, and teach younger people about the lifeways of the old people.

Perceived Impacts

The trail through the canyon has deteriorated somewhat due to the elements, non-use, and lack of maintenance. The graffiti on the rock art panels is attributed to CCC camp workers and, more recently, tourists. Desecration has occurred despite signs at the rock art panels prohibiting access beyond a short rock wall and delineating the site as a sacred area not to be disturbed. Weather and exposure are also affecting the condition of the panels.

Recommendations

Muuputs Canyon is on reservation land and under the jurisdiction of the Kaibab Paiute Tribe. Elders recommended leaving the area as it is, except for trail improvement to make the hiking easier. Tours or hikes through the canyon to the rock art sites, however, should be guided by tribal members. According to one elder:

Well, I think just having guided visitors or hikers come through here instead of going on their own...they might destroy a plant that was important...that's why they need a guide...some parts of the trail should be fixed...walking places should be more safer. (CG004).

6.5 Summary

Southern Paiutes utilized the resources of Pipe Spring and the Kanab Creek Ecoscape to support their life and culture. They derived benefit from the environment around them and were expected to reciprocate, by harvesting plants or making offerings to the creator. PISP could assist in the preservation of and education about Southern Paiute cultural traditions. Pipe Spring, and the fort that was built around it to protect both Mormon settlers and water for their cattle, is both a physical and symbolic reminder of the Euro-American encroachment into Southern Paiute territory. Many of the impacts of this encroachment, such as the spread of disease and the destruction of native plant resources, were unintentional and frequently unknown. PISP could educate local, regional, national, and international visitors about the impacts of intercultural competition for land and resources. PISP was created within the boundaries of the Kaibab Paiute Reservation. Efforts to coordinate activities between the NPS and the Tribe have been varied and of mixed success. PISP could serve as a model of a partnership between the NPS and a tribal government.

CHAPTER SEVEN

CULTURAL RESOURCE INVENTORY

The purpose of this chapter is to compile an inventory of cultural resources that Southern Paiute people have used and continue to use in Zion National Park (Zion) and Pipe Spring National Monument (PISP). This inventory is compiled from recent interviews with Southern Paiute elders and documented evidence, such as books, articles, and unpublished manuscripts. The great bulk of these documents are eyewitness accounts of Spanish or Euroamerican travelers who recorded the presence and activities of Paiute people at some locations throughout the study area. Some documents come from oral history interviews with Paiute people conducted by an anthropologist early in the twentieth century.

It is important to devote special attention to the cultural resources in Zion and PISP because they are historically and contemporarily important to the survival and prosperity of the Southern Paiutes as a unique people. Southern Paiute people believe that the plants, animals, soil, minerals, and water of this land have their own self-willed life forces. They have talked and continue to talk to these resources, receiving guidance as to how the resources desire to be treated. The cultural significance of these resources is reflected in the Paiutes' continued reliance upon these resources for their mythology, food, medicine, ceremonies and the manufacture of traditional items. This importance is further demonstrated by the fact that knowledge concerning the plants and animals and their uses is currently being transmitted to younger generations of Southern Paiute people.

7.1 Soil, Water, Mineral, and Stone Resources

A number of natural materials found in and around Zion and PISP were and still are used by Southern Paiute people for a variety of purposes such as ceremonies and manufacturing. These materials include stone, wood, water, and various minerals. However, this study did not allow time for an thorough look at the specific soil, mineral, and stone resources that occur in the Kanab Creek and Virgin River ecosystems. The following section mentions a few natural materials, found in other areas and possibly found in the parks or in the areas surrounding the parks, that are important to Southern Paiute people. This section has been included to provide a broader perspective on the importance of these resources.

The concern of Southern Paiutes for natural elements is strong, because soil, water, stone, and minerals are components of the holy land. Many of the Southern Paiutes have commented that they hold in high regard people who have knowledge of water sources, which are so vital for sustaining life in the desert. Paiutes believe that natural elements should be protected from contamination, alteration, or even movement without talking to them. Like plants and animals, Southern Paiutes believe that natural elements have rights, human-like qualities, and life of their own.

7.1.1 Water

The belief that the water sources are connected to each other underground correlates with the belief in Water Babies. Southern Paiute people mentioned that Water Babies are often present at springs. According to ethnographic literature (Miller 1983), Water Babies own springs and have elaborate systems of underground pathways, usually taking form as underground watercourses. Water Babies travel from one spring to another and are never good, at best being neutral, and are extremely dangerous. If a person angers a Water Baby, the person will almost surely die. By extension, then, any activity that damages or destroys the underground water sources will anger the Water Babies who own it, thereby endangering everyone in the vicinity.

Water bodies, like springs, streams, rivers, and lakes are viewed as having rights and human-like qualities. If water bodies are misused they can become angry and engage in self-motivated actions.

7.1.2 Minerals

Ethnographic studies of human societies document that people who live in a region over long periods of time come to understand, explain, and deal with most of the natural components of their environment. Such knowledge is termed "local knowledge" or "emic perspectives" of the environment. Paiute people certainly qualify as having local knowledge inasmuch as they have lived in the region for more than a thousand years. One Paiute elder, for example, discussed places where the old people told him never to spend the night. These were places of great power that could make you sick if you remained there. He also told about powerful rocks that could cure or harm and were only utilized by religious leaders. If these rocks were broken, they could release their power and potentially harm people. Consequently, it was always better not to break a rock unless you understood the extent of its power.

Other Indian people confirmed these ideas about rocks having power. It is recognized that some rocks have more or different power than others. Breaking a rock or removing it from its place without fully explaining these actions not only releases the power inherent in the rock but also angers the rock.

Rocks can also be self-willing, inasmuch as they can reveal themselves to people and act on people. Crystals, for example, have a self-willing, animate power, and will reveal themselves to a person whom they desire to be with. If this person picks them up, the person will have great luck. The luck, however, is taken away from others and eventually people will come to recognize this and single out the excessively lucky person as having used some non-human power at the expense of his or her people. Threats of community sanctions usually make the person take the crystal back to where it had revealed itself to them and return it with an explanation of why it was being returned (Levi 1978; Miller 1983).

7.1.3 Stone

Southern Paiute pipe bowls were fashioned from stone. Most of this stone was "a gray-blue- green color obtained in [a] cave of Grand Canyon near [the] river" (Kelly 1964:47). Once collected, this stone was transported back home and shaped into pipe bowls, and drilled with a stone tipped shaft for inserting a cane stem.

7.1.4 Salt

Kelly noted that Southern Paiute people obtained a dark-colored "salt called *timpi-oavi* (rock salt)" from the Grand Canyon (Kelly 1964:55). For example, the San Juan Paiutes traditionally gathered this resource from the salt cave at the Little Colorado River junction (Kelly 1964:172). Natural salt is very important to the Southern Paiutes and they continue to incorporate it into their culture in many ways. For example, there is a San Juan legend that tells how a supernatural being, *ø anungwhts* ("salt person"), visited the San Juan and left a trail to the salt cave. The salt cave remains an extremely sacred site today.

7.1.5 Pigment

Pigment or hematite clay is commonly known as red ocher. It is used by the Southern Paiute for such purposes as decoration and was historically used for trade. Dellenbaugh recorded that red ocher (*ompi*) was used to paint the legs of a table in the house of Lyman Hamblin. Hamblin told Dellenbaugh he had gotten the paint from the Paiutes. Dellenbaugh noted that in addition to trading the ocher to the Mormons, the Shivwits Paiute likely traded the hematite to Hualapais, Havasupais, Apaches, and perhaps "even as far east as the Pueblos of the Rio Grande" (Dellenbaugh in *The Masterkey* 7 [1933]:85-87). Kelly also reported that there was some use of paint among Paiute people. "A red pigment (*ompi*) looked 'just like red earth'; obtained in Ankati district and near Grand Canyon" (Kelly 1964:66).

7.1.6 Clay

Clay was used for making pottery. Lowie documented that:

"The Paiute cooked in earthen kettles (*pambö'n^ø*) made of hard clay (*wiáb^ø*). According to one hardly convincing Moapa statement these used to be made by a *man* specializing in the art for the rest of his people. This is indeed contradicted by the Shivwits, who say their 'mud buckets' [*pambö'ni*] were made by women, as we should expect. It proved impossible to have a pot made, but a brief description was given. The clay used was of a yellow color but became brownish-black on firing" (Lowie 1924:225).

7.2 Southern Paiute Identified Plants

Southern Paiutes relied upon plants for their survival, making ethnobotanical knowledge essential to their "transhumant adaptive strategy" (Stoffle and Evans 1976) for living in the desert. An intimate knowledge of plant genetics has been suggested as a major "cultural focus" of desert-dwelling American Indian people (Anderson 1956; Shipek 1970). Being horticulturalists is a cultural characteristic that separates Southern Paiutes from closely related groups in the Great Basin (Dobyns and Euler 1980).

A wide variety of plants continue to be utilized by Paiute people for food, medicine, ceremonies, and economic activity (Bye 1972). It is evident that plants are important because Paiute people say a prayer before a plant is picked and utilized with a request that it provide the needed medicine or nutrition. The plant, like the people, has rights and human-like qualities. The prayer is directed to the plant because the plant is perceived as an anthropomorphic organism.

This section of the chapter gives a brief summary of the cultural significance of various plants found in Zion and PISP. Southern Paiutes recognize and talk about plants according to their life stages, so complete information about culturally significant plants can only be obtained from multi-season studies. Because most studies are completed in only a single season, there is undoubtedly much to be learned about the Southern Paiute use of plants. Therefore, an absence of information for a particular plant does not necessarily indicate that the plant was not important to the Paiute people, but rather that its use or importance has not yet been recorded. Specific information could not be found for some of the plants known to be important to Southern Paiutes. Therefore these plants are only listed in this section. For Southern Paiute names or for more information on plants in this section, refer to Tables 5.2 and 6.2.

Abies concolor - White fir

A teaspoon of resin from the bark is eaten daily to cure tuberculosis. The bark is also boiled and drunk freely for tuberculosis instead of water. Fresh pitch is placed on cuts and then covered with a bandage. The needles are also brewed into a tea and used for pulmonary troubles. Resin from the bark can be added to this tea as well (Train 1957:19).

Achillea sp. - Yarrow

Southern Paiutes use plants in this genus to make medicinal leaf teas for coughs, weak or upset stomachs (Stoffle and Dobyns 1982:131), bladder ailments and as a blood tonic after childbirth (Train 1957:21). Their leaves are also mashed and made into a poultice for swellings, sores, and headaches. Leaves may be boiled and used as a disinfectant poultice for collar sores on horses, as a medicinal wash for fevers, sores, and rashes, or, when strained, as drops for sore eyes. Leaves and roots are used in many different ways for toothaches. It is believed that the nerve of the ulcerated tooth will eventually be killed if the root is used continuously. Roots from plants in this genus are also chewed for colds, gas pains, and are believed to be good for the kidneys (Train 1957:20).

Agastache urticifolia - Horse mint

The leaves of this plant are used for indigestion and stomach pains and are mashed into a poultice for swellings. The plant is also boiled into a medicinal tea for colds (Train 1957:21).

Agropyron smithii - Western wheat grass

Western wheat grass seeds are collected and ground for use as food (Stoffle and Dobyns 1982:120, Stoffle and Dobyns 1983a:80).

Agrostis exarata - Spike bentgrass

The seeds of *A. exarata* are collected and ground for use as food (Stoffle and Dobyns 1982:120, Stoffle and Dobyns 1983a:80).

Allium sp. - Wild onion

Historically, Southern Paiutes used wild onions for food or manufacture (Euler 1966:23). Today, they continue to cook the bulbs and use them as food (Stoffle and Dobyns 1982:123, Stoffle and Dobyns 1983a:83, Stoffle, Dobyns and Evans 1983:121).

Amaranthus albus - Pale amaranth

Historically, pale amaranth was used for food or manufacture (Euler 1966:23). Today, Southern Paiutes continue to gather the seeds of *A. albus* and process them in various ways for use as food (Stoffle and Dobyns 1982:120, Stoffle and Dobyns 1983a:80). They were also used as pot herbs for cooking (Stoffle and Dobyns 1982:126).

Ambrosia sp. - Ragweed

No details available at this time.

Amelanchier sp. - Serviceberry

Historically, the wood from plants in this genus was used to make bows (Fowler and Matley 1979:62) and arrow shafts (64). The berries of *A. utahensis* (Utah serviceberry) and *A. alnifolia* (Saskatoon serviceberry) were also consumed as fresh fruit (Stoffle and Dobyns 1982:122, Stoffle and Dobyns 1983a:83) and used in manufacturing processes (Stoffle, Dobyns and Evans 1983:121). It is not known whether this plant is currently used (Stoffle, Halmo, Evans, and Olmsted 1990).

Androstephium breviflorum - Funnel-lily

No details available at this time.

Anemone tuberosa - Desert thimbleweed, Windflower

No details available at this time.

Angelica sp. - Angelica

Plants in this genus are smoked by Southern Paiutes to ease coughs (Stoffle and Dobyns 1982:137, Stoffle and Dobyns 1983a:150). The roots of these plants are dried and chewed for sore throats or coughs, brewed into a medicinal tea for colds and kidney ailments, and are pulped and applied to cuts and sores (Train 1957:22).

Apocynum cannabinum -
Dogbane

Historically, Southern Paiutes used the fibers from *A. cannabinum* to create rope or string for stringing bows, making rabbit nets, lacing bone tubes into necklaces, or tying feathers to headresses (Fowler and Matley 1979:24-25, 32, 54, 62).

Aquilegia formosa - Columbine

The fresh roots of this plant are mashed and rubbed on rheumatic joints to relieve aching. They are also brewed into a medicinal tea for coughs (Train 1957:24).

Arabis pulchra - Pretty rockcress

Plants in this genus served medicinal purposes (Stoffle and Dobyns 1982:188). The seeds of pretty rockcress were used for food. It is not known whether the plant is currently used (Stoffle, Halmo, Evans, and Olmsted 1990).

Arctostaphylos patula - Green-leaf manzanita

The green-leaf manzanita is smoked by Southern Paiutes for fevers (Stoffle and Dobyns 1982:137, Stoffle and Dobyns 1983a:150). Its fruit is also gathered and ground, dried for later use, or consumed fresh (Stoffle and Dobyns 1982:124, Stoffle and Dobyns 1983a:84).

Arctostaphylos pungens - Pointleaf manzanita, Mexican manzanita

The pointleaf manzanita is smoked by Southern Paiutes for fevers (Stoffle and Dobyns 1982:137, Stoffle and Dobyns 1983a:150) or brewed into a medicinal tea for rheumatism (Stoffle and Dobyns 1983a:142). Its fruit is gathered and ground, dried for later use, or eaten fresh (Stoffle and Dobyns 1982:124, Stoffle and Dobyns 1983a:84).

Argemone sp. - Prickly poppy

The ripe seeds of plants in this genus are ground into an oily paste that is used to make a salve for burns, cuts, or sores (Train 1957:25).

Artemisia bigelovii - Bigelow sagebrush

Sagebrush is mentioned in traditional Southern Paiute stories and legends (Stoffle et al. 1994, Stoffle, Halmo, Evans, and Austin 1994). Historically, dry bark from sagebrush was used as a torch to carry fire from one area to another (Euler 1966:48). When hunting was difficult, the bark was also used to make garments and moccasins (Euler 1966:29). Sage was considered a desirable thatching material as well (Laird 1976:105, 107). More recent studies show that Southern Paiutes boil *A. bigelovii* as a medicinal tea for relief of sore throats and stomach aches. It is also chewed for the same symptoms. Bigelow sagebrush is burned as incense and used ceremonially for purification. It is collected and used only as needed; care is taken to ensure it is not wasted (Stoffle, Halmo, Evans, and Austin 1994).



Figure 7.1 From left to right: Sagebrush, Indian Paintbrush, Ricegrass

Artemisia dracunculus - Tarragon

Sagebrush is mentioned in traditional Southern Paiute stories and legends (Stoffle et al. 1994, Stoffle, Halmo, Evans, and Austin 1994). Historically, dry bark from sagebrush was used as a torch to carry fire from one area to another (Euler 1966:48). When hunting was difficult, the bark was also used to make garments and moccasins (Euler 1966:29). Sage was considered a

desirable thatching material as well (Laird 1976:105, 107). Contemporary reports indicate that the seeds of *A. dracunculus* are gathered and ground into food (Stoffle and Dobyns 1982:120, Stoffle and Dobyns 1983a:80) and its leaves are boiled into a medicinal tea for coughs, colds, stomach aches, childbirth, worms, swelling, and bruises (Stoffle and Dobyns 1982:131, and Stoffle and Dobyns 1983a:142). The tops of this plant are also used as a hot poultice for sprains, swellings, and rheumatism, the branches are boiled and used as a wash for rheumatism, and the whole plant can be brewed into a medicinal tea that serves as a blood tonic after childbirth (Train 1957:25).

Artemisia filifolia - Sand sagebrush

Sagebrush is mentioned in traditional Southern Paiute stories and legends (Stoffle et al. 1994, Stoffle, Halmo, Evans, and Austin 1994). Historically, dry bark from sagebrush was used as a torch to carry fire from one area to another (Euler 1966:48). When hunting was difficult, the bark was also used to make garments and moccasins (Euler 1966:29). Sage was considered a desirable thatching material as well (Laird 1976:105, 107). The stems of sand sagebrush were also used for fuel (Stoffle, Halmo, Evans, and Austin 1994) and the leaves could be boiled into a medicinal tea for coughs, colds, stomach aches, childbirth, worms, swelling, and bruises (Stoffle and Dobyns 1982:131, and Stoffle and Dobyns 1983a:142).

Artemisia ludoviciana - Water sage, Louisiana woodworm, Sage herb

Sagebrush is mentioned in traditional Southern Paiute stories and legends (Stoffle et al. 1994, Stoffle, Halmo, Evans, and Austin 1994). Historically, dry bark from sagebrush was used as a torch to carry fire from one area to another (Euler 1966:48). When hunting was difficult, the bark was also used to make garments and moccasins (Euler 1966:29). Sage was considered a desirable thatching material as well (Laird 1976:105, 107). Recent reports show that the seeds of *A. ludoviciana* continue to be gathered and ground into food (Stoffle and Dobyns 1982:120, Stoffle and Dobyns 1983a:80). The leaves, stems, flowers, and young shoots are chewed raw or boiled into a medicinal tea to aid sore throats, colds, coughs, stomach aches, childbirth, worms, swelling and bruises. They are also ground into a powder and used to clean the feet (Stoffle, Halmo, Evans, and Austin 1994, Stoffle and Dobyns 1982:131, and Stoffle and Dobyns 1983a:142). *A. ludoviciana* continues to be a highly valued Southern Paiute plant (Stoffle, Halmo, Evans, and Olmsted 1990).

Artemisia nova - Black sagebrush

Sagebrush is mentioned in traditional Southern Paiute stories and legends (Stoffle et al. 1994, Stoffle, Halmo, Evans, and Austin 1994). Historically, dry bark from sagebrush was used as a torch to carry fire from one area to another (Euler 1966:48). When hunting was difficult, the bark was also used to make garments and moccasins (Euler 1966:29). *A. nova* was used as food during shortages (Euler 1966:22) and was considered a desirable thatching material (Laird 1976:105, 107). Today, the leaves and stems continue to serve medicinal purposes. They can be boiled and inhaled like a vaporizer, brewed into a medicinal tea, or used as a poultice. In ceremonies, the leaves and stems are burned for purification. Black sagebrush bark and wood are also used for fuel and construction (Stoffle et al. 1994:140).

Artemisia tridentata - Big sagebrush

Sagebrush is mentioned in traditional Southern Paiute stories and legends (Stoffle et al. 1994, Stoffle, Halmo, Evans, and Austin 1994). Historically, dry bark from sagebrush was used as a torch to carry fire from one area to another (Euler 1966:48). When hunting was difficult, the bark was also used to make garments and moccasins (Euler 1966:29). Sage was considered a desirable thatching material as well (Laird 1976:105, 107). Southern Paiutes continue to use young shoots, leaves and stems for food (Stoffle and Dobyns, and Evans 1983:121), smoking meat, and as a medicinal tea for colds, coughs, stomach aches, childbirth, worms, swelling, bruises (Stoffle and Dobyns 1982:131, Stoffle and Dobyns 1983a:142), headaches, fevers, a warm antiseptic bath for newborn babies, and is often preferred as a general tonic (Train 1957:29-30). In ceremonies, it is burned for purification (Stoffle et al. 1994:140, Stoffle, Halmo, Evans, and Austin 1994,). Leaves are also used as decoration, as a wash for sore eyes (Stoffle and Dobyns 1982:135, Stoffle and Dobyns 1983a:148), muscular cramps, and swollen feet (Train 1957:30), to make a soap for basket cleaning, a charm for romantic attraction, a poultice for sores, infections (Stoffle, Halmo, Evans, and Olmsted 1990), and head colds (Train 1957:29), a wet dressing for bullet wounds, a medicinal chew for indigestion (Train 1957:30) and, when boiled, as a vaporizer for treating colds (Train 1957:29, Stoffle, Halmo, Evans, and Austin 1994). Leaves are dried and finely pulverized into a type of talcum powder for babies as well. The sap is chewed as a gum (Stoffle, Halmo, Evans, and Austin 1994) and the leaves are eaten as a treatment for colds (Train 1957:29). The bark and wood are used for fuel and construction (Stoffle, Halmo, Evans, and Austin 1994).

Asclepias sp. - Milkweed

Plants in this genus are used for medicinal purposes. The roots are boiled and used as a wash to relieve headaches (Train 1957:30). The latex is used as an antiseptic, a healing agent for sores, and is employed to cure ringworm. Ripe seeds are ground and used as a salve on sores, or are boiled and used to draw the poison out of rattlesnake bites. The roots are also boiled into a medicinal tea to ease coughs, tuberculosis, and the rash of measles. This medicinal tea can also be used as a wash for rheumatism (Train 1957:31).

Aster sp. - Aster

Plants in this genus are brewed into a medicinal tea that is used as a blood tonic. The stems and flowers are soaked in water and applied as a medicinal wash for rheumatism (Train 1957:31), and the leaves are mashed in cold water and used as a poultice for swollen jaws or neck glands (Train 1957:32).

Astragalus praelongus - Rattleweed locoweed, Stinking milkvetch

Southern Paiutes believe that one must talk to *A. praelongus* before pulling it up. It is still used by some individuals today (Stoffle, Halmo, Evans, and Austin 1994).

Atriplex canescens - Four-wing saltbush

The stems of this plant can be combined to form a stirring stick (Stoffle, Halmo, Evans, and Austin 1994), and the seeds are gathered and ground for use as food (Stoffle and Dobyns 1982:120, Stoffle and Dobyns 1983a:80). When dry, the wood is burned as fuel and used to make arrows (Stoffle, Halmo, Evans, Olmsted 1990). *A. canescens* is also a medicinal plant that is used as a poultice/powder for sores (Stoffle and Dobyns 1982:134, Stoffle and Dobyns 1983a:146). It continues to be used by Southern Paiutes today (Stoffle, Halmo, Evans, and Austin 1994).

Atriplex confertifolia - Shadscale

Historically, *A. Confertifolia* was used by the Southern Paiutes for food or manufacture (Euler 1966:23). Other sources indicate that shadscale leaves are used as a poultice and/or powder for cuts. The seeds also are gathered and ground for use as food, (Stoffle and Dobyns 1982:120, Stoffle and Dobyns 1983a:80) and, when dry, the wood is burned as fuel (Stoffle, Halmo, Evans, Olmsted 1990).

Baccharis glutinosa - Seepwillow

Seepwillow is a ceremonial plant. It is used in the construction of cradleboard frames, game sticks, and Paiute homes. The leaves are dried for use as tobacco. Southern Paiutes continue to use this plant today (Stoffle, Halmo, Evans, and Austin 1994).

Balsamorhiza sagittata - Arrowleaf balsamroot

The roots of this plant are boiled into a medicinal tea for venereal diseases and stomach aches. The root is also dried and used as a dressing for syphilitic sores, mashed and used on swellings and insect bites, or burned in a room where the sick have been as a fumigant. Sap from fresh roots is taken internally as a cure for consumption (Train 1957:33).

Betula sp. - Birch

No details available at this time.

Calochortus sp. - Sego lily, Mariposa lily

The bulbs of plants in this genus are used as food (Stoffle and Dobyns 1982:123, Stoffle and Dobyns 1983a:204, Stoffle, Dobyns, and Evans 1983:121). These plants are still used today (Stoffle, Halmo, Evans, Olmsted 1990, Stoffle et al. 1994:140).

Carex sp. - Sedge

No details available at this time.

Castilleja chromosa - Early Indian paintbrush

C. chromosa is used in ornamentation (e.g. houses, hair) and in the making of soap. The seeds may be eaten (Stoffle, Halmo, Evans, and Olmsted 1990). The fruit or flower buds of other plants in this genus are also eaten fresh (Stoffle et al. 1994:140).

Caulanthus crassicaulis - Squaw cabbage

Southern Paiutes consume squaw cabbage fresh (Stoffle and Dobyns 1982:126, Stoffle and Dobyns 1983a:86).

Cercocarpus ledifolius - Curl-leaf mountain mahogany

According to Percy Train, "...this plant would appear to be one of the more important sources of medicinal remedies for the Indians" (Train 1957:35). Historically, *C. ledifolius* was used to make sinew-backed double-curved bows (Fowler and Matley 1979:62). More recent studies show that the bark is dried over an extended period of time and is brewed into a medicinal tea for pulmonary disorders such as tuberculosis (Train 1957:35, Stoffle and Dobyns 1982:133, Stoffle and Dobyns 1983a:144), for coughs and colds (Train 1957:35), stomach-aches, venereal diseases, diarrhea, stomach ulcers, pneumonia (Train 1957:36), and is used as a blood tonic (Train 1957:36, Stoffle and Dobyns 1982:133, Stoffle and Dobyns 1983a:144). Leaves are also prepared as a medicinal tea for heart disorders (Train 1957:36). Dried bark or soft inner bark is ground into a powder and used as a treatment for sores such as syphilitic sores, cuts, burns, and wounds.

Chaenactis douglasii - Douglas dusty-maiden

C. douglasii is crushed and applied as a poultice for swellings and rattlesnake bites (Train 1957:36-37). The whole plant or just the leaves is also boiled into a medicinal tea for coughs and colds (Train 1957:36).

Chenopodium fremontii - Fremont goosefoot

Southern Paiutes consume the young shoots, stems, leaves, and seeds of *C. fremontii*. This plant is still used today (Stoffle et al. 1994, 141).

Chrysothamnus nauseosus - Rubber rabbitbrush, Gray rabbitbrush

The rabbitbrush plant is mentioned in traditional Southern Paiute stories and legends (Stoffle et al. 1994:141). It is used in the construction of dwellings (Stoffle, Dobyns, Evans, and Olmsted 1990) and for fuel. The stems, leaves, and flowers are used as a medicinal tea, wash, and poultice (Stoffle et al. 1994:141). *C. nauseosus* is also an important environmental indicator: when rabbitbrush flowers are in full bloom, they indicate that pinyon nuts are ready for harvest (Stoffle et al. 1994:141, Stoffle, Halmo, Evans, and Olmsted 1990). Rabbitbrush is consumed as food (Stoffle, Dobyns, and Evans 1983:121), used for making baskets and woven

water jugs (Stoffle, Halmo, Evans, and Austin 1994), and is used in ceremonies (Stoffle et al. 1994:141). The sap is also chewed as gum (Stoffle et al. 1994:141, Stoffle and Dobyns 1982:188). This plant is very important and continues to be used by Southern Paiute people (Stoffle et al. 1994:141).

Cirsium sp. - Pink thistle

The leaves from plants in this genus are boiled and used as a poultice on wounds and burns (Stoffle, Halmo, Evans, Austin 1994:240). The young shoots or stems of some plants are also eaten raw (Stoffle, Halmo, Evans, and Olmsted 1990). Thistle continues to be used today (Stoffle, Halmo, Evans, Austin 1994:240).

Claytonia sp. - Spring beauty

The roots or bulbs of plants in this genus are used for food (Stoffle and Dobyns 1982:123, Stoffle and Dobyns 1983:83).

Clematis ligusticifolia - Virgin's bower, Wild clematis

A medicinal wash is produced by boiling the leaves of this plant. The wash is used for dropsical conditions and to relieve tired feet (Train 1957:39).

Coleogyne ramosissima - Blackbrush

Southern Paiutes use blackbrush for food (Stoffle, Dobyns, and Evans 1983:121).

Comandra umbellata - Bastard toad-flax

The fruit of this plant is gathered and eaten raw (Stoffle and Dobyns 1982:124, Stoffle and Dobyns 1983a:84).

Cornus sp. - Dogwood

Plants in this genus are smoked by Southern Paiutes for medicinal purposes (Stoffle and Dobyns 1982:137, Stoffle and Dobyns 1983a:150).

Cryptantha sp. - Cryptanth

No details available at this time.

Curcubita foetidissima - Coyote gourd, Missouri gourd

The seeds of *C. foetidissima* are gathered and ground for use as food (Stoffle and Dobyns 1982:120, Stoffle and Dobyns 1983a:80). The roots are prepared as a medicinal tea for gonorrhea and syphilis (Train 1957:41, Stoffle and Dobyns 1983a:144). The seeds are also used as a poultice and/or powder for piles and sores (Train 1957:41, Stoffle and Dobyns 1982:134).

Cuscuta sp. - Dodder

Plants in this genus are eaten to create sterility. The Southern Paiute name for these plants means literally "woman without children" (Train 1957:42).

Cymopterus sp. - Spring-parsley

The roots of plants in this genus are pounded and used for food (Stoffle and Dobyns 1982:123, Stoffle and Dobyns 1983a:83, Stoffle, Dobyns, and Evans 1983:38). Water from the boiled roots also serves as an insecticide (Train 1957:42).

Dalea sp. - Indigobush

Southern Paiutes brew these plants into a medicinal tea to soothe indigestion (Stoffle and Dobyns 1982:133, Stoffle and Dobyns 1983a:144), and to serve as a remedy for coughs, colds, pneumonia, tuberculosis, influenza, stomach aches, kidney problems, venereal diseases, measles, muscular pains, diarrhea and, when sugar is added, for whooping cough. This tea is also used externally as a medicinal wash for smallpox, measles, and rheumatism. Stems are ground into a powder to be used on sores or are chewed for the relief of toothaches or face neuralgia (Train 1957:42-44).

Datura sp. - Jimsonweed

Jimsonweed is a traditional medicinal plant used as a painkiller for toothaches, as a poultice for treating fungal infections (Stoffle, Halmo, Evans, and Austin 1994), and can be chewed to ease coughs (Stoffle and Dobyns 1982:136, Stoffle and Dobyns 1983a:149). It is also applied to the body as a lotion but will cause severe intoxication and hallucinations if too much is absorbed (Stoffle, Halmo, Evans, and Austin 1994). The roots are roasted or baked, ground into a powder, mixed with water, and then ingested to induce power/knowledge seeking visions (Stoffle, Halmo, Evans, and Olmsted 1990). The roots are also chewed or used to make a narcotic tea (Train 1957:44, Laird 1976:39-40). Before a root is collected, the plant must be addressed respectfully. One must apologize to the plant for disturbing it and explain what it is to be used for. Only the root pointing east is collected. Often visions are sought from this plant to reveal the names of enemies or to locate lost objects (Laird 1976:39-40). It is reported that this plant is used in rituals (Stoffle, Dobyns, and Evans 1983:121) and is still used today by medicine people (Stoffle, Halmo, Evans, and Austin 1994).

Descurainia pinnata - Tansy mustard

In the past, tansy mustard has been a main source of food for Southern Paiutes. Today the seeds are still collected seasonally and dried for use all year. When dry, the little red seeds are ground into mush, paste, made into bread, or used for flavoring in foods (Stoffle, Halmo, Evans, and Austin 1994, Stoffle and Dobyns 1982:120, Stoffle and Dobyns 1983a:80). The stems and leaves are boiled as greens (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle, Dobyns, and Evans 1983:121). Tansy mustard is also used as pot herbs for cooking (Stoffle and Dobyns 1982:126, Stoffle and Dobyns 1983a: 86). Southern Paiutes continue to use this plant today (Stoffle, Halmo, Evans, and Olmsted 1990).

Descurainia sophia - Tansy mustard, Herb sophia

The stems and leaves of *D. Sophia* are boiled as greens. The seeds are collected and dried for year-long use (Stoffle, Halmo, Evans, and Olmsted 1990).

Dichelostemma pulchellum - Bluedicks

Southern Paiutes use this plant for food (Stoffle, Dobyns, and Evans 1983:121).

Distichlis spicata - Saltgrass

Southern Paiutes scraped a salty extract from the leaves of saltgrass and cooked it in ashes as a salt supplement for food (Stoffle, Halmo, Evans, and Olmsted 1990).

Echinocereus engelmannii - Engelmann hedgehog cactus

The fruit of the engelmann hedgehog cactus is eaten fresh by Southern Paiutes. It is still used today (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle and Dobyns 1983a: 176).

Echinocereus triglochidiatus - Claretcup cactus

The claretcup cactus is a traditional medicinal plant that is still used today to remove warts (Stoffle, Halmo, Evans, and Olmsted 1994). It is also used as a poultice/powder for boils (Stoffle and Dobyns 1982:134, Stoffle and Dobyns 1983a: 146).

Eleocharis palustris - Spike rush

Southern Paiutes use the young shoots and stems of spikerush to make baskets, rope, and mats. The roots are used as a basket dye. The stems also serve as an animal food. This plant is still used today (Stoffle et al. 1994:141).

Elymus canadensis - Canada wild rye

The seeds of Canada wild rye are gathered and ground for use as food (Stoffle and Dobyns 1982:120 Stoffle and Dobyns 1983a:80).

Elymus elymoides - Squirrel tail

Squirrel tail is a Southern Paiute medicinal plant. The young shoots and stems are used as a hair treatment and the leaves are used for livestock feed. Care is taken to store useful parts for future use. This plant is still used today (Stoffle et al. 1994:141).

Encelia virginensis - Virgin encelia, Brittlebush

This species of *Encelia* is an important medicinal plant. It is combined with two other plants and brewed into a medicinal tea to cure mild cases of venereal disease. If the tea does not cure the disease, the individual goes to the sweat lodge. More tea is boiled outside at the lodge fire, and the individual drinks large quantities before entering (Stoffle, Halmo, Evans, and Austin 1994:241). It is also used in making baskets (Stoffle, Halmo, Evans, and Olmsted 1990). Southern Paiutes continue to use virgin encelia today (Stoffle, Halmo, Evans, and Austin 1994:241).

Ephedra nevadensis - Nevada Indian tea

Indian tea is mentioned in the traditional legends of the Southern Paiute (Stoffle et al. 1994:142). This species of Indian tea makes a strong beverage and medicinal tea (Stoffle, Dobyns, and Evans 1983:121) used for cleaning out the kidneys (Stoffle, Halmo, Evans, and Austin 1994:242, Stoffle et al. 1994:142) and for treating venereal diseases (Train 1957:45). The tea has a more bitter taste than tea from other varieties of *Ephedra* (Stoffle, Halmo, Evans, and Olmsted 1990). It can also be used as a poultice/powder for burns (Stoffle and Dobyns 1982:134, Stoffle and Dobyns 1983a:146). Dried stems are stored for year-round use (Stoffle, Halmo, Evans, and Austin 1994:242) and the wood is used for fuel (Stoffle et al. 1994:142). Southern Paiutes continue to commonly use this plant today (Stoffle, Halmo, Evans, and Olmsted 1990).

Ephedra torreyana - Torrey Indian tea

The stems of torrey Indian tea are brewed into a beverage and medicinal tea used for internal disorders, venereal disease, stomach aches (Stoffle and Dobyns 1982:131, Stoffle and Dobyns 1983a:142), colds, aches and pains, and as a general system cleanser. The stems were dried in bundles and then boiled for tea when needed. The greener stems are fresher and are considered to have more power (Stoffle, Halmo, Evans, and Austin 1994:242). *E. Torreyana* is also used as a poultice for burns (Stoffle and Dobyns 1982:134, Stoffle and Dobyns 1983a:146). Since Southern Paiutes believe that *Ephedra* grows to help the people, they talk to the plants and tell them about their ailments. The plant is still used today (Stoffle, Halmo, Evans, and Austin 1994:242).

Ephedra viridis - Indian tea

Southern Paiutes brew the spikelets of this species as a beverage and a medicinal tea (Stoffle, Dobyns, and Evans 1983:121) used for various internal disorders, stomach aches (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle and Dobyns 1982:131, Stoffle and Dobyns 1983a:142), venereal diseases, colds, stomach ulcers, rheumatism, bladder disorders, and as a kidney regulator. The tea is also used as a blood tonic or purifier, is taken for delayed or difficult menstruation, and is believed to aid in circulation. This tea can also be combined with the bark of *Cercocarpus ledifolius* and used for children's diarrhea. Stems are dried and ground into a powder used for sores (Train 1957:45-46). The wood is used for fuel. Useful parts are stored for future use. Southern Paiutes continue to use it today (Stoffle et al.1994:142).

Equisetum laevigatum - Smooth scouring rush

When needed, the leaves of *E. Laevigatum* are gathered, dried, and boiled as a medicinal tea. It is sometimes mixed with peppermint for flavor (Stoffle, Halmo, Evans, and Austin 1994:242). This plant is very important to the Southern Paiute (Stoffle and Dobyns 1982:188) and continues to be prescribed as a healthy alternative to pills by Indian doctors (Halmo, Evans, and Austin 1994:242).



Figure 7.2 Prickly Pear Cactus

Eragrotis sp. - Love grass

Southern Paiutes brew the spikelets of this species as a beverage and a medicinal tea (Stoffle, Dobyns, and Evans 1983:121) used for various internal disorders, stomach aches (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle and Dobyns 1982:131, Stoffle and Dobyns

1983a:142), venereal diseases, colds, stomach ulcers, rheumatism, bladder disorders, and as a kidney regulator. The tea is also used as a blood tonic or purifier, is taken for delayed or difficult menstruation, and is believed to aid in circulation. This tea can also be combined with the bark of *Cercocarpus ledifolius* and used for children's diarrhea. Stems are dried and ground into a powder used for sores (Train 1957:45-46). The wood is used for fuel. Useful parts are stored for future use. Southern Paiutes continue to use it today (Stoffle et al.1994:142).

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Eragrotis sp. – Love grass

Love grass seeds are collected by Southern Paiutes and ground for use as food (Stoffle and Dobyns 1982:120, Stoffle and Dobyns 1983a:80).

Eriastrum eremicum - Mohave eriastrum

No details available at this time.

Erigeron sp. - Daisy

The roots of plants in this genus are boiled and prepared as a medicinal wash for the eyes or as a medicinal tea for diarrhea. The entire plant is also brewed into a medicinal tea used for stomach-aches, cramps, and chronic constipation (Train 1957:46-47).

Eriodictyon angustifolium - Narrow-leaf yerba santa

The leaves from plants in this species are brewed into a medicinal tea for coughs and colds (Train 1957:47, Stoffle and Dobyns 1982:131, Stoffle and Dobyns 1983a:142). Southern Paiutes also use this particular species to make a medicinal tea for pulmonary and venereal ailments (Train 1957:47, Stoffle and Dobyns 1982:133, Stoffle and Dobyns 1983a:144), vomiting, diarrhea, and stomach-aches (Train 1957:47). Yerba santa can be used as a poultice/powder for rheumatism and partial paralysis (Train 1957:47, Stoffle and Dobyns 1982:134, Stoffle and Dobyns 1983a:146), a medicinal wash for sore eyes (Stoffle and Dobyns 1982:135, Stoffle and Dobyns 1983a:148), and can be smoked to help lung problems (Stoffle and Dobyns 1982:137, Stoffle and Dobyns 1983a:150).

Eriogonum inflatum - Desert trumpet, Bladderstem, Indian pipeweed

The fresh stems of *E. Inflatum* are either cooked or consumed raw by the Southern Paiutes (Stoffle, Dobyns, and Evans 1983:121, Stoffle and Dobyns 1982:126, Stoffle and Dobyns 1983a:86). Young children used dried, inflated stems as pipes and playtoys. Tiny black “seeds” or insect droppings found on the plant are hallucinogenic and are used as a medicine (Stoffle, Halmo, Evans, and Olmsted 1990).

Erodium cicutarium - Heronbill, Storksbill

The seeds of *E. Cicutarum* were gathered and eaten. They were also dried and stored for future use. It is not known whether this plant is currently used (Stoffle et al. 1994:142).

Euphorbia albomarginata - Rattlesnake weed

Spurge or rattlesnake weed is a medicinal plant (Stoffle, Dobyns, and Evans 1983:121). The milky sap from the stems, leaves, and flowers are either smoked (Stoffle and Dobyns 1982:137, Stoffle and Dobyns 1983a:150) or used as a medicinal wash to treat eye inflammations, infections, and cataracts (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle and Dobyns 1982:135, Stoffle and Dobyns 1983a:148). Young shoots, stems, leaves, and flowers are used as a snakebite medicine and brewed as a tea to treat kidney ailments. Useful parts are dried and stored for future use. Southern Paiute people continue to use this plant today (Stoffle et al. 1994:142).

Fallugia paradoxa - Apache plume

The long straight stems of Apache plume are still used to make arrows for hunting rabbits and for selling to tourists. The plant is managed by annual burning which encourages new, straight young shoots (Stoffle, Halmo, Evans, and Austin 1994:242).

Fraxinus anomala - Singleleaf ash

Southern Paiutes use this plant for food (Stoffle, Dobyns, and Evans 1983:121).

Fraxinus pennsylvanica ssp. *velutina* - Velvet ash

Velvet ash is used in construction and in ceremonies. Being a natural hardwood, it is also used to make bows, arrows, drum frames, and staffs used in pow wow dancing. It is used for fuel during ceremonies because it burns slowly. Velvet ash is usually harvested in late fall but can be collected throughout the year and stored for future use (Stoffle, Halmo, Evans, and Austin 1994:243).

Fritillaria atropupurea - Spotted missionbells, Leopard-lily

Southern Paiutes use the bulbs of *F. atropupurea* for food (Stoffle and Dobyns 1983a:83).

Garrya flavescens - Ashy silktassel

Ashy silktassel is used to make a medicinal tea for heart troubles (Stoffle and Dobyns 1982:133, Stoffle and Dobyns 1983a:144).

Gaura coccinea - Scarlet beeblossom

No details available at this time.

Gilia aggregata - Scarlet gilia, Skyrocket

G. aggregata is used to make a medicinal tea to treat stomach aches (Stoffle and Dobyns 1982:133, Stoffle and Dobyns 1983a:144), colds, and to be used as an emetic and physic (Train 1957:51).

Gilia congesta - Ballhead gilia

This plant is prepared as a medicinal tea for the treatment of venereal diseases such as gonorrhea. It is also employed as an emetic and physic and used for the relief of colds, diarrhea, indigestion, and stomach problems (Train 1957:52).

Glycyrrhiza lepidota - Desert root, American licorice

Parts of this part are chewed as a tonic (Stoffle and Dobyns 1982:136). Graminae (Grass family) – Grass Grass is mentioned in a traditional Southern Paiute song and myth (Fowler and Fowler 1971:128, Laird 1976). Historically, grass seeds were gathered by women and used for food (Euler 1966:111-113, Laird 1976).

Grindelia squarrosa - Gum plant

G. squarrosa is prepared as a medicinal tea for treating pneumonia, coughs, and bladder problems (Train 1957:54-55).

Gutierrezia microcephala - Matchweed, Small-head snakeweed

G. microcephala is the subject of an important traditional Paiute story. It is also used for teaching. *Matchweed* is so named because it is a good fire starter when dry. If it is pounded and then soaked or boiled, the juice and pulp can be used as a poultice for snake bites (Stoffle,

Halmo, Evans, and Austin 1994:243). The leaves are boiled as a medicinal tea (Stoffle, Halmo, Evans, and Olmsted 1990).

Gutierrezia sarothrae - Snakeweed

No details available at this time.

Haplopappus sp. - Goldenweed

No details available at this time.

Helianthus annuus - Common sunflower

Historically, Southern Paiutes gathered sunflower seeds (Fowler and Matley 1979:9) to be used for food (Euler 1966:113, Stoffle, Dobyns, and Evans 1983:39). They were often roasted and then ground on milling stones (Euler 1966:81). The roots were also prepared as a medicinal wash for rheumatism (Train 1957:56).

Hilaria rigida - Big galleta

No details available at this time.

Holodiscus sp. - Ocean spray

The roots of plants in this genus were brewed into a medicinal tea that served as a remedy for stomach disorders and diarrhea. Boiled stems were also prepared as a tea to help cure colds (Train 1957:59).

Hymenoclea salsola - White cheesebush, Burrobush

This plant is used by Southern Paiutes as a medicinal wash for infants and sick persons (Stoffle and Dobyns 1982:135, Stoffle and Dobyns 1983a:148).

Juncus sp. - Rush

Plants in this species are used for a variety of manufacturing purposes. Several of these include making baskets, decoys, and providing insulation for dwelling walls (Stoffle, Halmo, Evans, and Olmsted 1990). Mats are also made out of the leaves (Stoffle, Halmo, Evans, and Austin 1994:243, Stoffle and Dobyns 1982:188) and the roots (Stoffle and Dobyns 1982:123, Stoffle and Dobyns 1983a:83, Stoffle, Dobyns, and Evans 1983:38) and the base of stems are consumed as food. It is harvested in spring and fall. Cutting leaves at the bottom serves the management function of pruning and encourages fresh new growth (Stoffle, Halmo, Evans, and Austin 1994:243). Currently, the plant is highly valued among contemporary basket makers (Stoffle, Halmo, Evans, and Olmsted 1990).

Juniperus sp. - Juniper, Cedar

Juniper is mentioned in Southern Paiute traditional stories (Stoffle et al. 1994:143). Historically, it was used for food and construction (Euler 1966:23). The wood from this tree was used to construct wickiups (Euler 1966:88), shelters (Euler 1966:81), bows (Euler 1966:114, Fowler and Matley 1979:9), war clubs (Fowler and Matley 1979:68), and ladles (Fowler and Matley 1979:76). It was also used to make notched sticks or musical rasp instruments that were played for such things as the Bear Dance (Fowler and Matley 1979:71-72). The bark was used for covering shelters, making cord, and making “playing cards” (Fowler and Matley 1979:9, 28, 71). In addition, bark can be wrapped into a long bundle that, when lit, will glow without burning quickly. This was used in traveling because it could be used to start a fire quickly (Fowler and Matley 1979:75). Sometimes the inner bark of young cedar was cut into little strips or tablets and painted with figures of men women and children (Powell 1873:61). The leaves were pounded with red ocher and used to cover or decorate the outside of pitch containers (Fowler and Matley 1979:21). The berries were roasted, ground, and mixed with meals (Powell 1873:46, Euler 1966:113).

Today, juniper continues to be used for a wide variety of purposes. Southern Paiute people burn the stems and leaves, or boughs ceremonially as a purifying medicine (Stoffle et al. 1994:143, Stoffle, Halmo, Evans, and Olmsted 1990). Boughs are used to make a medicinal wash and a medicinal tea for venereal diseases, coughs, and colds (Train 1957:61-62, Stoffle and Dobyns 1982:133, Stoffle and Dobyns 1983a:144). Young twigs are boiled as a medicinal tea that is used for hemorrhages, fevers, stomach-aches, kidney problems, influenza, and which serves as a blood tonic (Train 1957:62-63). Once the fruit is dried and the fleshy outer portion is discarded, the seeds can also be taken as a blood tonic (Train 1957:61). Twigs are also prepared as an antiseptic wash for sores, are heated and rubbed on measles eruptions to relieve discomfort, and are made into poultices for burns, swellings, and rheumatism (Train 1957:63). Berries are prepared as a medicinal tea as well. This tea is used for kidney ailments, menstrual cramps, rheumatism, and is employed as a blood tonic (Train 1957:64). Leaves or twigs are smoked and inhaled for the treatment of head colds (Train 1957:62) and are used as a fumigant after illness (Train 1957:63). Young juniper twigs are also utilized in the Indian sweat bath. The Indian sweat bath is used to induce sweating in patients with rheumatism or heavy colds (Train 1957:63-64). Bark is used to tan hides (Stoffle et al 1994:143), and make sandals, skirts and other utilitarian items as well (Stoffle, Halmo, Evans, and Olmsted 1990). Wood, bark, and branches are used as fuel (Stoffle et al. 1994:143) and for construction of pens, corrals, and dwellings (Stoffle, Halmo, Evans, and Olmsted 1990). The juniper berry is roasted and eaten (Stoffle and Dobyns 1982:122, Stoffle and Dobyns 1983a:82, 204), and the seeds are used to make necklaces. Southern Paiute people manage juniper by pruning. Useful parts are stored for future use. These plants continue to be very important to Southern Paiutes (Stoffle et al 1994:143).

Lappula sp. - Stickseed

No details available at this time.

Larrea tridentata - Creosote bush

Creosote bush, or “greasewood,” as it is commonly referred to by Indian people, is mentioned in traditional Southern Paiute myths (Laird 1976:168, 189). Historically, these plants were used to obtain gum or resin. This gum or resin was used for such things as attaching arrowheads (Fowler and Matley 1979:65) sealing storage baskets (Laird 1976:6), or setting stone blades in knives (Fowler and Matley 1979:69). Today, creosote bush continues to serve multiple purposes. It is an important medicinal plant that is used for any kind of sickness, both inside and outside the body (Laird 1976:107, Stoffle, Halmo, Evans, and Austin 1994:243, Stoffle, Halmo, Evans, and Olmsted 1990). The leaves, flowers, and young shoots are boiled and drunk as a medicinal tea for stomach ailments, internal disorders, cramps, colds (Stoffle and Dobyns 1982:131, Stoffle and Dobyns 1983a:142), cancer, and for cleaning out the kidneys (Stoffle, Halmo, Evans, and Austin 1994:243, Stoffle, Halmo, Evans, and Olmsted 1990). The stems and leaves are also boiled into a solution that is used as a poultice or medicinal wash for measles (Stoffle and Dobyns 1982:134, Stoffle and Dobyns 1983a:146), small pox, chicken pox (Stoffle and Dobyns 1983a:148), skin sores, rashes, or athlete’s foot. Creosote can also be ground into a powder and applied to skin wounds. In the sweat lodge, it is sprinkled dry on the rocks to help with respiration (Stoffle, Halmo, Evans, and Austin 1994:243). Other uses include wood for fuel, sap for glue, branches for manufacture, and burning leaves for ceremonial purposes (Stoffle, Halmo, Evans, and Olmsted 1990). It is also used for food (Stoffle, Dobyns, and Evans 1983:122, Stoffle and Dobyns 1983a:176). To collect this plant, one must stand on the north side of the plant toward the sun to pray for it. Harvesting techniques are equivalent to the management function of pruning which encourages fresh new growth. This plant continues to be very useful and important to Southern Paiutes today (Stoffle, Halmo, Evans, and Austin 1994:243).

Lepidium fremontii - Fremont’s peppergrass

The seeds from this plant are gathered by Southern Paiutes and ground for use as food (Stoffle and Dobyns 1982: 121, Stoffle and Dobyns 1983a:81).

Lepidium lasiocarpum - Desert pepperweed

The seeds from this plant are gathered by Southern Paiutes and ground for use as food (Stoffle and Dobyns 1982:121, Stoffle and Dobyns 1983a:81).

Lepidium montanum - Mountain pepperplant

Lepidium montanum was identified for the first time in this study. No further information is available at this time.

Lewisia sp. - Bitterroot

No details available at this time.

Linum lewisii - Blue flax

This plant is most commonly used as a remedy for sore eyes. The medicinal eye wash is prepared in several ways: the whole plant is boiled, the tops of the plant are soaked in cold water, the tops are steeped slightly, or the leaves are boiled. Fresh leaves and stems are also used as a poultice for goiter and other swellings (Train 1957:67-68).

Lomatium sp. - Biscuitroot, Indianroot

No details available at this time.

Lupinus ssp. - Lupine

Plants in this species are used to induce urination (Train 1957:68).

Lycium sp. - Squawberry, Wolfberry

Wolfberry or squawberry is mentioned in Southern Paiute myths (Laird 1976:157-158). It is a traditional Southern Paiute plant that has, in the past, been used for food and for trading (Euler 1966:64). Today, various species of *Lycium* continue to be used by the Southern Paiute. The berries are eaten fresh (Stoffle, Dobyns, and Evans 1983:38, Stoffle and Dobyns 1982:122, Stoffle and Dobyns 1983a:82), mashed to make a juice (Stoffle and Dobyns 1983a:176), ground and used as a jam, or dried and stored for year-round use (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle, Halmo, Evans, and Austin 1994:244). Wolfberry is gathered and taken to ceremonies as well (Stoffle, Halmo, Evans, and Austin 1994:244).

Lygodesmia sp. - Indian gum plant, Skeleton weed

Plants in this genus have a rubber-like exudate that is collected from the stems and roots and used as chewing gum. A cottony fuzz is collected from the base of the plants and is placed on boils and sores to aid in healing. The roots can also be prepared as a tea and used externally to reduce swelling, or used internally as a physic and emetic (Train 1957:69).

Mahonia repens - Creeping barberry

Parts of creeping barberry plants are chewed by Southern Paiute people for colds (Stoffle and Dobyns 1982:136, Stoffle and Dobyns 1983a:149). The berries of plants in this genus are also consumed as fresh fruit (Stoffle and Dobyns 1982:122, Stoffle and Dobyns 1983a:82). The roots are boiled into a medicinal tea taken to stop bloody dysentery, to thicken the blood (Train 1957:33), as a drink for venereal diseases, coughs, bladder and kidney problems, and as a blood tonic or purifier (Train 1957:34). The stems are also boiled into a medicinal tea for stomach problems (Train 1957:34).

Marrubium vulgare - Common horehound

The branches of this plant are used to whip aching portions of the body. This action served as a counter-irritant by stimulating blood circulation (Train 1957:69).

Melilotus alba - White sweet-clover

Historically, white sweet-clover was used by the Southern Paiutes for food (Euler 1966:112-113).

Melilotus indicus - Yellow sweet-clover

Historically, yellow sweet-clover was used by the Southern Paiutes for food (Euler 1966:112-113).

Mentha arvensis - Field mint, American wild mint

Field mint is a traditional medicinal plant that is still used today. Fresh leaves are boiled and drunk as a tea. They can also be dried and stored for year-round use (Stoffle, Halmo, Evans, and Austin 1994:244).

Mentzelia albicaulis - Desert corsage, White-stem blazingstar

The seeds of desert corsage are collected, ground, and eaten (Stoffle and Dobyns 1982:189, Stoffle and Dobyns 1983a:176). They can also be stored for future use. Southern Paiute people still use this plant today (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle et al. 1994:143).

Mirabilis multiflora - Colorado four-o'clock

Colorado four-o'clock is a powerful medicinal plant that serves as the exclusive treatment for syphilis. Individuals must pay to obtain it, and the plant must be prayed to in order for the remedy to work. The entire plant (stems, leaves, flowers, and roots) is pulled up, boiled in approximately three inches of water, and consumed as a tea (Stoffle, Halmo, Evans, and Austin 1994:244). It is also used for decorative purposes (Stoffle et al. 1994:144). *M. Multiflora* can be harvested all year long and is still used by Southern Paiute people (Stoffle, Halmo, Evans, and Austin 1994:244).

Monardella odoratissima - Western bee balm

This plant is prepared as a medicinal tea for treating colds, gas pains, and indigestion. The tea is also used as an eyewash for soreness or inflammation (Train 1957:70-71).

Nasturtium officinale - Watercress

Historically, *N. officinale* was used by the Southern Paiutes for food or manufacture (Euler 1966:23). Today the stems and leaves are eaten fresh as salad greens, boiled like spinach, or fried with shortening and eaten with meat (Stoffle, Halmo, Evans, and Austin 1994:244).

Nicotiana attenuata - Coyote tobacco

Tobacco is mentioned in a traditional Southern Paiute song (Fowler and Fowler 1971:124). It is a medicinal and ceremonial plant. The leaves are used as a medicinal poultice for cuts, sore eyes (Train 1957:71, Stoffle and Dobyns 1982:134, Stoffle and Dobyns 1983a:146, Stoffle et al. 1994:144), swellings, rheumatism, eczema, cuts, athlete's foot, and snakebites, and are dried and smoked to ease asthma and coughs (Train 1957:71). The leaves are also prepared as a tea that is used externally for the treatment of hives and dropsical conditions and internally to expel worms, or serve as an emetic or physic (Stoffle et al. 1994:144). The entire plant is considered an object of ritual. For example, dried leaves are smoked in ceremonies (Stoffle and Dobyns 1982:137, Stoffle and Dobyns 1983a:150). It is also used as a gift (Laird 1976:38). Coyote tobacco continues to be used by Southern Paiute people today (Stoffle et al. 1994:144).

Nicotiana trigonophylla - Indian tobacco, Desert tobacco

Leaves of Indian tobacco are dried and smoked for pleasure as well as for medicinal and ceremonial purposes (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle and Dobyns 1983a:176). Before smoking, it is frequently mixed with sage, or red willow. This type of Indian tobacco is sold and traded with other Indian people and is only occasionally used in ceremonies. It is sometimes used as a gift (Laird 1976:38). Indian tobacco is collected during the summer months and stored for use throughout the year. Southern Paiutes continue to use this plant today (Stoffle, Halmo, Evans, and Austin 1994:245).

Oenothera pallida - Pale evening-primrose

The nut-like seeds and flowers of pale evening-primrose are used for food. It is harvested in the fall, and is still used today (Stoffle, Halmo, Evans, and Austin 1994:245).

Opuntia sp. - Prickly pear cactus, Cholla

Historically, plants in this genus were used for food. The fruit was either eaten fresh (Fowler and Matley 1979:9), cooked (Laird 1976:109), or compressed into balls (Euler 1966:88). The juice could also be extracted and made into a wine. The leftover pulp was then made into a cake or loaf that could be stored for use in the winter (Powell 1873:42, Fowler and Matley 1979:9). Both the cakes and compressed balls of cactus apples were either eaten or used for trade with the white settlers (Euler 1966:34 and 88, Fowler and Matley 1979:7).

Opuntia basilaris - Beavertail cactus

The pads of the beavertail cactus are cut into strips to extract the moisture. The fruits and seeds are eaten fresh like strawberries, or used to make jam (Stoffle, Halmo, Evans, and Austin 1994:245, Stoffle and Dobyns 1982:189). They can also be dried and stored for year long use (Stoffle and Dobyns 1982:124, Stoffle and Dobyns 1983a:84). In addition, the fresh buds are gathered and consumed (Stoffle and Dobyns 1982:125, Stoffle and Dobyns 1983a:85) and new leaves are cooked (Stoffle and Dobyns 1982:126, Stoffle and Dobyns 1983a:86). The beavertail cactus may have been traditionally transplanted to various ecozones to increase the crop. This plant is still used today (Stoffle, Halmo, Evans, and Olmsted 1990).

Opuntia echinocarpa - Golden cholla, Silver cholla

The golden cholla or silver cholla is used by the Southern Paiutes for food (Stoffle, Dobyns, and Evans 1983:122, Stoffle and Dobyns 1982:189). The spines are used as needles or awls for sewing and basketmaking. It is not known whether this plant is currently used (Stoffle, Halmo, Evans, and Olmsted 1990).

Opuntia erinacea - Mohave prickly pear, Grizzly bear cactus

Prickly pear cactus is a traditional food plant that is still used by Southern Paiute people (Stoffle and Dobyns 1982:189, Stoffle, Halmo, Evans, and Austin 1994:245). Before it is eaten, the spines are either burned or scraped off with a knife and the outer pads are removed. The fruit were traditionally roasted in hot ashes, but are now baked for approximately three hours in a traditional oven (Stoffle, Halmo, Evans, and Austin 1994:245). They can also be eaten raw, made into jam, or dried and stored for year-round use (Stoffle, Halmo, Evans, and Olmsted 1990).

Opuntia phaeacantha - Engelmann prickly pear

This species of prickly pear is a traditional food plant (Stoffle and Dobyns 1982:189). It is collected once or twice a season, but is most widely used during the spring. Once the fruit is cut off the plant, a knife is used to scrape off the spines until the surface is smooth. The fruit is then rinsed and baked. This plant continues to be used today (Stoffle, Halmo, Evans, and Austin 1994:245).

Orobanche fasciculata - Broomrape

Southern Paiutes used the roots/bulbs of this plant for food (Stoffle, Dobyns, and Evans 1983:39, Stoffle and Dobyns 1982:123, Stoffle and Dobyns 1983a:83). Broomrape is also used as a source of fresh greens (Stoffle and Dobyns 1982:126, Stoffle and Dobyns 1983a:86).

Orobanche ludoviciana - Broomrape, Wild asparagus

Broomrape, or wild asparagus is referred to in at least one traditional Southern Paiute myth (Laird 1976:162). It is also used for food (Laird 1976:109). Both the roots (Stoffle and

Dobyns 1982:123, Stoffle and Dobyns 1983a:83) and greens are collected and eaten. This plant is still used today (Stoffle, Dobyns, and Evans 1983:39, Stoffle et al. 1994:144).

Oryzopsis hymenoides - Indian ricegrass

Indian ricegrass is mentioned in traditional Southern Paiute stories (Stoffle et al. 1994:147). Historically, it provided a constant food source during the summer and early fall (Euler 1966:22, Stoffle and Dobyns 1982:189). More recent studies indicate that ceremonies are held before harvest, and that people sing and pray for the plant before gathering it. It is also an important food source for animals (Stoffle, Halmo, Evans, and Austin 1994:246). The plant can be cut in half or uprooted and taken to a central location where the seeds are shaken off. The plants are then returned to the place they were found growing and replanted (Stoffle, Halmo, Evans, and Austin 1994:246). After being collected, the seeds are rubbed between two hands to remove the chaff. Seed covers are also burned off or winnowed in a special basket (Stoffle, Halmo, Evans, and Austin 1994:246). Seeds are then ground (Stoffle and Dobyns 1982:121, Stoffle and Dobyns 1983a:81) into a flour and roasted in ashes to make a kind of bread. They can also be ground and mixed with water to make a mush or gravy (Stoffle, Halmo, Evans, and Austin 1994:246). Sometimes, this same grass was gathered half ripe, used in a different way, and was possibly known by a different name (Presnall 1936). Seeds can be stored for year-round use. This plant is actively managed by selecting, storing, and replanting seeds, and burning areas to stimulate regrowth (Stoffle, Halmo, Evans, and Austin 1994:246, Stoffle, Halmo, Evans, and Olmsted 1990).

Osmorhiza occidentalis - Sweetroot

According to Percy Train, "As a source for remedies, this plant holds favor among all the Indians." The roots are prepared as a medicinal tea to treat colds, pulmonary disorders, pneumonia, influenza, venereal diseases, stomach-aches, gas pains, indigestion, fevers and chills. In treating several of the ailments already mentioned, this plant is often combined with other plants to increase the effectiveness of the remedy. The tea is also used externally to kill head lice, chicken lice, to serve as an antiseptic wash for venereal sores and skin rashes and is used as an eyewash. The roots are chewed for sore throats and are pulped and applied as a wet dressing to snake bites, swellings, bruises, cuts, and sores (Train 1957:73).

Panicum sp. - Panic grass

The seeds from this plant are gathered by Southern Paiutes and ground for use as food (Stoffle and Dobyns 1982:121, Stoffle and Dobyns 1983a:81).

Pediomelum sp. - Scruf-pea

The Southern Paiutes used the roots of this plant for food. They can be consumed raw or roasted (Stoffle and Dobyns 1982:123, Stoffle and Dobyns 1983a:83).

Penstemon palmeri - Palmer beardtongue

Plants in this genus are used for medicinal purposes (Train 1957:75-76, Stoffle, Dobyns, and Evans 1983:122, Stoffle and Dobyns 1982:189). Leaves are brewed into a medicinal tea or used as a poultice for fevers (Stoffle and Dobyns 1982:131, Stoffle and Dobyns 1983a:142, 146).

Phlox hoodii - Carpet phlox

No details available at this time.

Phragmites australis - Giant common reed, Cane, Common reed

P. australis is mentioned in Southern Paiute legends (Laird 1976:195, Stoffle, Halmo, Evans, and Olmsted 1990) and songs (Fowler and Fowler 1971:123). Historically, it has been used for food, ceremony, and construction. It was used to make arrows for catching small game (Euler 1966:114, Fowler and Matley 1979:66), arrow shafts (Fowler and Matley 1979:64; Laird 1976:107) and cane dice (Fowler and Matley 1979:74). The Paiutes also extracted a saccharine juice or “honey dew” from the cane (Powell 1873:47). This “cane grass candy” was historically used as a trade item as well (Euler 1966:39,97). Contemporary studies show that Southern Paiutes continue to scrape a candy-like exudate off the leaves and eat it as a sugary food (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle, Dobyns, and Evans 1983:39). The exudate is also given to pneumonia patients because it is believed to loosen phlegm and soothe the pain in the lungs (Train 1957:77). The stems and leaves of the giant common reed are woven and used for shade, windbreaks and other structures, and for ceremonial mats for the Sun Dance. This plant is still used today (Stoffle, Halmo, Evans, and Austin 1994:246).

Physalis sp. - Groundcherry

This plant is used by Southern Paiutes for food (Stoffle and Dobyns 1983a:177).

Physaria chambersii - Chambers' twinpod

This plant is used primarily as an eyewash for sties and soreness. The medicinal wash is prepared in many ways: soaking pulverized leaves in cold water, boiling the whole plant, or soaking the whole roots in warm water (Train 1957:77-78).

Pinus sp. - Pine

Pinyon pine is mentioned in Southern Paiute traditional stories and songs (Fowler and Fowler 1971:125, Stoffle et al. 1994:145). Historically, pinyon trees were of great importance to Southern Paiute people (Euler 1966:22). Nuts from these trees were only collected in quantity every three years, but served as a staple during the fall months (Euler 1966:23, Laird 1976). When in season, they were stored in great quantities and sometimes given as gifts (Euler 1966:35, 79). A sweet sap from these trees was also used as food (Powell 1873:47). Pinyon gum

was used to pitch sinew wrappings (Fowler and Matley 1979:65) and was sometimes heated and smeared around the end of an arrow at the nock (66). Pitch could also be used as resin (Fowler and Matley 1979:65) and for lining the inside and outside of pitch containers or water jugs (23). The trees were often used for protection or shelter (Euler 1966:35) and the wood was used to make things such as ladles (Fowler and Matley 1979:76).

Today, pinyon pine continues to be a multipurpose plant. The pinenut is collected in the fall and can be eaten raw, roasted (Stoffle and Dobyns 1982:121, Stoffle and Dobyns 1983a:85), boiled, or ground into a gravy-like mush (Stoffle, Halmo, Evans, and Olmsted 1990). The resin is prepared as a medicinal tea for colds, venereal diseases, rheumatism, tuberculosis, influenza, chronic indigestion, bowel troubles, fevers, nausea, and can be used as a blood tonic for the post childbirth period. In treating venereal diseases and diarrhea, resin is also chewed or swallowed whole as pills. For sore throats, resin is either chewed or pulverized and applied directly with a swab. Resin was also heated and applied as a drawing agent to boils and slivers or as a dressing for sores, cuts, swellings, and insect bites. Heated resin was also smeared on a hot cloth and used to treat pneumonia, muscular soreness, and chest congestion (Train 1957:78-79). The pine pitch continues to be used as glue, a ceremonial medicine for purification (burned), a medicinal tea, a poultice, and for construction. The wood is used as fuel and for construction. Bark and cones are also used as fuel. Boughs are burned for purification in ceremonies (Stoffle et al. 1994:145) and the gummy sap is still chewed and used as a medicinal and ceremonial substance. Pinyon trees remain a very important resource for the Southern Paiute (Stoffle, Halmo, Evans, and Olmsted 1990).

Pluchea sericea - Arrow weed

The young shoots and stems of arrow weed are used to make arrows (Laird 1976:107, 250; Stoffle, Halmo, Evans and Austin 1994:250), firestarters, baskets, and shelters. Arrow weed is also a desirable thatching material (Laird 1976:105,107). Today, these items are still made for craft displays (Stoffle, Halmo, Evans, and Austin 1994:250). This plant is brewed into a medicinal tea for indigestion, diarrhea, and passing blood (Train 1957:80, Stoffle and Dobyns 1982:133, Stoffle and Dobyns 1983a:144). It is also chewed for indigestion (Train 1957:80, Stoffle and Dobyns 1982:136, Stoffle and Dobyns 1983a:149). Arrow weed apparently was an important trade item among Southern Paiute women (Stoffle, Halmo, Evans, and Olmsted 1990). The materials can be dried and stored for use throughout the year (Stoffle, Halmo, Evans, and Austin 1994:250).

Poa bigelovii - Bluegrass

The seeds from this plant are gathered by Southern Paiutes and ground for use as food (Stoffle and Dobyns 1982:121, Stoffle and Dobyns 1983a:81).

Poa fendleriana - Muttongrass, Bluegrass

Southern Paiutes use *P. fendleriana* for food (Stoffle and Dobyns 1982:189).

Populus fremontii - Fremont cottonwood, Poplar

Poplars are mentioned in a traditional Southern Paiute song (Fowler and Fowler 1971:123). Historically, *P. fremontii* was used by the Southern Paiutes to make ladles (Fowler and Matley 1979:76), handles for stone knives (Fowler and Matley 1979:68), hearths (Fowler and Matley 1979:74), and wickiups (Euler 1966:115). More recent studies show that smaller leaved branches are also used in the construction of the cry lodge (a funeral ceremony structure), windbreaks, shelters, sheds or ramadas, drum frames, slingshots, pipes, dolls, flutes, and noisemakers. Poles from cottonwood trees are also used in house construction (Laird 1976:105-106). Flowers are eaten as food and made into necklaces, and the trunk or logs from the tree serve as center poles in the Sun Dance ceremony. The whole tree provides shade in a ceremonial context as well as in everyday situations. The roots are either used to make traps or are traded to the Hopis, who use them to make kachinas. Dead wood is used as fuel. Pruning encourages continued fresh new growth (Stoffle, Halmo, Evans, and Austin 1994:246).

Portulaca sp. - Purslane

Seeds from plants in this genus are collected and ground for use as food (Stoffle and Dobyns 1983a:81).

Prosopis glandulosa (var. *Torreyana*) - Torrey mesquite

Historically, mesquite trees provided the principal resources for Southern Paiutes (Euler 1966:21). The pods and seeds were gathered and ground together in a flour. This was then used as mush or made into cakes that were baked or sun dried and stored (Powell 1873:39). The pods were also prepared for eating by being parched or shaken in a basket with hot coals (Laird 1976:106). Mesquite and raspberries were also used to make a wine (Powell 1873:49). Contemporary studies indicate that the beans are extracted from the pod and eaten fresh, or mashed and ground into a juicy pulp that is consumed as a beverage (Stoffle, Halmo, Evans, and Austin 1994:247). They are also ground into a mush or gravy or made into cakes (Stoffle, Halmo, Evans, and Olmsted 1990). The beans can be dried and stored for use throughout the year. The wood is used for construction and is a preferred source of fuel (Stoffle, Halmo, Evans, and Austin 1994:247).

Prunus fasciculata - Desert almond

Southern Paiutes used the desert almond for food (Stoffle, Dobyns, and Evans 1983:122).

Prunus virginiana - Chokecherry

The fruit from this plant is either mashed or dried and used for food (Stoffle and Dobyns 1982:124). The leaves, bark, or dried roots of this plant may be prepared as a medicinal tea for the treatment of tuberculosis, coughs, and colds. Dried bark is smoked to relieve headaches

or colds or is pulverized and used as a drying powder for sores. The steam from boiling bark is a treatment for snowblindness (Train 1957:82-83).

Psathyrotes sp. - Turtle back

Plants in this genus are dried and then soaked to make a medicinal eyewash. The dry leaves are also chewed for toothaches. These plants are prepared as a medicinal tea that serves as an emetic or physic for stomach-aches, bowel disorders, diarrhea, constipation, biliousness, and liver problems. The tea is used for venereal diseases as well. In addition, these plants are used to make poultices for swellings and snake-bites and to make a medicinal wash for headaches (Train 1957:83-84).

Pseudotsuga menziesii - Douglas-fir

No details available at this time.

Purshia mexicana - Cliffrose

The stems and leaves of cliffrose are prepared as a medicinal tea and poultice. The wood is used for construction and as fuel. This plant is still used today (Stoffle et al. 1994:145).

Purshia tridentata - Buckbrush, Bitterbrush

Buckbrush is mentioned in Southern Paiute traditional stories (Stoffle et al. 1994:145). Various parts of the plants are prepared as a medicinal tea for venereal diseases, colds, pneumonia, liver problems, and was used as an emetic or physic and a general tonic. The tea also serves as an antiseptic wash for itches, rashes, skin eruptions, scratches, or insect bites. Other remedies prepared from this plant are used for the treatment of smallpox, chicken pox, and measles (Train 1957:84-85). *P. tridentata* is also used as a poultice. The bark is used for making clothing and the stems and wood are used for fuel. The fruit can also be collected and eaten. This plant is still used today (Stoffle et al. 1994:145).

Quercus gambellii - Scrub oak, Gambel oak

Historically, scrub oak was used as food and for making bows (Euler 1966:62, 87). Today, Southern Paiutes continue to collect acorns and grind, boil, and roast them (Laird 1976:104, Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle et al. 1994:145). Young shoots, stems, leaves and wood are used in construction and the wood is used as fuel. Useful parts are stored for the future (Stoffle et al. 1994:145).

Rhus trilobata (all varieties) - Squawbush

Historically, squawbush was used by the Southern Paiutes for food and manufacture (Euler 1966:23). The wood was used to make such things as arrow shafts, small bows for boys, cradleboards for dolls, and was used as sticks for bullroarers (Fowler and Matley 1979:60, 62,

64, 72). More recent studies show that the young shoots and stems are also used for making baskets such as the famous Navajo wedding basket, cradleboards, winnowing baskets (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle and Dobyns 1982:189), water jugs, threshers, and pinenut containers (Stoffle, Halmo, Evans, and Austin 1994:247). This plant is the "Paiute willow," in that it is viewed as being superior to willow for basketmaking purposes and is preferred over all others. Materials for basketmaking as well as finished products are sold for cash (Stoffle, Halmo, Evans, and Austin 1994:247). The berry and seed are eaten fresh and the berries can be mashed into a beverage (Stoffle, Dobyns, and Evans 1983:38, Stoffle and Dobyns 1982:122, Stoffle and Dobyns 1983a:82). Squawbush is also made into a poultice/powder that serves as an astringent for smallpox (Train 1957:86, Stoffle and Dobyns 1982:134, Stoffle and Dobyns 1983a:146). The sticky sap within the branches is used as a paste and the dead wood is burned as fuel (Stoffle, Halmo, Evans, and Austin 1994:247). This plant is managed by transplanting, burning to stimulate regrowth, and pruning methods which encourage ideal growth for basketry. Parts used for both food and manufacture are stored for year-round use. It is now perceived as becoming increasingly rare, but remains a very significant and highly valued resource (Stoffle, Halmo, Evans, and Olmsted 1990).

Ribes aureum - Golden currant

Historically, the berries of the golden currant were used as a trade item (Euler 1966:64). Today, they continue to be used by Southern Paiutes for food (Stoffle, Dobyns, and Evans 1983:38). The inner bark is prepared as a medicinal tea for leg swellings or is dried and ground into a powder to cure sores (Train 1957:86).

Ribes cereum - White squaw currant, Wax currant

Squaw currant is mentioned in Southern Paiute traditional stories (Stoffle et al. 1994:146). Historically, it was used for arrow making (Fowler and Matley 1979:66), and as a trade item (Euler 1966:64). Today, the berries of the plant continue to be collected and eaten (Stoffle et al. 1994:146)

Ribes velutinum - Desert gooseberry

Desert gooseberry is mentioned in traditional Southern Paiute stories. Historically, it was used as a trade item (Euler 1966:64). Today, its fruit continues to be collected and eaten and its wood is used for fuel and construction (Stoffle et al. 1994:146).

Robinia neomexicana - New Mexico locust

Historically, New Mexico locust wood was used to make bows (Fowler and Matley 1979:62).

Rosa woodsii - Woods wild rose

Wild rose is mentioned in traditional Southern Paiute stories. The berries are consumed fresh (Stoffle and Dobyns 1982:122, Stoffle and Dobyns 1983a:82) and the stems, leaves, and

flowers are used to prepare a ceremonial wash and a beverage and medicinal tea (Stoffle et al. 1994:146). The medicinal teas made from various parts of this plants are used for colds, diarrhea, intestinal influenza, and serve as a physic and tonic. The roots, wood, or inner bark of the stems of *R. woodsii* are also used as a poultice or dressing for sores, cuts, wounds, burns, and swellings (Train 1957:86- 87). The bulb is used to make jam and the whole plant can be used for decoration. Southern Paiute people manage woods wild rose by transplanting cuttings. This plant is still used today (Stoffle et al. 1994:146).

Rubus sp. - Raspberry

Historically, raspberries were used by the Southern Paiute to make wine. In making this wine, they were sometimes combined with mesquille or strawberries (Powell 1873:49). The berries are also consumed as fresh fruit (Stoffle and Dobyns 1982:122, Stoffle and Dobyns 1983a:82).

Rumex crispus - Curly dock, Wild rhubarb

The leaves and stems of wild rhubarb are boiled and eaten as greens (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle, Dobyns, and Evans 1983:39). The roots are pulped and used for rheumatic swellings and pains. The pulped root is applied as a dressing or poultice for bruises, burns, and ordinary swellings. The roots are also boiled and prepared as a medicinal tea to treat venereal diseases and to serve as a tonic, physic, and blood purifier. The seeds can also be ground, boiled in a little water and eaten to stop diarrhea (Train 1957:87-88). This plant is still used today (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle, Dobyns, and Evans 1983:39).

Rumex hymenosepalus - Wild rhubarb, Canaigre

The stems (Stoffle, Dobyns, and Evans 1983:39) of wild rhubarb are eaten fresh or boiled as greens with added sugar (Stoffle and Dobyns 1983a:191, Stoffle, Halmo, Evans, and Austin 1994:247). They are harvested when the weather turns warm (spring) and the flowers and stalks of the plant turn red in color (Stoffle, Halmo, Evans, and Austin 1994:247).

Salix sp. - Willow

Historically, the wood from willow trees is used for many purposes such as constructing wickiups (Euler 1966:62, 115, Laird 1976:105), making bowls (Euler 1966:64), winnowing trays (Fowler and Matley 1979:9), drumsticks (Fowler and Matley 1979:72), sinew-backed bows (Laird 1976:5), and the handles of stone knives (Fowler and Matley 1979:68). This wood is often used to make the billets and tally sticks or gambling sticks for the four stick game (Fowler and Matley 1979:69-71). Twigs can also be weaved into fans for collecting seeds (Fowler and Matley 1979:9) and leaves were used for shelter from the wind and rain (Euler 1966:62). More recent studies also show that young shoots, leaves and branches are also used to make baskets, cradleboards, shade houses (Laird 1976:106, 250), corrals, hats, water jugs and are used in the sweatlodge. In Sun Dance ceremonies, shoots are woven into a holder and placemat for water or are sometimes painted red and black and placed upright on the altar. Like many houses

and sheds, Sun Dance houses are made in part of willow. Young shoots and stems are dried and split for storage and are rehydrated before use. Dry branches are also used as fire kindling. Moisture can be extracted from the stems of willow in an emergency as well (Stoffle, Halmo, Evans, and Austin 1994:247). This plant can also be brewed into a medicinal tea that serves as a blood purifier (Train 1957:89, Stoffle and Dobyns 1982:133, Stoffle and Dobyns 1983a:144) and as a regular spring tonic (Train 1957:89). The bark is chewed as a medicine for headaches (Stoffle, Halmo, Evans, and Austin 1994:247). This particular species is also prepared in many forms for the treatment of venereal diseases, bloody flux or dysentery, intestinal influenza, diarrhea, and urination problems. Various parts of this species also serve as a laxative, a physic, or, when the bark of the stems is ground into a fine powder, it is applied as a healing agent to the navels of young babies (Train 1957:89-90). Bark is woven into effigies and figurines (Stoffle, Halmo, Evans, and Austin 1994:247). Willow is used to teach younger generations about traditional plant use and basketmaking (Stoffle, Halmo, Evans, and Austin 1994:247-248). It is still valued highly among contemporary basket makers (Stoffle, Halmo, Evans, and Olmsted 1990).

Salsola iberica - Russian thistle, Tumbleweed

Russian thistle or tumbleweed is mentioned in Southern Paiute stories (Stoffle et al. 1994:146). The young shoots are harvested in May and are boiled, mixed with shortening, and salted to taste (Stoffle, Halmo, Evans, and Austin 1994:248). The stems and leaves are also used as fuel. This plant is still used today (Stoffle et al. 1994:146).

Salvia columbariae - Chia sage, California sage

No details available at this time.

Salvia dorrii - Purple sage, Indian tobacco

The stems and leaves of this plant are used for healing and purification, burned as an incense, and used in sweatlodges as part of Native American Church ceremonies. Dried leaves are smoked for pleasure as well as medicinal purposes. For example, San Juan Paiute people smoke this tobacco in sheep corrals while praying for the health of their sheep. The flowers of the plant contain seeds that are collected, stored, and replanted to ensure continued availability. Stems and leaves are harvested in spring and summer, and can also be stored for use throughout the year (Stoffle, Halmo, Evans, and Austin 1994:248). This plant continues to be used today (Stoffle, Halmo, Evans, and Olmsted 1990).

Sambucus racemosa - Red elderberry

The Southern Paiute used fresh berries from this plant for food (Stoffle and Dobyns 1982:122, Stoffle and Dobyns 1983a:82).

Sarcobatus vermiculatus - Greasewood

Historically, greasewood was used to make foreshafts for arrows and was used as a bit on fire-making drills (Fowler and Matley 1979:64, 74). More recent studies show that the seeds are collected and ground for use as food and medicine (Stoffle and Dobyns 1982:121, Stoffle and Dobyns 1983a:81). The whole plant is burned to a charcoal and prepared as a remedy for diarrhea (Train 1957:92).

Scirpus acutus - Hard-stem bulrush

The rhizomes/roots of this plant are used by the Southern Paiutes for food (Stoffle, Dobyns, and Evans 1983:38, Stoffle and Dobyns 1982:123, Stoffle and Dobyns 1983a:83).

Scirpus validus - Soft stem bulrush, Tule

The rhizomes/roots of this plant are used by the Southern Paiutes for food (Stoffle, Dobyns, and Evans 1983:38, Stoffle and Dobyns 1982:123, Stoffle and Dobyns 1983a:83). Tule was also used to make four-holed flutes (Laird 1976:107).

Sclerocactus sp. - Pineapple cactus, Devil claw

Southern Paiutes use the stems of this plant for food. Once collected, the spines are removed with a knife or are roasted off in a pit. The skin is then removed and the stems are cut and eaten. They are sometimes fried with eggs as well. *Sclerocactus* can be harvested throughout the year (Stoffle, Halmo, Evans, and Austin 1994:249).

Senecio sp. - Groundsel

No details available at this time.

Shepherdia rotundifolia - Roundleaf buffaloberry

The Southern Paiutes used fresh berries from this plant for food (Stoffle and Dobyns 1982:122, Stoffle and Dobyns 1983a:82).

Sisymbrium altissimum - Tumble mustard

The seeds of tumble mustard were collected and stored for year-round use. This plant was also prepared as a tea (Stoffle et al. 1994:146).

Smilacina racemosa - False solomon-seal, Coyote berry

The Southern Paiutes used fresh berries from this plant for food (Stoffle and Dobyns 1982:122, Stoffle and Dobyns 1983a:82).

Smilacina stellata - Solomon-seal

The fresh roots are prepared as a poultice for boils, swellings, and sprains. It is used as a remedy for earaches and as a medicinal wash for eye inflammations. A medicinal tea is also created from boiling the roots. This tea is used to regulate menstruation and relieve stomach problems. An exudate produced by this plant is used as a cough syrup and is eaten as candy by children (Train 1957:92-93).

Solanum sp. - Nightshade

The fruit of plants in this genus was eaten fresh or boiled into a tea for the treatment of diarrhea. The tea was also used as a beverage when Southern Paiutes traveled in areas where the water was not potable (Train 1957:93).

Solidago sp. - Goldenrod

Historically, goldenrod seeds were collected by the Southern Paiutes and used for food. They were often roasted and then reduced on milling stones (Euler 1966:81).

Sonchus oleraceus - Common sow-thistle

The roots of the common sow-thistle are eaten raw for food and for medicinal purposes. The milky sap from the stalk is ingested as a diarrhea medicine. The roots are collected in late spring and early fall and can be dried and stored for use throughout the year (Stoffle, Halmo, Evans, and Austin 1994:249).

Sphaeralcea ambigua - Apricot globemallow, Desert globemallow

The flower buds of desert globemallow were used as food (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle, Halmo, Evans, and Austin 1994:249). Stems and bark were prepared as a hair gel and the roots were used as an eye medicine (Stoffle et al. 1994:147).

Sporobolus sp. - Dropseed

The seeds of dropseed are used by Southern Paiutes for food (Stoffle, Dobyns, and Evans 1983:39). They are sometimes ground and sometimes mixed with other food substances (Stoffle and Dobyns 1982:121, Stoffle and Dobyns 1983a:81).

Stanleya pinnata - Prince's plume, Indian spinach

Indian spinach or Prince's plume is mentioned in traditional Southern Paiute stories (Stoffle et al. 1994:147). Historically, it was used by the Southern Paiutes for food or manufacture (Euler 1966:23). More recent studies show that the fresh green leaves and young

shoots are also eaten raw as salad greens or boiled as a spinach (Stoffle and Dobyns 1982:126, Stoffle and Dobyns 1983a:86, 191, Stoffle, Halmo, Evans, and Austin 1994:249). The roots of this plant are prepared as a tonic tea used for general weakness after an illness. The roots are also mashed and applied as a poultice to relieve pain and congestion of the throat (Train 1957:95). The leaves are harvested in spring and can be stored for use throughout the year (Stoffle, Halmo, Evans, and Austin 1994:249, Stoffle, Halmo, Evans, and Olmsted 1990). Southern Paiute people manage Indian spinach by pruning to ensure a stable and reliable supply of fresh greens. It is still used by Southern Paiutes today (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle et al. 1994:147).

Stephanomeria sp. - Wire lettuce

A gummy extract was scrapped off the roots of this plant and chewed like gum. Plant parts are harvested throughout the year. Wire lettuce continues to be used today (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle, Halmo, Evans, and Austin 1994:249).

Stipa comata - Needle-and-thread grass

No details available at this time.

Stipa speciosa - Desert needlegrass

The roots of *S. speciosa* were used to make hairbrushes. It is not known whether this plant is still used (Stoffle, Halmo, Evans, and Olmsted 1990).

Streptanthella longirostris - Wild mustard, Long-beak fiddle-mustard

The seeds of *S. longirostris* may have been used by the Southern Paiutes for food. It is not known whether this plant is currently used (Stoffle, Halmo, Evans, and Olmsted 1990).

Streptanthus cordatus - Heartleaf twistflower, Wild mustard

The Southern Paiutes used the seeds of this plant for food. It is not known whether the seeds are still eaten today (Stoffle, Halmo, Evans, and Olmsted 1990).

Suaeda sp. - Seepweed

The Southern Paiutes use the stems, leaves, and seeds of plants in this genus for food (Stoffle, Dobyns, and Evans 1983:39, Stoffle and Dobyns 1983a:191). The seeds are often ground before use (Stoffle and Dobyns 1982:121, Stoffle and Dobyns 1983a:81). Plants are also boiled to make a tea for bladder and kidney problems (Train 1957:95). Fresh stems and leaves are mashed and used as a medicinal poultice for cuts and sores (Stoffle, Halmo, Evans, and Olmsted 1990). The poultice stops the itching and dries up chicken pox sores (Train 1957:95). It is still used today (Stoffle, Halmo, Evans, and Olmsted 1990).

Swertia radiata - Deer-ears

The roots of *S. radiata* are used by the Southern Paiute for food (Stoffle, Dobyns, and Evans 1983:38, Stoffle and Dobyns 1983a:83).

Symphoricarpos longiflorus - Long-flower snowberry

The berries of long-flower snowberry may have been used for food (Stoffle, Halmo, Evans, and Olmsted 1990). Other parts of the plant were smoked for medicinal purposes (Stoffle and Dobyns 1982:137, Stoffle and Dobyns 1983a:150). The plant was also prepared as a tea for indigestion and stomach pains (Train 1957:95). It is not known whether Southern Paiutes continue to use this plant today (Stoffle, Halmo, Evans, and Olmsted 1990).

Tamarix chinensis - Tamarisk, Saltcedar

Historically, the boughs or bark of this tree were used to make shelters during the inclement season (Euler 1966:81). More recent studies show that the stems or branches can also be used for building shadehouses and cradleboards. The young shoots are fashioned into arrows. Dead wood is used for fuel. Branches for shade house construction are harvested in spring and summer because the leaved branches provide the shade. The young shoots can be stored for future use. Cuttings are transplanted near homes (Stoffle, Halmo, Evans, and Austin 1994:249).

Tetradymia sp. - Horsebrush

The stems and leaves of plants in this species are prepared as a medicinal tea for colds, coughs, and stomach aches. These plants may also be combined with *Juniperus utahensis* to create a remedy for pneumonia, influenza, colds and chronic coughs (Train 1957:96).

Thelypodium sp. - Thelypody

The young stems and leaves of plants in this genus were boiled and eaten as greens. The Southern Paiute method for harvesting these plants ensured them two to three crops a year and a continually reliable supply. It is still used for food today (Stoffle, Halmo, Evans, and Olmsted 1990).

Townsendia sp. - Townsendia

No details available at this time.

Typha domingensis - Cattail, Southern cattail

The submerged portion of the stems and roots, as well as the flower pollen of the southern cattail are used for food by the Southern Paiutes (Stoffle, Dobyns, and Evans 1983:38, Stoffle, Halmo, Evans, and Olmsted 1990). Blossoms are eaten raw or cooked as a soup (Stoffle and Dobyns 1982:125, Stoffle and Dobyns 1983a:85). The young shoots can also be used in making decoys, baskets, sweat-house mats, shelters, and boats. Dried stems are used for kindling

and all parts can be dried and stored for year-round use. This plant is highly valued by the Southern Paiutes and continues to be used today (Stoffle, Halmo, Evans, and Olmsted 1990).

Typha latifolia - Cattail, Broad-leaf cattail

The submerged portion of the stems and roots, as well as the flower pollen and seeds of the southern cattail are used for food by the Southern Paiutes (Stoffle, Dobyns, and Evans 1983:38, Stoffle, Halmo, Evans, and Olmsted 1990). The young shoots can also be used in making decoys, baskets, shelters, and boats (Stoffle, Halmo, Evans, and Olmsted 1990). The stems and leaves are used to make sweat-house mats for the Sun Dance ceremony. The moisture-bearing stalks are used to treat dehydration and are woven into baskets, used in wickiups, windbreaks, sheds, and for shade (Stoffle, Halmo, Evans, and Austin 1994:250). Dried stems are used for kindling and all parts can be dried and stored for year-round use. This plant is highly valued by the Southern Paiutes and continues to be used today (Stoffle, Halmo, Evans, and Olmsted 1990).

Urtica sp. - Nettle

Plants in this genus are prepared as a medicinal tea for colds or as a medicinal wash for rheumatism. Fumes from these plants are also inhaled as a treatment for grippe or pneumonia (Train 1957:98).

Valeriana sp. - Valerian, Tobacco root

The Southern Paiutes use the racemes from this plant for food (Stoffle and Dobyns 1982:123, Stoffle and Dobyns 1983a:83).

Viguiera multiflora - Showy goldeneye

The Southern Paiutes gathered the seeds of this plant and ground them for use as food (Stoffle and Dobyns 1982:121, Stoffle and Dobyns 1983a:81).

Vitis arizonica - Canyon grape

Historically, the fruit of the canyon grape was used for food (Euler 1966:113). Today, it continues to be eaten raw (Stoffle, Dobyns, and Evans 1983:39), or used to make jelly and wine (Stoffle, Halmo, Evans, and Olmsted 1990). The leaves are boiled as a medicinal tea to treat sore throats. They are also used as a poultice (Stoffle, Halmo, Evans, and Austin 1994:250). Fruits are stored for year-round consumption. Some Southern Paiute people transplant cuttings of the canyon grape near their homes and cultivate them. Chemehuevis used grape vines to tie saplings together in the construction of shelters (Laird 1976:105, 107). The plant is becoming increasingly hard to find but continues to be used today (Stoffle, Halmo, Evans, and Olmsted 1990, Stoffle, Halmo, Evans, and Austin 1994:250).

Wyethia sp. - Mules' ear

Plants in this genus are brewed into a medicinal tea for venereal diseases, stomach problems (Stoffle and Dobyns 1982:133, Stoffle and Dobyns 1983a:144), tuberculosis, colds, and fevers (Train 1957:99). This tea also works as an emetic, a cathartic, and a blood tonic (Train 1957:99, Stoffle and Dobyns 1982:133, Stoffle and Dobyns 1983a:144).

Yucca angustissima - Narrowleaf yucca

Yucca is mentioned in traditional Southern Paiute stories (Laird 1976, Stoffle et al. 1994:147). Historically, Southern Paiutes ate many parts of the yucca plant. The rich fruit was eaten raw or roasted (Euler 1966:81, Laird 1976:108, Fowler and Matley 1979:9). The pulp of the fruit was made into a roll and eaten like bread or used for trade (Euler 1966:88, Fowler and Matley 1979:4). The tender flower stalks and flowers were roasted in pits lined with rocks and also eaten (Presnall 1936). Fibers from the leaves were used to make string and rope for rabbit nets (Euler 1966:87), for weaving capes and aprons (Laird 1976:7, 94, 108), and for such things as holding hair knots (Euler 1966:70). *Yucca* stalks were also used as hearths (Fowler and Matley 1979:74). More recent studies show that the roots of this species of yucca are mashed and mixed with water to make a shampoo. Leaves are used to weave sandals and stems or stalks are used in making baskets and water jugs. Dead leaves are made into a dye for baskets. Dry material is used for kindling. The seeds in the flower at the top of the stalk are also eaten as food (Stoffle, Halmo, Evans, and Austin 1994:250).

Yucca baccata - Banana yucca, Blue yucca

Yucca is mentioned in traditional Southern Paiute stories (Laird 1976, Stoffle et al. 1994:147). Historically, Southern Paiutes ate many parts of the yucca plant. The rich fruit was eaten raw or roasted (Euler 1966:81, Laird 1976:108, Fowler and Matley 1979:9). The pulp of the fruit was made into a roll and eaten like bread or used for trade (Euler 1966:88, Fowler and Matley 1979:4). Fibers from the leaves were used to make string and rope for rabbit nets (Euler 1966:87), for weaving capes and aprons (Laird 1976:7, 94, 108), and for such things as holding hair knots (Euler 1966:70). *Yucca* stalks were also used as hearths (Fowler and Matley 1979:74). More recent studies show that the flower of this species of yucca is also eaten fresh as a food (Stoffle and Dobyns 1982:125, Stoffle and Dobyns 1983a:85). The fruit is usually harvested in fall when it is ripe and tastes sweet but can be cut while green and allowed to ripen in storage. Southern Paiutes roast, pound, or sun dry the fruit (Stoffle and Dobyns 1982:124, Stoffle and Dobyns 1983a:84). *Y. baccata* is also chewed as a cathartic (Stoffle and Dobyns 1982:136, Stoffle and Dobyns 1983a:149). Fibers for string making can be dried and stored, and are rehydrated when ready to use. Dried stems are also used as kindling (Stoffle, Halmo, Evans, and Austin 1994:251). Stems and leaves from this yucca are used in the making of shoes, baskets, and hairbrushes. The leaves are used as a soap, spines as needles, and the roots become a shampoo when mixed with water (Stoffle et al. 1994:147, Stoffle, Halmo, Evans, and Olmsted 1990). This plant continues to be used today (Stoffle, Halmo, Evans, and Olmsted 1990).

Yucca kanabensis - Kanab yucca

Yucca kanabensis was identified for the first time in this study. No further information is available at this time. For more information on *Yucca* sp. see *Y. angustissima* and *Y. baccata*.



Figure 7.3: Yucca

7.2.1 Summary

The data clearly indicates that plants continue to be highly important cultural resources to the Southern Paiute people. For some of the plants listed in this section, no specific information could be found. However, many of these plants have Southern Paiute names and are mentioned in historical and contemporary sources on Paiute culture. Southern Paiute people still use plants for a variety of purposes such as food, medicine, and making traditional items. However, many of the species identified are perceived by Southern Paiutes as becoming increasingly

inaccessible to them. The cultural significance of the Southern Paiute information on plant uses (traditional and current), storage, management, and preference needs to be impressed upon non-Indian people in the hopes that these resources might be protected from potential adverse impacts.

7.3 Southern Paiute Identified Animals

Several kinds of animals were hunted by Southern Paiute people. Explorers and other eyewitnesses recorded numerous incidences of Paiute hunting and consumption of animals in the study area. Paiute guides and packers often killed an animal and shared the meat during evening meals in camp with explorers.

American Indian people express concern for all animals because of a traditional belief that all animals, including insects, are important to the earth. Respect for animals is demonstrated in the kinds of traditional prayers that are said in association with hunting and taking the life of an animal. Like plants, animals are perceived to have rights and human qualities, because they are seen as relatives of human beings.

This section of the chapter gives a brief summary of the cultural significance of various animals found in Zion and PISP. There is little mythical, traditional, or contemporary information available on some of the animals known to be important to Southern Paiutes. Those animals are therefore only listed in this section. For Southern Paiute names or for more information on animals in this section, refer to Tables 5.3 and 6.3.

7.3.1 Mammals

Ammospermophilus leucurus - White-tailed Antelope Squirrel

The antelope squirrel is mentioned in at least one traditional Southern Paiute myth (Laird 1976:156).

Antilocapra americana - Pronghorn Antelope

Mythic stories that involve the antelope continue to be shared among Southern Paiute people (Stoffle et al. 1995). Some of those stories are reported in Fowler and Fowler (1971:81), Palmer (1978:52), and Laird (1976:177, 180, 226). At least two mythic names are given for the antelope. Historically, the Southern Paiute use of antelope for food has been well documented (Euler 1966: 112). In addition, clothing was made from the hide (Euler 1966:114; Fowler and Matley 1979:9), jewelry made from the jawbone (Fowler and Matley 1979:57), and arrow straighteners made from the horns (Sapir 1910:80-83). Contemporary reports indicate that antelope continue to be used for food, ceremony, clothing, tools, and other purposes (Stoffle et al. 1995:40). Antelope are hunted for their meat, but the blood, internal organs, and brain are eaten as well. Some Paiutes continue to use the blood when making hot dogs. According to one individual, "It is good for kids. It teaches them to be hunters" (Stoffle et al. 1995:40).

Bassariscus astutus - Ringtail Cat

No details available at this time.

Bat

Bats are mentioned in Southern Paiute tradition mythic stories (Laird 1976:164, 182-192; Palmer 1978:41). In one story, the bat is represented as being deceptive, an animal whose flight was “flickering and uncertain” (Palmer 1978:41). See *Pipistrellus hesperus*.

Canis latrans - Coyote

An important mythological figure, the coyote is described in Southern Paiute stories and legends. These include the Paiute creation story and stories explaining phenomena such as the change of seasons and the origin of menstruation. The coyote has many mythic names and is often a central figure in stories that describe the relationships among animals (Palmer 1978:5, 11, 16, 33-37; Martineau 1992:2, 10, 11, 13, 22, 25-26, 31, 33, 37-38, 41, 45, 74-75, 103, Stoffle et al. 1994, Stoffle et al. 1995, Laird 1976). Within these myths, the coyote often fills the role of a pattern-setter for bold and skillful warriors and hunters (Laird 1976:110). Historically and contemporarily the coyote is held close to the Southern Paiute heart and is regarded with respect and affection (Fowler and Fowler 1971:220-221, Laird 1976:110-111). Southern Paiutes traditionally did not trap or catch coyotes; the coyote comes when it has a message to deliver (Stoffle et al. 1994, Stoffle et al. 1995).

Castor canadensis - Beaver

Southern Paiute consultants are familiar with mythical stories involving the beaver (Stoffle et al 1995:42). For instance, Palmer (1978:37) documented a Southern Paiute story in which the beaver foolishly loses the hair on its tail because he was too proud. Traditionally, the beaver pelt was used for clothing. Beaver hides were also tanned to make arrowcases (Fowler and Matley 1979:67).

Cervus elaphus - Elk

Palmer (1978:5) documents a mythological story in which the elk is represented as an animal with excellent vision and great dignity. In another mythological story, the elk serves to mediate a quarrel between a deer and an antelope (Palmer 1978:55). Parts of the elk were also used to adorn women’s clothing. For example, both the teeth and the toes of the elk were used as adornments on women’s skirts (Fowler and Matley 1979:33,35).

Dipodomys sp. - Kangaroo Rat

No details available at this time.

Erethizon dorsatum - Porcupine

Fowler and Fowler (1971:86), Palmer (1978:56), and Martineau (1992:33) report traditional Southern Paiute mythic stories involving the porcupine. Porcupine was traditionally and is contemporarily used for food (Euler 1966:113). The hair, bones, quills, claws, and teeth of the porcupine are also used on clothing. The teeth are strung on necklaces and the quills are strung together and put on a stick for use in dancing (Gregory 1948:139; Kelly 1964:52, Stoffle et al. 1995). Fowler and Matley (1979:58) also describe necklaces made of porcupine quills.

Felis concolor - Mountain Lion

The mountain lion is mentioned in traditional Southern Paiute myths (Laird 1976:62, 111, 148, 213, 255). Fowler and Matley (1979:67) describe the historical use of mountain lion skin to make arrowcases. A more recent study shows that the mountain lion is also used in ceremonies, for clothing, and as tools. The fur and claws are specially prepared for use in ceremonies and the hide, claws, teeth, and tail are used for clothing. The brains are spread on the hide, worked in with the hands, and let dry while the claws of the mountain lion are used on bracelets, teeth are used on necklaces, and the tail is used as a hair piece or ornament to hang on a dance outfit (Stoffle et al. 1995).

Lepus californicus - Black-tailed Jack Rabbit

Southern Paiutes have traditional mythic time stories involving the jack rabbit (Laird 1976:154-155). For example, the jack rabbit is involved in the story of how the seasons were set (Palmer 1978:66; see also Cottontail). Today, this very important animal resource continues to be used for food, ceremony, clothing, tools, and other purposes (Laird 1976, Stoffle et al. 1994, Stoffle et al. 1995). The rabbit was traditionally hunted year-round with a rabbit club; a group of individuals would chase the rabbit toward one man who would then club it to death. Later, Paiutes would chase and club rabbits from horseback. Today, rabbits are hunted with shotguns. The meat, bones, blood, fat, and internal organs of the rabbit are used as food. In former times, Paiutes ate the rabbit's intestines, heart, liver, kidneys, and brains; some families still eat the brains. The fur is used for making blankets, special fur garments worn in ceremonies, and other clothing. Rabbit bones are used to make beads for necklaces and whistles and bones and sinew are used as tools or eating utensils. Rabbit skulls are also used in Paiute games and as children's toys (Stoffle et al. 1995).

Lynx sp. - Bobcat, Wildcat

The bobcat is featured in traditional Southern Paiute mythology (Fowler and Fowler 1971:87, Laird 1976, Martineau 1992:26). Dellenbaugh (1908:256) and Jones (Gregory 1948:170) observed Uinkaret Paiutes, who worked for John Powell's expedition, skinning and boiling the meat of a bobcat for food. Kelly (1964:53, 76) reported that bobcat flesh was roasted overnight in an earth oven for food and described the use of the hide for caps and arrow

quivers. Powell (1895:104-106) observed Southern Paiute men wearing bobcat skin as robes. The skin was also used for mats or blankets (Darrah 1947:69), as cradleboard swaddling (Fowler and Matley 1979:61), and for making arrowcases (Fowler and Matley 1979:67).

Mephitis mephitis - Striped Skunk

The skunk is featured in several mythic stories (Fowler and Fowler 1971:95; Palmer 1978:101; Martineau 1992:41) and at least one song (Laird 1976). Kelly (1964:54-55) reported that skunks were hunted but not eaten. Their pelts were sometimes used to make moccasin soles.

Microtus sp. - Meadow mouse

See Mouse.

Mouse

Mice were not traditionally captured, but they have been recognized for their role in nature. Southern Paiute children were instructed to always leave some of the crops in the fields for the mice to eat (Stoffle et al. 1995). Chemehuevis shamans used mice as spiritual "helpers" that could "steal the disease away" (Laird 1976:32).

Neotoma sp. - Woodrat

Two mythic stories featuring the rat have been recorded (Fowler and Fowler 1971:87; Palmer 1978:89). In historic times, the skins of the woodrat were used as fringes on women's clothing (Fowler and Matley 1979:33).

Odocoileus hemionus - Mule Deer

Southern Paiutes have traditional stories and songs about deer that have been recorded in several published documents (Fowler and Fowler 1971:123; Palmer 1978:5, 52, Laird 1976). The mule deer traditionally was and continues to be a very important animal resource for Southern Paiute people (Stoffle et al. 1994, Stoffle et al. 1995). Extensive documentation has been made of the traditional importance of deer in Southern Paiute culture. Deer was an important food source (Euler 1966:113). Men's clothing included breechcloths, moccasins, leggings, and shirts made of buckskin (Fowler and Matley 1979:28), and women wore buckskin skirts (Bolton 1950: 201) and doeskin shirts (Euler 1966:115). Fowler and Matley (1979:53, 60) describe the use of buckskin pieces and sinew stitching for a headdress, cradleboard, and bowcase. They also describe the use of buckskin and woven cloth for cruppers, devices used with horse saddles (Fowler and Matley 1979:82). Deer sinew was also used to make bows, bow string, and arrows (Sapir 1910:84; Fowler and Matley 1979:63, 64) and the deer antlers were carved into tapered flakers for making arrows (Fowler and Matley 1979:66). They were also used to make glue for laying sinew backing on bows (Kelly 1964:73).

Information about what is used, how it is used, and when and why it is used was widely known among the Southern Paiutes. Deer is used for food (Laird 1976:5), medicine, ceremony, clothing, tools, and other purposes. The meat, bones, fat, internal organs, tongue, and brain are eaten. Some of the meat is reserved exclusively for men to eat. A woman cannot eat deer meat during menstruation nor can she touch the bows and arrows, or more recently the guns, that are used in the deer hunt. Neither the father nor mother of a newborn child can eat deer meat either. Deer teeth are used in medicine bags and on necklaces. Fresh blood is drunk by young men to make them good hunters. The meat, hide, bones, feet, tail, antlers, and internal organs are used in ceremonies. The hide, teeth, tail, antlers, and sinew are used to make jackets, vests, moccasins, gloves, pants, cradleboard lining, ornaments, drums and blankets and other various forms of clothing. The leg bones are used for making beads, and necklaces. Toenails are used on men's shoes and tails are beaded and placed on a stick for use in pow wow dancing. Deer brain is the primary ingredient for tanning buckskin. Antlers are also used to make buttons, necklaces, ornaments, knife handles, and can be boiled to make a glue or cut out for use on a belt. Sinew is taken from the back of the deer and made into thread for sewing moccasins and other clothing. Many parts of the deer are also used for making tools (Stoffle et al. 1995).

Ondatra zibethica - Muskrat

No details available at this time.

Ovis canadensis - Desert Bighorn Sheep

Southern Paiutes have mythic stories and songs about the bighorn sheep (Fowler and Fowler 1971:223, Laird 1976, Palmer 1978:72). In the mountain sheep dance, a ceremony that takes place prior to a hunt, the bighorn sheep has its own song (Fowler and Fowler 1971:123; Palmer 1978:30; Martineau 1992:101). The Mountain Sheep sometimes serves as a spiritual "helper" for Southern Paiute shamans (Laird 1976:11, 112). The historical use of mountain sheep has been well documented. The animal was used for food (Bolton 1950:211-212, Powell 1895:316-320; see Euler 1966:112-13, Laird 1976:5), and to make skirts (Euler 1966:115). The horns were used to make bows (Fowler and Matley 1979:62-63, Euler 1966:114), arrow straighteners (Fowler and Matley 1979:65, Euler 1966:115) and spoons and dippers (Fowler and Matley 1979:76). The animal was generally hunted in the fall, and the meat, fat, and internal organs were used for food. The horns may also have been used to make medicine and the fat was applied to the body as a lotion. The hide and horns were used in ceremonies such as the mountain sheep ceremony. The hide, bones, feet, and tail were used to make clothing. Traditionally, the sheep's hide was an important trade item because it was not readily available to members of other tribes. Mountain sheep bones were also made into beads, and the teeth and hooves were used as ornaments on necklaces. The sheep's bones and horns were used for making tools; the foreleg was used to make a scraper for preparing hides, and the horns and sinew were used for a variety of tools, including eating utensils. Sinew was also used to attach feathers to arrows, and to string bows when the sinew from the deer was not available. The bighorn sheep continues to be very significant in Southern Paiute culture and is still used for food, medicine, ceremony, clothing, tools, and other purposes. However, because of the sheep's protected status, hunting is now severely restricted (Stoffle et al. 1995).

Perognathus sp. - Pocket Mouse

See Mouse.

Peromyscus sp. - Mouse

See Mouse.

Pipistrellus hesperus - Western Pipistrelle (bat)

Historically, the entire bat was used for medicine (Stoffle et al. 1995). See Bat.

Procyon lotor - Raccoon

No details available at this time.

Rat

Rat is mentioned in Southern Paiute mythic stories (Fowler and Fowler 1971:87; Palmer 1978:89). See also *Neotoma* sp.

Spermophilus sp. - Ground Squirrel

Historical records indicate that Southern Paiutes used ground squirrels for food (Euler 1966:113). Also see Squirrel.

Spilogale sp. - Skunk

See *Mephitis mephitis*.

Squirrel

Palmer (1978:6) documented a mythic story in which a squirrel is overjoyed at the return of birds to their home. Powell (1895:104-106) records the use of squirrel tails to decorate festival clothing. Fowler and Matley (1979:76) describe a pouch made out of a tanned squirrel skin. The bones and sinew from squirrels were also used in the manufacture of clothing (Fowler and Matley 1979:32).

Sylvilagus audubonii - Desert Cottontail

A number of traditional Southern Paiute mythic stories involve the cottontail (Palmer 1978:25-29, Laird 1976). In one story, the cottontail attempted to kill the sun by shooting an arrow at it. A stream of fire was emitted from the sun through the wound and burned the earth. The cottontail ran ahead of the fire to warn others and was offered protection by the rabbitbrush (*Chrysothamnus nauseosus*); thus, the bush received its name. In addition, the cottontail has brown spots on the back of its neck because it was burned by the sun (Palmer

1978:25-29). Variations of this story involve the jack rabbit instead of the cottontail. The cottontail was traditionally and still is used for food, clothing, and other purposes (Fowler and Matley 1979:9, Euler 1966:112,114-115, Laird 1976:5, 112-113, Stoffle et al. 1995). The meat, fat, liver, heart, and kidneys are eaten. The fat is stretched, soaked in water, and then used for cooking. The cottontail's fur is also used to make various articles of clothing such as gloves. Gloves are made by tanning the inside of the hide and then turning them inside out so the fur is worn against the skin and the tanned side faces out. The bones are used to make beads and to make needles and awls for sewing, and making baskets. The teeth are used as jewelry. Sinew (*tamu*) is dried and used for sewing and skulls are used to play a Paiute counting game (Stoffle et al. 1995).

Tamias sp. - Chipmunk

The chipmunk is a central figure in a mythic story about quarreling (Fowler and Fowler 1971:95). Fowler and Matley (1979:9, 58) noted that historically, chipmunk tails were used to decorate festive clothing and were attached to necklaces.

Taxidea taxus - Badger

The badger is featured in several mythic stories (Fowler and Fowler 1971:220, Palmer 1978:101, 103, Laird 1976:172). In some stories, badgers are considered allies or relatives of the bears (Laird 1976:113, 203). Kelly (1964:52) reported that badgers were not specifically hunted, but when found they would be killed. Badger meat was boiled three times to remove the strong taste, and the hide was used to make moccasin soles (Stoffle et al. 1995).

Thomomys sp. - Pocket Gopher

No details available at this time.

Urocyon cinereoargentatus - Gray Fox

The gray fox is featured in a mythic story regarding the origin of fire (Fowler and Fowler 1971:87). In Chemehuevis mythology, the fox is a popular hero that experiences many adventures as it travels north and south to visit relatives (Laird 1976:111).

Ursus americanus - Black Bear

The bear is represented in a number of mythic stories in which they are sometimes portrayed as tricksters (Palmer 1978:5, Martineau 1992: 26, 45, Laird 1976:113, 227-228). In addition, the bear dance (*makwon*) was not only prominent in the past but is still practiced today (Martineau 1992:95). The bear was also used as an animal helper in the healing practices of some shamans. Shamans could draw upon the strength of the bear while in their human form or could sometimes turn themselves into a bear (Laird 1976:38, 47, 70). When the Chemehuevis encounter a bear while they are traveling, they address him as *niwaani*, or "my friend" (Laird 1976:113).

Vulpes sp. - Fox

See *Urocyon cinereoargentatus*.

7.3.2 Reptiles

Coleonyx variegatus - Banded Gecko

Geckos are mentioned in traditional Southern Paiute myths. In one such myth, a gecko plays the role of a warrior (Laird 1976:116, 172-173).

Crotalus sp. - Rattlesnake

The rattlesnake is represented a number of times in mythic stories and songs (Fowler and Fowler 1971: 12, 94, 126, 219, Laird 1976:157, 172, Palmer 1978:16). Palmer (1978:16) relates when a group of clan chiefs journeyed from the desert to look for their mother cave in the land of the setting sun (their place of origin). During their trip, a medicine man identifies a rattlesnake and other animals as the embodiment of the god Shinob, who, in turn, shows them the correct path out of the desert. Myths are only to be told in the wintertime because the snakes are dormant. If a myth is told in the summertime, it is believed that someone will be bitten by a rattlesnake (Laird 1976:148).

Crotaphytus collaris - Collared Lizard

See Lizard.

Gambelia wislizenia - Leopard Lizard

See Lizard.

Lampropeltus sp. - Kingsnake

See Snake

Lizard

There is a general mention of lizards in traditional Southern Paiute mythic stories. Historically, lizards were used for food (Euler 1966:30, 44, 45, 48) and medicine (Stoffle et al. 1995). They were hunted during the winter when food supplies were low, and their meat was roasted and eaten (Euler 1966:48, Stoffle et al. 1995). A long stick with a hook on the end was used to haul lizards and other small animals out of their holes (Euler 1966:48). The lizard's tail was also used to remove cataracts from the eyes by splitting it in half and sweeping it across the eye beneath the lid (Stoffle et al. 1995).

Pituophus melanoleucus - Gopher Snake, Bullsnake

Southern Paiutes have traditional mythic stories about snakes. One such story involves a "hot sand snake" and tells why Paiutes dance the snake dance (Palmer 1978:76). The gopher snake was and continues to be used by Southern Paiutes for food and clothing. The snake is gathered in the fall, and the meat is roasted and then eaten. The snakeskin is used to decorate headbands and other articles of clothing. The bones are also used as ornaments (Stoffle et al. 1995). Also see snake.



Figure 7.4 Lizard on a wall of the Pipe Spring Monument building

Sauromalus obesus - Chuckwalla

Chuckwallas are included in traditional Southern Paiute stories (Laird 1976:11, 116, 207, Stoffle et al. 1995). Historically, they were used as a source of food (Euler 1966:30, Laird 1976:116, Stoffle et al. 1995).

Scleroporos magister - Desert Spiny Lizard

See Lizard.

Snake

Published manuscripts describe the use of snakeskins to make ornaments for decorating festival clothing (Powell 1895:104-106) and for necklaces (Fowler and Matley 1979:58). Snakes were also used for food (Euler 1966:113).

7.3.3 Birds

Birds have a special place in Southern Paiute culture. For example, bird hearts are used as love charms. One must be cautious using one though because it can backfire and cause harm to one's relatives. Bird songs are also important to Southern Paiute people. For example, bird songs are sung all night before a funeral to help the departed person's spirit travel to the next world (Stoffle et al. 1995). Bird feathers are also very important and are mentioned in several traditional myths and songs (Fowler and Fowler 1971:123, 124, 127, 128). They were used on clothing such as capes, as ornamentation, in ceremonies, on arrows and for several other purposes (Laird 1976).

Accipiter cooperii - Coopers Hawk

In historical times, the feathers of this hawk were used in men's headresses (Fowler and Matley 1979:53).

Agelaius phoeniceus - Red-winged Blackbird

No details available at this time.

Amphispiza bilineata - Black-throated Sparrow

No details available at this time.

Anas sp. - Duck

Palmer (1978:5) mentions one mythical reference to the duck. Martineau (1992:31-33) recorded one story about coyote and "Old Man Duck," the medicine man. The Chemehuevis named a group of stars after a broken-winged duck (Laird 1976:93). In traditional and contemporary times, Southern Paiutes use ducks for food (Euler 1966:29), clothing, and making tools. They are hunted at any time during the year, but are not disturbed while nesting (Kelly 1964:54, Stoffle et al. 1995). Euler reports that Kaibab Paiutes killed several hundred ducks in the fall and spring when exhausted flocks stopped to rest (1966:29). The fat is cooked with the meat and, in the past, duck eggs were eaten whenever they were available. Bones are used to make beads for use on clothing, and feathers are used to decorate headbands or hats. In addition, the bones, feathers, and feet are used to make tools and the feathers are used on arrow shafts (Stoffle et al. 1995).

Aphelocoma coerulescens - Scrub Jay

No details available at this time.

Aquila chrysaetos - Golden Eagle (see also *Haliaeetus leucocephalus* - Bald Eagle)

A generic "eagle" is included in several Southern Paiute songs (Fowler and Fowler 1971:122, 125; Martineau 1992:94), and is the central figure in many traditional mythic stories (Fowler and Fowler 1971:223, Laird 1976:167, Palmer 1978:5, 14, 21, 45-50, 84, Martineau 1992:37). The golden eagle is used and treated in the same way as the bald eagle. Published accounts record the use of golden eagle feathers for headdresses (Fowler and Matley 1979:53) and on arrows used in big game hunting (Sapir 1910:80-83). Kelly (1964:92-93) reports that eagle nests (aeries) were owned and passed from father to son. These aeries were a key source of feathers which were both necessary for producing arrows as well as for ceremonies. Eagle skins or braided feathers are a necessary part of the Chemehuevis Cry or Mourning Ceremony (Laird 1976:42, 115). Eagle feathers were a trade item; a bundle 2 to 3 inches in diameter brought a buckskin in exchange (Stoffle et al. 1995:55).

Ardea herodias - Great Blue Heron

No details available at this time.

Athene cunicularia - Burrowing Owl

Burrowing owls are mentioned in traditional Southern Paiute myths. Because this owl shares abandoned burrows with rattlesnakes, it is believed that the rattlesnake is the owl's alter-ego. Also, the Chemehuevis believe that the seasons are three months long due to a myth where this bird persistently holds up one of its small three-toed feet (Laird 1976:93, 115, 157). For more information, see owl.

Branta sp. - Goose

Martineau (1992:27) relates a mythic story in which the coyote has a rather fruitless encounter with a flock of geese.

Bubo virginianus - Great Horned Owl

The great horned owl is mentioned in traditional Southern Paiute myths (Laird 1976:68). It is a special messenger to the Paiute people (Stoffle et al. 1995). For more information, see owl.

Buteo jamaicensis - Red-tailed Hawk

Martineau (1992:38,45) recorded two traditional Southern Paiute mythic stories involving hawks. Laird also mentions mythic stories involving the red-tailed hawk. In one story, the hawk is presented as a good hunter that will provide for his wives (1976:10, 68, 114, 164-

168, 200, 218). Historically, red-tailed hawk feathers were used on headdresses and arrows for small game (Fowler and Matley 1979:53,65). Today, the hawk continues to be trapped or hunted for medicine, ceremony, clothing, and tools. The bones and feathers are used medicinally. Fans made of hawk feathers have special power and are used for smoking people and things to ward off evil. The bones and feathers are also used in ceremonies such as the Sun Dance. Under certain conditions when feathers are removed from live hawks and the hawks released, a special relationship is created between the hawk and person. Hawk feathers and claws are also used for decoration. For example, the feathers are attached to buckskin and other articles of clothing, and the claws are worn on a necklace (Stoffle et al. 1995).

Buteo swainsoni - Swainson's Hawk

Swainson hawk feathers were sometimes used for male headdresses (Fowler and Matley 1979:53).

Callipepla sp. - Quail

Southern Paiutes have traditional mythic stories (Martineau 1992:102, Laird 1976:177, 179, 226) and at least one song about the quail, Quail Song (Fowler and Fowler 1971:124, Laird 1976:18, 73). Historically, it was used in ceremonies such as the Paiute Quail Dance (Martineau 1992:102). Kelly (1964:54) also reported Paiutes eating quail eggs and Fowler and Matley (1979:55, 58) described the use of various bird parts for ornamentation. For example, hair ornaments and necklaces sometimes contained quail topknots, scalp feathers, beaks, and scalp pieces. Quail crests were also used to ornament hats (Laird 1976:114). Today, the quail continues to be used for food, ceremony, clothing, and tools. Quail meat is boiled, fried, and roasted and the feathers are plucked and used in ceremonies, on clothing, and on arrows (Stoffle et al. 1995).

Carpodacus purpureus - Purple Finch

No details available at this time.

Cathartes aura - Turkey Vulture

Fowler and Fowler (1971:126) tell of a Southern Paiute song about the turkey vulture.
Catherpes mexicanus - Canyon Wren

See Wren

Ceryle sp. - Kingfisher

No details available at this time.

Charadrius vociferus - Killdeer

No details available at this time.

Chordeiles sp. - Nighthawk

Palmer (1978:22) relates a traditional Southern Paiute story in which the nighthawk plays an important role. The nighthawk stops a rock that is chasing the god, Shinob, by persistently pecking at it until it splits open. The nighthawk's heroism and loyalty to the belabored god leaves the bird bruised and bleeding. In return, Shinob bandages the bird with fancy markings.

Cinclus sp. - Water Ouzel

No details available at this time.

Circus sp. - Hawk, Harrier

No details available at this time.

Coccythraustes vespertinus - Evening Grosbeak

No details available at this time.

Colaptes sp. - Flicker

Southern Paiutes have traditional stories (Kelly 1964:53) and songs about the flicker (Fowler and Fowler 1971:128). Historically, species such as the red-shafted flicker were used for food (Kelly 1964:53), and for decorating men's headresses (Fowler and Matley 1979:53). The flicker continues to be used today. It is still hunted with a slingshot in the summertime (Stoffle et al. 1995).

Columba fasciata - Band-tailed Pigeon

No details available at this time.

Corvus brachyrhynchos - American Crow

Crows are mentioned in traditional Southern Paiute myths. In Chemehuevi mythology, the crow is considered the bird of the moon (Laird 1976:90, 154, 172, 174, 200).

Corvus corax - Common Raven

Raven are mentioned in Southern Paiute mythic stories (Palmer 1978:5). According to their beliefs, mountain spirits (Kai-ni-suva) can take the form of a raven and come to visit Paiute

people in their camps (Fowler and Fowler 1971:75). Therefore, when a raven comes into camp and perches on a rock, it is offered food. Raven feathers were used in feather cluster headresses (Fowler and Matley 1979:54).

Cyanocitta sp. - Jay

No details available at this time.

Dendragapus obscurus - Blue Grouse

No details available at this time.

Dendroica petechia - Yellow Warbler

No details available at this time.

Eremophila alpestris - Horned Lark

No details available at this time.

Euphagus cyanocephalus - Brewer's Blackbird

No details available at this time.

Falco sparverius - Sparrow Hawk, American Kestrel

No details available at this time.

Fulica americana - American Coot

No details available at this time.

Geococcyx sp. - Roadrunner

No details available at this time.

Glaucidium gnoma - Northern Pygmy Owl

See Owl.

Grus canadensis - Sandhill Crane

No details available at this time.

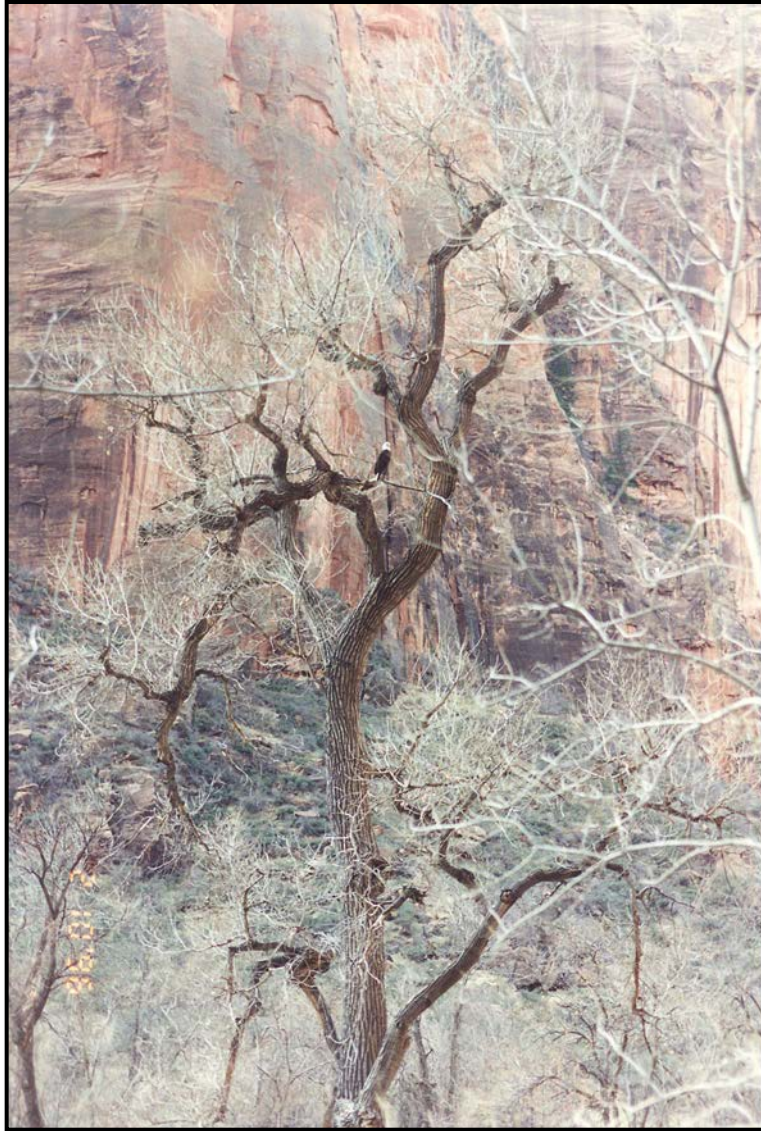


Figure 7.5 Bald Eagle

Gymnorhinus cyanocephalus - Pinyon Jay

The pinyon jay is included in a Southern Paiute circle dance song (Martineau 1992:94). The generic blue jay is also included in a mythic story describing how the seasons were set (Palmer 1978:67). Pinyon jays may also have been used for food (Kelly 1964:53). This bird received its name because of its usefulness in locating pinyon nut areas ready for harvest. The cry of the bird and its flight pattern allowed the people to find the stands of trees with ripe pinyons (Stoffle et al. 1994:162).

Haliaeetus leucocephalus - Bald Eagle (see also *Aquila chrysaetos* - Golden Eagle)

The eagle is included in Southern Paiute songs (Fowler and Fowler 1971:122, 125; Martineau 1992:94), and is the central figure in many traditional mythic stories (Fowler and

Fowler 1971:223, Laird 1976:167, Palmer 1978:5, 14, 21, 45-50, 84, Martineau 1992:37). Although most of the mythic stories refer to the generic “eagle,” at least one focuses specifically on the bald eagle. In one story, a lone eagle feather is worn by the Paiutes to call down the protection of the great spirit upon them (Palmer 1978:19).

The bald eagle has traditionally been and continues to be very important in Southern Paiute culture. Eagles are used for medicine, in ceremonies, in making clothing, and for other purposes. Feathers represent power and strength and are used in ceremonies, to make clothing, and to help ward off bad spirits (Stoffle et al. 1995). Eagle skins or braided feathers are a necessary part of the Chemehuevis Cry or Mourning Ceremony (Laird 1976:42, 115). Bones are used as medicine. The skull is mounted on a stick to be used by veterans in ceremonial dances and pow wows and the leg bones are used for making beads. Leg bones are also used for making special whistles used in dances. In addition, the talons of the eagle are used for medicine, in ceremonies, on clothing, and for other purposes (Stoffle et al. 1995:55).

Himantopus mexicanus - Black-necked Stilt

No details available at this time.

Hirundo sp. - Swallow

See Swallow.

Hummingbird

The hummingbird is a central figure in several traditional Southern Paiute mythic stories and has at least three mythic names. In one such story, the earth was created by the gods with the help of the hummingbird (Palmer 1978:3). In another story, the hummingbird used its cane to create water springs (Martineau 1992:17). The hummingbird is recognized for its importance in pollinating flowers (Stoffle et al. 1995:53).

Icterus sp. – Oriole

No details available at this time.

Junco sp. - Junco

No details available at this time.

Lanius sp. - Shrike

No details available at this time.

Larus sp. - Gull

Gulls are mentioned in traditional Southern Paiute myths. In one such myth, Coyote uses the feathers of a gull on an arrow that he shoots into the sky to bring true dawn (Laird 1976:116, 200, 229).

Melanerpes sp. - Woodpecker

No details available at this time.

Meleagris gallopavo - Wild Turkey

The turkey was and continues to be used for food. It was traditionally hunted with a bow and arrow and is now killed with a shotgun. The meat, fat, and internal organs are boiled or roasted before they are eaten. All parts, including the neck and internal organs, are eaten (Stoffle et al. 1995).

Mimus polyglottos - Northern Mockingbird

The Chemehuevis word for mockingbird, yampa, was sometimes used to form names for people (Laird 1976:78).

Mycteria americana - Wood Stork

Fowler and Matley (1979:58) make reference to a gorget that uses the bill of a wood stork.

Otus kennicottii - Screech Owl

See Owl.

Owl

Palmer (1978:49, 66) and Martineau (1992:41) recorded Southern Paiute stories in which the owl is a central figure. The owl is also the subject of at least one Southern Paiute song (Laird 1976:18). Owls are not captured; they come near when they have sad news to relay. Although their activities are never to be interrupted, their feathers can be collected and used on prayer sticks (Stoffle et al. 1995). Fowler and Matley (1979:53) describe the use of owl feathers on a headdress.

Oxyura jamaicensis - Ruddy Duck

No details available at this time.

Parus gambeli - Mountain Chickadee

No details available at this time.

Passerinea cyanea - Indigo Bunting

No details available at this time.

Pelecanus erythrorhynchos - American White Pelican

No details available at this time.

Perisoreus canadensis - Gray Jay

No details available at this time.

Phalacrocorax sp. - Cormorant

No details available at this time.

Phalaenoptilus sp. - Poorwill

No details available at this time.

Pheucticus melanocephalus - Black-headed Grosbeak

No details available at this time.

Pica sp. - Magpie

The magpie is mentioned in a mythic story about why birds wear bright plumage (Palmer 1978:5).

Picoides sp. - Woodpecker

No details available at this time.

Pipilo chlorurus - Green-tailed Towhee

No details available at this time.

Piranga ludoviciana - Western Tanager, Mountain Tanager

No details available at this time.

Podilymbus sp. - Grebe

No details available at this time.

Recurvirostra americana - American Avocet

No details available at this time.

Salpinctes obsoletus - Rock Wren

Southern Paiute have traditional stories involving the rock wren (Stoffle et al. 1995). This bird was also used by some Southern Paiutes as a medicinal charm. Once trapped or snared, the bird's bones were ground into a powder and kept in a man's medicine bag as a charm to attract women (Stoffle et al. 1994:162). Also see wren.

Sayornis saya - Say's Phoebe

No details available at this time.

Sialia sp. - Bluebird

The bluebird is the subject of a traditional Southern Paiute song (Fowler and Fowler 1971:125).

Sitta sp. - Nuthatch

No details available at this time.

Spizella passerina - Chipping Sparrow

No details available at this time.

Strix occidentalis - Spotted Owl

See Owl.

Sturnella sp. - Meadowlark

No details available at this time.

Swallow

Palmer relates a mythic story in which the swallow helps the gods build the earth (Palmer 1978:4). The swallow is known as the builder because it uses mud to make a foundation on the water for the earth to rest (Stoffle et al. 1995).

Tachycineta thalassina - Violet-green Swallow

See Swallow.

Toxostoma sp. - Thrasher

No details available at this time.

Troglodytes sp. - House Wren

See Wren.

Turdus migratorius - American Robin

Palmer refers to the robin in a mythic story about why birds wear bright plumage (1978:5).

Tyrannus verticalis - Western Kingbird

No details available at this time.

Wren

Southern Paiute have traditional stories involving wrens. In historic times, the wren was recognized by its song. Wren feathers were and continue to be used in ceremonies. When dead, the wren's body is buried underground as a gift back to Mother Nature (Stoffle et al. 1995).

Zenaida macroura - Mourning Dove

Southern Paiutes have traditional stories about the mourning dove (Laird 1976). Doves were and continue to be hunted for food, ceremony, clothing, and tools. They were traditionally hunted with a slingshot, bow and arrow, or were beaten with a stick (Stoffle et al. 1995). Kelly (1964:53) reports that doves were hunted from blinds built near watering places. When killed, they were plucked, cleaned, and cooked in ashes. Today they are hunted with guns. The feathers, wings, and heads are kept for sacred ceremonies. The feathers are used by medicine men or are used to decorate buckskin and other articles of clothing. The skull is used as an ornament on ceremonial necklaces. The entire bird can also be dried in a specified position to be used in ceremonies. The bones are cut with flint and used as tools (Stoffle et al. 1995).

Zonotrichia leucophrys - White-crowned Sparrow

No details available at this time.

7.3.4 Amphibians

Bufo sp. - Toad

According to a mythic story related by Palmer (Palmer 1978:21), the toad is given its name by the god Shinob in the Paiute language, which is also his language.

Rana sp. - Frog

Southern Paiutes have traditional mythological stories about the frog. In one mythic story related by Palmer (1979:19), the frog, in the embodiment of the god Shinob, teaches a lesson. The frog is also a central figure in a story about the moon (Fowler and Fowler 1971:221). Historically, the frog was used for food (Euler 1966:113). Today, frogs continue to be used for food and are caught with a net. Their meat is either boiled or roasted and is considered "too slimy" for frying or drying. Whipple (U.S. House of Representatives 1856) reported Paiute people eating frogs along the Moapa (Muddy) River (Stoffle et al. 1995).

7.3.5 Arachnids

Scorpion

No details available at this time.

Spider

Spiders, in general, are mentioned in traditional Southern Paiute myths (Laird 1976:117, 205). A water spider, specifically, is mentioned in the Chemehuevi creation story (see chapter two). In the story, Coyote turns himself into a water spider and carries Louse's eggs from the island to the mainland in the same manner that water spiders carry their eggs in a sac. Black widow spiders are also mentioned in myths (Laird 1976:117). Historically, spiders were consumed as food (Euler 1966:42).

Tarantula

No details available at this time.

7.3.6 Insects

Ant

The Red Ant figures in a Southern Paiute myth and in several songs and chants (Fowler and Fowler 1971:121-122, Laird 1976:18, 172, 182). To some Southern Paiute groups, ants were considered a valued source of food, ie., a delicacy (Euler 1966:45, 46, Stoffle et al. 1995:20). Before they were eaten, they were sometimes matted or boiled (Euler 1966:113). It has been recorded that some non-Indians referred to the Southern Paiutes as "Ant Eaters" (Euler 1966:47).

Beetle

No details available at this time.

Bumblebee

Historically, the Southern Paiutes used honey for food (Euler 1966:113).

Butterfly

According to Euler (1966:30), some Southern Paiute groups have been recorded as using caterpillars for food.

Centipede

The Southern Paiute have a story about the centipede which says that when a centipede bites a person, the centipede counts its feet. The person who was bitten will die within the same number of days, months, or years as the centipede has feet (Martineau 1992:132).

Cicada

According to Euler (1966:30), some Southern Paiute groups have been recorded as using cicadas for food.

Cricket

According to Euler (1966:30), some Southern Paiute groups have been recorded as using crickets for food.

Dragonfly

Shamans sometimes used dragonflies as scouts or runners that would travel between them and their other animal helpers (Laird 1976:32, 277).

Flea

Matavi^yumi, Matavi^yum, or Matavi^yuts, Southern Paiute words meaning having fleas, have been used to name people and dogs (Laird 1976:80).

Fly

Flies, such as sandbar flies and horseflies, are mentioned in traditional Southern Paiute myths (Laird 1976). Historically, Southern Paiutes consumed the larvae of flies found along lakes. These may have been the larvae of *Ephydra hians*, a species of brine fly (Euler 1966:30, 42, 113).

Grasshopper

Grasshoppers are mentioned in traditional Southern Paiute myths. In one such myth, Grasshopper appears as a man, a man-sized grasshopper, a giant, and as a swarm of small grasshoppers (Laird 1976:118, 211, 218).

Lice

Lice are mentioned in traditional Southern Paiute myths. In the Chemehuevis creation story (see chapter two), Louse is the woman who became the mother of mankind (Laird 1976:72, 118, 137, 149-151).

Mosquito

Mosquitoes are mentioned in traditional Southern Paiute myths. In one such myth, Mosquito appears as a fearsome warrior. In this myth, Mosquito appeals to Coyote as being very warlike because he sings a war song about drinking the blood of living persons (Laird 1976:117, 172, 174- 176, 224).

Moth

According to Euler (1966:30), some Southern Paiute groups have been recorded as using caterpillars for food.

Worm

Worms, especially yucca date worms, are mentioned in several traditional Southern Paiute myths (Laird 1976:162-168, 118, 211, 217 -220). Historically, worms were consumed as food (Euler 1966:42).

Xylocopa sp. - Carpenter bee

Historically, Southern Paiutes would commonly extract the honey of the carpenter bee from cane (*Phragmites australis*) and use it for food (Euler 1966:30, 113).

Yellowjacket

No details available at this time.

7.3.7 Fish

Catostomus sp. - Sucker, Pipefish

No details available at this time.

Fish

Although fish were and continue to be used for food by many Southern Paiutes (Euler 1966:30-31, 113, Stoffle et al. 1995) some Paiutes, such as the Chemehuevis, do not eat fish of any kind (Laird 1976:46-47). See trout for more information.

Trout

Southern Paiute have traditional mythic stories about trout. In one story, the trout was responsible for carrying fire across the river. The fire burned him and produced the red spot on his gills (Stoffle et al. 1995). Fowler and Fowler (1971:125) discuss a Paiute song about trout. Although trout were and continue to be used for food by many Southern Paiutes (Euler 1966:30-31, 113, Stoffle et al. 1995) some Paiutes, such as the Chemehuevis, do not eat fish of any kind (Laird 1976:46-47). The meat, skin, bones, tail, and fat of the fish are eaten. Trout are fried, roasted over charcoal, or cooked on sticks over an open fire. When fried to a very crispy state, the entire body, except the head, can be eaten. The head is also boiled and eaten (Stoffle et al. 1995)

7.4 Summary

The data clearly indicates that animals, like other cultural resources, continue to be highly important cultural resources to the Southern Paiute people. For some of the animals listed in this section, no specific information could be found. However, many of these animals have Southern Paiute names and are mentioned in historical and contemporary sources on Paiute culture. Southern Paiute people still use animals for a variety of purposes such as food, medicine, and making traditional items. However, many of the species identified are perceived by Southern Paiutes as becoming increasingly inaccessible to them. The cultural significance of the Southern Paiute information on animal uses (traditional and current), storage, management, and preference needs to be impressed upon non-Indian people in the hopes that these resources might be protected from potential adverse impacts.

CHAPTER EIGHT MANAGEMENT RECOMMENDATIONS

One purpose of this ethnographic overview and assessment is to provide information that could be incorporated into the Resource Management Plans of Zion National Park (Zion) and Pipe Spring National Monument (PISP). This study was co-managed by six Southern Paiute tribes through the Southern Paiute Consortium (SPC), and the National Park Service (NPS) in accordance with the management objectives of these park units. These tribes seek further involvement in park management. Several laws require the NPS to consult with Native American tribes (see Chapter Three). There are many avenues for Southern Paiute participation in park management that go beyond the minimum consultation required by law. This chapter describes some of those alternatives and management recommendations. After an overview of general recommendations, park-specific recommendations will be provided.

8.1 Overview

Both Zion and Pipe Spring are to be managed to assure the long-term protection of cultural and natural resources. At the highest level, tribes and the NPS can co-manage the entire park or specific projects such as this overview and assessment. Tribes can also participate in resource management in other ways. These other ways can include: (1) establishing a regular meeting schedule that ensures open communication between the tribes and the park units, (2) designing and implementing monitoring programs, (3) establishing policies for Native American access, (4) creating and reviewing interpretive displays, and (5) working with NPS officials to coordinate and integrate resource management outside park boundaries.

Tribal representatives were asked what they thought should be done to protect natural and cultural resources within the Virgin River and Kanab Creek ecoscapes, and specifically at interview sites in Zion National Park and Pipe Spring National Monument. Each interview contained a discussion of what the Paiute representatives perceived was occurring to water, plant, animal, archaeological, and geological features and what should be done to protect these features. Further discussion of management and access issues was motivated by questions about overall management recommendations.

Southern Paiute elders were cautious about making policy statements without having complete information about the issues under consideration. For example, they were uncertain about the coordination of management practices within the ecoscapes due to the presence of private, county, state, and Federal lands. In addition, only some of the culturally significant sites recorded in the study area were visited during the study. Some tribal elders were unable to participate because of the physical requirements necessary to reach particular study sites. Nevertheless, the recommendations provide a basis for the further development of Southern Paiute and NPS partnerships for resource management.

8.1.1 Co-Management

The NPS enters into co-management relationships with tribal governments and other governmental units when such arrangements help the agency achieve its mission to "protect natural and cultural resources in an unimpaired state for future generations while providing opportunities for the enjoyment of those resources." As the agency works to define and implement ecosystem management, such partnerships will take on increasing importance. Co-management arrangements are generally governed by formal agreements. For example, in 1976 the NPS and Oglala Lakota signed a Memorandum of Agreement (MOA) regarding Badlands National Park. Under the provisions of that MOA, the NPS and Oglala Lakota equally share both the gate receipts collected from individual recreational entry to the park and the costs of collecting those receipts. Specific policies developed pursuant to the MOA are issued as administrative orders. For example, Office Order BADL-037 of January 13, 1995 clarifies the mechanisms for calculating and disbursing receipts.

The co-management relationship between Zion, Pipe Spring, and the Southern Paiutes is spelled out in a letter from the park superintendents to the tribal chairs of the Kaibab Paiute Tribe and Paiute Indian Tribe of Utah (Falvey and Hiscock 1994). This letter identifies a Contracting Officer's Technical Representative (COTR) to represent the interests of the NPS and a Tribal Coordinator to represent the tribes' interests. The NPS provides funds directly to the SPC to enable the tribes to participate in this project.

Successful co-management relationships require all partners to commit resources, including time, money, and personnel. The co-management agreement at Badlands provides a mechanism for both the NPS and the tribe to obtain revenue to support their obligations under the agreement. That agreement provides a good model for Zion and Pipe Springs.

8.1.2 Specific Resource Management Issues

Southern Paiute people believe that as caretakers of the land, all Southern Paiute people should be informed and allowed to participate in the identification, evaluation, and recommendation of plans affecting resources in Zion and Pipe Spring. Regardless of the structure of the relationship created between the parks and tribes, several management issues were raised by the tribal consultants during this study. The following sections discuss concerns about (1) coordinating communication, (2) resource monitoring, (3) Native American access, (4) interpretive displays, and (5) coordinating and integrating resource management outside park boundaries.

Coordination of Communication

A key to effective relationships among organizations is the opportunity for individuals with decision making authority to meet regularly and to share their concerns. Additional meetings among the personnel responsible for specific tasks ensure that the relationship permeates all levels of an organization. Frequently, requests for tribal participation in decision making have been project-specific and have come shortly before those decisions were to be made. Tribal representatives are often unable to attend meetings on short notice, and those who do participate

may be unable to judge the full ramifications of decisions when they are isolated from the overall park management program. Representatives who participated in this study acknowledged that resource planning is a difficult task. In response to a question about what, if anything, should be done to protect a site, one Kaibab representative said:

It's a hard question for me to answer.

To improve communication among all parties, the SPC recommends that both Zion and Pipe Spring establish a formal consultation process. They should also establish annual meetings to inform tribal representatives of all projects planned for the year, designated meetings among tribal representatives and park interpretive staffs, and additional project-specific consultations as required. Such a process would ensure that the limited time and resources of both the tribes and the parks be utilized most effectively. These recommendations are discussed in greater detail in the park-specific sections of this report.

Resource Monitoring and Mitigation

Park management includes the monitoring of human use in and around the park and the identification and evaluation of human impacts to park resources (ZRMP 1994:7).

Southern Paiute representatives generally oppose the artificial manipulation of natural events such as fires and floods. The following comments typify their sentiments:

[They] should leave it alone. Let it be natural.

However, so much has already been altered within the parks that the boundaries between natural and human impacts are blurred. Therefore, issue-specific consultation is required.

Southern Paiute elders recognize and support NPS efforts to restrain access, reduce trailing, and limit disturbance to sacred and culturally significant places. Yet, disrespect for the land and resources, such as is expressed through vandalism, was noted at various sites within the parks (see Figure 8.1 and 8.2). A cultural resource monitoring program developed and implemented by NPS and tribal representatives could address the needs of both the parks and the tribes. The major challenge to the monitoring program will be a lack of resources. Neither Zion nor Pipe Spring have any base-funded long-term monitoring programs in place, and the parks lack the support necessary for implementing and continuing long-term monitoring of resources and processes (ZRMP 1994:118). The Southern Paiute Consortium is currently in its second year of the development and implementation of a cultural resources monitoring program for the *Colorado River Corridor* (Stoffle, Austin, Fulfroost, Phillips, and Drye 1995). The Colorado River Corridor lies along the Colorado River from the Glen Canyon Dam to the end of the free flowing river at Separation Canyon within Grand Canyon National Park. It is potentially impacted by water releases from the Dam. Through this project, Southern Paiute monitors are being trained to design and implement a culturally appropriate monitoring program. The Southern Paiutes seek to participate with NPS staff in the development of a resource monitoring program for Zion and Pipe Spring. A joint monitoring program might be developed between Zion, Pipe Spring, and the SPC to best utilize both expertise and resources.



Figure 8.1 Vandalism in the Form of Graffiti

Native American Access

NPS units have been given the authority, through National Park Service Management Policies (1988), the Native American Relationships Policy (1987), and the American Indian Religious Freedom Act (AIRFA, 1966), to allow access to contemporary Native American groups with ancestral claims to park lands (see also Chapter Two). According to the Management Policies, Native American communities are permitted to "pursue customary religious, subsistence, or other cultural uses of park resources with which they are traditionally associated" (NPS 1988:5:11). Given the potential conflicts between human use and resource protection, the NPS units are directed to "plan and execute programs in ways that safeguard cultural and natural resources while reflecting informed concern for the contemporary peoples and cultures traditionally associated with them" (NPS 1988:5:11). The Management Policies specifically state that "members of native American tribes or groups may enter parks for such non-recreational activities (i.e. traditional religious, ceremonial, or other customary activities) without paying an entrance fee" (NPS 1988:8:9). The Native American Relationships Policy (FR 52-183) directs park Superintendents to provide "reasonable access" to Native Americans for religious purposes and states that Native Americans may obtain fee waivers for non-recreational visits to NPS units "for religious or other traditional purposes." AIRFA states that the U.S. will protect and preserve the right of American Indians to believe, express, and exercise their traditional religions, "including, but not limited to access to sites."

On March 15, 1993, the Grand Canyon National Park (GCNP) provided explicit "Instructions for Fee Waiver," designating the contemporary Native American groups who claim ancestry to its park lands and specifying the conditions under which members of those groups will be provided free access to those lands. The GCNP permits tribal members to show tribal membership cards or other identification that affirms their membership. The Management Directive 5.1 of Glacier National Park (GNP), "Non-Fee Entry Permits," dated November 1, 1992, establishes the conditions under which individuals are issued non-fee entry permits. According to the GNP policy, "(a)ll members of the Blackfeet and Kootenai-Salish Tribes will be admitted without fee. Identification cards have been issued by the Tribes to all members."

Although access to the Zion N.P. backcountry areas is unrestricted and without cost, the Southern Paiute representatives perceived that entrance to any part of the park necessitated paying a fee. Consequently, Southern Paiute elders expressed strong feelings regarding rights of access to resources during interviews within both the Virgin River and Kanab Creek ecoscapes.

In Pipe Spring and Zion, where they took over the land the Indian people used to go to. Now that we can't get in there, we think it's nice that they keep the park clean, but we're sorry that we don't get to go there as we want to and that's the part that we don't like.

Paiute people have a spiritual as well as physical attachment to the land in their guardianship. Ceremonial activities are required to protect the land and resources within their holy land. The land is an essential component of these ceremonies and rituals performed to convey reverence for the Creator. Paiute elders desire access to sites in Zion and Pipe Spring to harvest plants, collect minerals, and visit sacred places to conduct the ceremonies necessary for perpetuating Southern Paiute culture. Although many ceremonies are not elaborate, they reaffirm the Paiute relationship with the earth. For example, several elders described the need to continually interact with the earth and its resources. According to one woman:

No matter where it is, if I am going to have something, if I am going to eat something, I always share it with the earth. (RS6)

Asking someone to pay money to participate in ceremonies or to collect resources necessary for the continuation of ceremonies is culturally inappropriate:

In any time during the Paiute time there was no money giving for any medical care that they did for one another. They did not charge each other for plants. When they gave them plants to use for medical or any kind of a use they didn't ask them for money. They just asked them to continue on getting better. That's the way they were. (CG6)

The use of plants and animals for ceremony, food, medicine and manufacture is deeply rooted in the Paiute culture (see Chapter Seven). A Kaibab man said that he would like access to:

Hunt rabbits and deer [and] to pick pine nuts.

The manner in which Paiutes traditionally use various resources also promotes regeneration. Accordingly, Paiute use of resources in Zion and Pipe Spring would help fulfill the NPS mission of protecting and preserving resources for future generations. According to a Kaibab woman who is very knowledgeable about plants:

If they made use out of these plants they would be given more of the plants. It's just like pruning your tree, gathering the vegetables and things that grow here, you would be provided with more the following years to come.

The Southern Paiute consultants explained that the parks should not exist solely for recreational activity but should be appreciated and utilized in their original life-giving capacities.

As noted throughout Chapter Seven, Southern Paiutes have strong cultural prohibitions against wasting or inappropriately using natural resources. Therefore, resource use, both in and out of the parks, should be done for specific purposes and accompanied by appropriate ceremonies. Although some individuals wish to be able to hunt in the parks, others mentioned their appreciation that the animals were safe within the park:

It makes us happy that we're coming through this place and we see the deer, and you know we don't mistreat them or anything. (CG5)

Additional park management decisions, such as setting speed limits and landscaping, will affect living things, and should be included in the information discussed at annual meetings (see Coordination of Communication). According to one individual:

[Animals] were the things that they were really protecting at the time when they had plenty of meat. They didn't want them to be killed just for the joy of killing animals. People weren't allowed to do that. I think that rule was provided by our chief, and it's been carried on throughout the years... Deer [are] killed on the road. A little further down [the road] I saw one that was dead. I guess a car bumped into it and I said, "That's the way they drive." I said, "They don't even care who's standing in the road."

Another said:

The Indians had a good relationship with the animals; want them for food, not for pleasure. Some people kill for pleasure...

At the Pah Tempe Hot Springs, one elder noted her concern over the destruction of native plants for aesthetic purposes:

I think [the problem is with] the people that kill plants with their insta-machines and things like that. They don't want them to grow, and so some of the food that was edible around here doesn't grow anymore. (CG6)

She also expressed concern about inappropriate interactions with water:

The people that throw things into the water and the spring aren't good for the water or the land itself. They should respect the land.

The Southern Paiute people would also like to obtain access to resources within the ecoscapes to utilize in the education of Paiute youth. Educating the next generation about natural and cultural resources is essential for the sustenance of their people and the land. As with adults throughout the United States, the Paiute elders have noticed that trends in modernization are penetrating their community and affecting the traditional way of life activities.

I think the younger generation is trying to get back to be interested in their tribes. Maybe the younger generation would like to come to see this. That's why I'd like to have it preserved. Look at it, where the ancestors were before their time.

Another elder commented that Paiutes should have access to the parks:

To visit and remember the ancestors and teach younger generations about old ways.

In addition to the opportunities for Southern Paiutes to hold traditional gatherings in the parks, an annual "living history" event could educate both tribal members and park visitors about Southern Paiute history.

Some of the Southern Paiute consultants noted a conflict between the cultural traditions that require universal access to resources and observations that resources are damaged by people who do not respect them. This conflict has been reported in other recent studies (see Stoffle et al. 1995a:237). The following excerpt demonstrates the way that values were passed down through stories:

They used to say wherever they went, in a group, the leader would always tell them they had to be thankful for the creator to let them have food and stuff from the area, that they would have to dance for it. So they would dance and sing and dance throughout the evening until about the middle of the night, and they would do these things to be thankful. They were never angry with one another, my mother used to tell me that they shared. If the other person couldn't get it, if their husband had died, then other elders, other men, would go hunting for them, would give it to them. That's the way people lived in the olden days. They shared... That was an example he set for us. You know, for sharing. He said never take all of what is given to you. There's always the Creator to feed and the water to be given.

When discussing animals, one individual commented:

They belonged to everybody. What they say is they belong to the Creator because he's the one who created it for the people and for the animals. (CG5)

At the Pah Tempe Hot Springs, elders observed:

I don't think it belongs to anybody. It's naturally here and people shouldn't put a claim on running water because running water will never be anybody's. It was the father's and it should continue to run like that. (CG6)

We been down to this hot spring. We were called to bless that place, but we knew. We told that man that he cannot charge anybody. Not only Indians, everybody else, too. It's already lost its power the way it looks. It don't have no power like it used to have. (CG5)

Nevertheless, several consultants were distressed by what they perceived to be the inappropriate use of resources and tried to resolve the conflict. One individual described what she perceived to be the Southern Paiutes' responsibility to share their knowledge and values with others:

We Indians know exactly what to pick and then what is poisonous and people have to be careful with it. So we have to try and teach [non-Indians] which is which. We like for them [to use it], if they're going to use it in the right way. It's all right. (CG5)

The struggle over sharing resources, yet not allowing them to be destroyed is reflected in the remarks of this elder as he talked about Pah Tempe Springs:

It should be kept that way for all people, all the Indians who come by to use it and it should remain that way... I think mainly it should be kept open for Indian people because they know what it's all about. If it is kept the way it is hopefully the other people can use it as well, but it should be kept up and not destroyed. (GC 126)

One method of sharing information and encouraging what Southern Paiutes perceive to be an appropriate use of the parks and their resources is through interpretive displays that are prepared for the public.

Interpretive Displays

Southern Paiute people perceive that information in current interpretative displays is generally biased toward a Euro-American perspective. The historical materials presented through signage within the parks and in the museums is generally focused on events which occurred after Euro-American penetration into the area. The Paiute people desire to have their aboriginal, historical, and contemporary presence within the Virgin River and Kanab Creek ecoscapes recognized. They want to see the parks provide visitors with information about the parks and the resources within them and their role in the Southern Paiute way of life. For example, displays of Southern Paiute plant uses and a typical living area are sought.

The SPC recommends that the parks sponsor an annual meeting during which Southern Paiute interpretation of the parks and their resources are discussed. Such a meeting should

include the individuals who are specifically identified as interpreters and also other resource specialists, such as botanists and geologists who can learn to relate traditional Southern Paiute and scientific knowledge. The Grand Canyon National Park (GCNP) has developed such a program in which SPC representatives have participated since 1993. The program includes both formal presentations by Southern Paiute representatives and also open sessions at which NPS employees can ask questions. The GCNP supports this training so interpreters can learn more about Southern Paiute culture and be prepared to discuss Southern Paiute views with park visitors.

Projects to design and construct interpretive displays that involve Southern Paiute culture should be co-managed by Southern Paiutes from the earliest phases.

Southern Paiute elders expressed concern about the use of artifacts in interpretive displays. The removal of Indian artifacts was widely practiced in and around both Zion and Pipe Spring. These artifacts have been collected as souvenirs or put on display in local or park museums. Paiute traditional beliefs govern the conditions under which either natural or cultural resources can be removed. Paiute elders commented on their reaction to the removal of resources.

I think the people who want to take rocks, or move rocks, they're the ones who destroy places like that.

When they find something they don't put it back. Someone may need it one day.

And you could see that many tribes went through here on account of the pottery. See they're the ones that did the pottery, and they're ones that painted them. And then there's a lot of the grinding stones...most Indian people of all tribes used the grinding stones to do their corn...everything they did they had to grind with those stones, so they couldn't pack it along so they left it there, then they went on, so the next people that come along used it, so that's why they're clear across the country. But going through some places in recent years, and visiting some homes, [the white people] collect a whole bunch of them, they have them in their yards, in their backyards, course you see most of them in the museums where they on display, but there was lot of them, up in our area there used to be a whole bunch of them on the hillside, but white people have taken them, so you see them in white people's yards, or backyards.

Several Paiute elders commented that they would like to contribute to the construction of proper interpretative displays by providing cultural and historical information. Interest in participating as cultural liaisons in the parks was expressed during an interview with a Kaibab woman.

Coordinating and Integrating Resource Management Outside Park Boundaries

As described in Chapter Four, Southern Paiutes support an ecosystem management approach to natural and cultural resources. Both the Virgin River and Kanab Creek ecoscapes extend beyond the jurisdiction of the NPS. Paiutes are concerned about degradation of resources

outside of NPS jurisdiction that might affect these ecoscapes. The management of the resources within these ecoscapes is presently under the control of private, local, county, state, tribal, and Federal landowners. With limited resources, the tribes are unable to actively participate in all management decisions. Where they have common concerns, the NPS and tribes can work together to ensure their interests are represented. For example, a recent regional effort, the development of *The Virgin River Habitat Conservation and Management Plan, (VRHMP)*, failed to involve the Southern Paiutes and had limited participation by the NPS. Both groups are concerned that water resources in Zion be protected, and coordinated efforts to ensure that protection could benefit everyone.

Additionally, NPS managers can take the lead in developing cultural resource management plans within the ecoscapes. Zion would therefore be an appropriate site for the development and management of a database and monitoring program for rock art sites throughout the region (see Zion below).

8.2 Management of Zion National Park

In addition to the general recommendations offered above, several issues were raised that are specific to Zion National Park. These issues are discussed in this section.

8.2.1 Ecosystem Management

Among the objectives of Zion's Resource Management Division is the desire to manage Zion "as a part of a greater regional ecosystem recognizing the needs of the park, other land management agencies, and private landowners" (ZRMP 1994:6). The Zion Resource Management Plan (1994) recognizes that Zion lies within multiple ecosystems. The Plan describes the Virgin River Watershed, Zion's Vegetation Ecosystem, and a Virgin Anasazi Cultural Ecosystem. This report has introduced the Virgin River Ecoscape, a Southern Paiute ecosystem for Zion National Park. The Virgin River Ecoscape must be managed by local, county, state, and Federal government units, the Paiute Indian Tribe of Utah, and private landowners. Zion is a central feature of this Ecoscape and can play a key role in the management of the resources there. This section describes opportunities for Zion to take the lead in managing the Virgin River Ecoscape.

8.2.2 Co-Management Opportunities

Zion and the Southern Paiute Consortium can enter into formal agreements to allow the co- management of the entire park or of specific park resources. Zion is a large park with many resources. Among the goals of the Zion Resource Management Plan is the development of an ethnographic program that provides sufficient guidance for park management on issues of concern to American Indians. Co-management efforts might be directed at resources of specific concern to the Paiutes. For example, Parunuweap Canyon is being nominated as an archaeological district to be listed in the National Register of Historic Places. Many Southern Paiute resources have been identified within the canyon. After reflecting on a question regarding the management of resources in Parunaweap Canyon, a Shivwits woman said

[The park should] have people who know to help protect. It's good to have rangers, but have Indians work with them. Have Indian guides.

Priorities for developing co-management relationships should be established by both Zion park managers and tribal leaders. The specific resource management issues raised by Southern Paiutes at Zion are described below.

8.2.3 Specific Resource Management Issues

Native American Access

Southern Paiute elders expressed dissatisfaction that they are required to pay entrance fees to visit Zion. Due to a miscommunication at the park gates, a park ranger attempted to charge the \$5.00 entrance fee to several elders who were participating in this study. The situation was resolved, but the incident reinforced an ongoing concern among the Paiutes regarding this issue. Paiute people feel that they should not have to pay park fees to visit the land that was once theirs.

They shouldn't [make] Indians pay. Before anybody else the Indians used to own it. [It's] good to have Indians here.

Yeah, [Paiutes] love to go through Zion, but when it costs like that they don't. We have to go clear around.

[They should make it possible for us] to go through free for the Indians and then that way we'd feel more like coming through. It makes us happy that we're coming through this place...

The Zion policy which allows free access for day visits to backcountry sites should be explicitly discussed with tribal representatives at annual meetings.

Paiute elders desire access to sacred places within Zion in order to conduct ceremonies there and restore a Paiute presence in the park.

It'd be nice to have a Sun Dance to show people [that are buried] around here that they're not forgotten.

Ceremony, [to] come back to experience the quiet, and to think, and to talk to the place in Indian. I think it is hungry for Paiute language.

Although Southern Paiutes have not been able to conduct ceremonies in Zion for many years, the park has been used by other groups for religious ceremonies. For example, in 1935, the Park Service sponsored an Easter program at its newly constructed amphitheater near the south entrance. The program was repeated in 1936 and by 1937 had become a "grandiose pageant" that "had the full cooperation of Zion Park personnel and Utah Parks Company" (Crawford nd:1). A series of stone steps and platforms were built into a hillside along the park road to serve as the

stage for the pageant. The Easter show was expanded in 1938 and continued to grow, attracting more visitors than any other day of the year, until it had to be discontinued in 1941 "as it had become too much for the Park Service to handle" (Crawford nd:2). In recent years other groups have used the park for religious gatherings, and Christian services are offered on Sundays throughout the year.

Interpretative Displays

In addition to the general recommendations provided above, specific meetings between representatives of the SPC and Zion's director of interpretation are necessary for the review of written materials used with the public and in the training of interpreters. An annual meeting during which materials was reviewed and new projects discussed would greatly facilitate communication between the park and the tribes.

Coordinating and Integrating Resource Management Outside Park Boundaries

Southern Paiute concerns extend beyond Zion's boundaries. Neither water, plant communities, nor animals are contained by artificial lines drawn on a map. Evidence of Southern Paiute occupation is present throughout the region. A few examples of the most pressing issues of concern to Southern Paiute representatives are discussed in this section.

Pah Tempe Hot Springs

Pah Tempe Hot Springs, one of the most significant features of the Virgin River ecoscape lies outside Zion's southern boundary. Yet, the hot springs is intimately tied to locations with the park and is a good example of the need for an ecosystem management approach to cultural resources.

Considerable controversy presently surrounds Pah Tempe and its future. The hot springs passed into private hands in the early 1900s. Since then the springs have remained in private ownership. Some owners have welcomed Paiute patrons free of charge while others have charged fees to all visitors. Southern Paiutes oppose having to pay for access to the hot springs because it's sacred nature is based on medicinal qualities which are sacred and cannot be bought and sold.

In 1985 the Washington County Water Conservancy District (WCWCD), as part of the LaVerkin Springs Project, built a diversion dam and installed a water line in the Virgin River canyon. The blasting that was done to excavate two crossings under the river ruptured the hot springs and dried up flows to the caves. The WCWCD made repairs to the springs, but water pressure to the springs decreased between 1987 and 1991 and an earthquake in September 1992 unearthed the pipeline. The flows to the caves again stopped. The present owner of the hot springs has filed suit against the WCWCD seeking repair of the damage to the hot springs. The WCWCD board of directors voted to condemn the hot springs. The March 9, 1995 draft of *The Virgin River Habitat Conservation and Management Plan* proposes that the water from the springs

be collected at its source and piped downriver to improve river water quality and provide year long water flows of at least 5 cubic feet per second (cfs) in that part of the river (WCWCD 1995) (see Figure 8.2).

This project will remove Pah Tempe Springs from the Virgin River at its point source and pipe the water 12 miles to below the Washington and St. George Fields Diversion, cool the water, and return it to the river to reestablish fish habitat below the diversion dam, where the river is dry during portions of the year (WCWCD 1995:22).

Parties to that plan include local communities, state, and Federal agencies. Neither the NPS nor the Southern Paiute Consortium are named. Indeed, the decision to remove Pah Tempe Springs from the Virgin River was made without consultation with any involved Paiute tribes.



Figure 8.2 Piping at Pah Tempe Springs

Prior to the LaVerkin Springs Project, an intensive *archaeological* survey of lands subject to the project's impact was conducted. The survey identified little observable archaeological evidence of Southern Paiute occupation of the region and had few suggestions for mitigation of the potentially impacted archaeological sites associated by the researchers with the Virgin River Anasazi (Thompson 1964). The grave Southern Paiute concerns about the proposed project were overlooked because, despite its Paiute name and local documentation of the sacred and cultural significance of the hot springs to Southern Paiutes (e.g., Webb 1986), no *ethnographic* survey was conducted. One elder shared the consequences of having disrupted the spring:

[One of the other elders told us] her grandfather or grandmother said, "One of these days the whole [canyon's] gonna close... She told us this morning in Paiute language, "One of these days you'll hear about it that the whole mountain caved in, just like you did up at Zions. (DH7)

Another elder commented:

My grandfather and his wife used to come here all the [time]. I was just growing then, but I noised later on when we were walking around the area - we were picking peaches - and we'd come here once in a while. That's when they started doing the trails and that thing [the spring] was all fixed up with cement and that's the way it looks today. I mean, it looked a little better than this, but after the floods had come it's ruined it, so it doesn't look the same. It's a different story now, that way in the old days. When I was growing up, I used to come with my grandfather and we used to see sick people come and they used to talk to the spring there. Then, when they got well, they felt much better, they went home. They came from far and near. All the people knew about it... but it has changed now.

Present owners advertise the hot springs as an "ancient Paiute healing grounds" (Pah Tempe Hot Springs promotional material, nd), and have established a coalition of representatives from the Utah State Historical Preservation Office, local historical societies and museums, and the Kaibab Paiute Tribe to try to protect the hot springs. The Southern Paiute consultants talked of their desire to see the spring preserved for use by people who understand and value its gifts. One elder reflected these sentiments in his comments:

I think this place should be preserved, be kept up so people can come for healing, for healing powers especially using the water coming out. To me, I don't think it should be disturbed. (GC126)

NPS employees from Zion might offer support to the coalition. Such support could include making this report and other written information available to coalition members, helping coordinate additional ethnographic studies through the Zion Cultural Resources Program, and providing a repository for information collected by the coalition. One Kaibab woman suggested that NPS could assist in the management of the spring:

I think they [NPS] should help because...they'd make good trails like they do...in Pipe Spring and Zion.

Illegal Collecting

Southern Paiute concerns about excavations also extend beyond the park boundaries. Pot hunting in the region has been recorded since the first archaeological investigations were conducted (i.e., Stirland 1949 - in Thompson 1964). As part of Zion's ecosystem management approach, park managers recognize the need to gather information about archaeological features outside the park in order to understand those found within the park. Using the Virgin Anasazi

Cultural Ecosystem as an example, managers conclude that "(l)oss of cultural material at any one locale means a loss of data that could be used in scientific research, leading to an improved understanding of the Virgin Anasazi and improved site management" (ZRMP 1994:14). In general, Southern Paiute representatives oppose any collecting of artifacts, whether by pothunters or professional archaeologists. However, some individuals argued that the continued loss of cultural material to looting and vandalism requires that something be done. A coalition of representatives from many groups, including local and state historic preservation organizations, tribes, and the NPS could work together to identify the areas of concern, develop strategies for protecting cultural resources throughout the area, and begin implementing those strategies. Coordinated efforts are needed to educate the public about the laws protecting cultural resources and the individual behaviors that will ensure that these resources are preserved for future generations.



Figure 8.3 Bullet holes on a NO-HUNTING Sign—Current Methods of Protecting Resources are Not Always Effective

Other.

Activities in the Virgin River watershed that affect the quality and quantity of water in the river require coordinated management. In 1970 a frequent visitor to Parunuweap noted the pollution stemming from activities upstream from the canyon.

Mt Carmel, & possibly (probably) Orderville & Glendale above, has its garbage dump right on the river. Intermittent flooding causes a tragic & pathetic pollution [sic] of this entire canyon with human garbage of every type & description! Wooden planks are

naturally very numerous, but old tires, window frames, toilet seats, doll buggies, balls, & tin cans of all sizes are included. Plastic Clorox type bottles are the most numerous item & surprisingly, unbroken light bulbs situated on top of small ledges, on log debris piles, or jammed in small cracks of sandstone or wood are also quite common (Gillette 1970).

An issue that is perceived by the Southern Paiute consultants who participated in this study to be linked to their resource concerns in the region is the rapid growth and development taking place. During an interview at the Upper Virgin River, one elder commented:

[People will] notice this road. When they find out there's a road here, there'll be cars going through here - flying through here. It's a nice place. It's good. To me it's still good. It's good when it's like this, but there's a time when it's not going to be like this. (RS3)

8.3 Management of Pipe Spring National Monument

8.3.1 Ecosystem Management

Pipe Spring is at the edge of the Southern Paiute ecosystem centered around Kanab Creek. This Kanab Creek Ecoscape must be managed by multiple county, state, and Federal agencies, the Kaibab Paiute Tribe, and private landowners. In a recent management assessment, Pipe Spring managers and staff recognized a need to broaden monument's inclusion of the cultures that have been associated with Pipe Spring. This section will describe Southern Paiute recommendations for management of the monument and a role for Pipe Spring in the management of the Kanab Creek Ecoscape.

8.3.2 Co-Management

The Kaibab Paiute Tribe has gone on record requesting a co-management relationship with the NPS regarding Pipe Spring. This may also include construction of a cultural center within which the Southern Paiutes can share their story about the spring and its significance in Southern Paiute life. The SPC has also expressed the desire to co-manage the monument's material collection because of concern that the NPS has been unable to properly care for the collection (Evans et. al 1994; see Resource Monitoring and Mitigation below).

8.3.3 Specific Resource Issues

Coordination of Communication

The Kaibab Paiute Tribe and Pipe Spring staff have recently strengthened their relationship and desire to see that relationship continue. At the core of the relationship is frequent and open communication between the Pipe Spring superintendent and tribal government officials. At a minimum, such communication should continue to occur at least biweekly. In addition, officials from each organization should continue to be extended invitations to significant meetings and events that pertain to both parties.

Resource Monitoring and Mitigation

In addition to the development of a program for the monitoring of monument resources, Southern Paiutes have expressed concern about the condition of the Pipe Spring museum collection (see Evans et. al 1994). That collection is housed in an equipment shed that has limited environmental controls to protect its constituents. Although the scope of this study did not permit a visit to the collection, several of the elders who participated in the study had also participated in an October 1993 consultation to review the items in the collection under the Native American Graves Protection and Repatriation Act (NAGPRA; see Chapter Two). The SPC reiterates its recommendation that attention be paid to both the physical and spiritual care of the Pipe Spring collection.

Native American Access

In response to the American Indian Religious Freedom Act (AIRFA, see Chapter Two) and the need to provide Native Americans access to public resources for the maintenance of their religious practices, Pipe Spring has an informal policy allowing free entrance to all Native Americans. Some Paiute elders were unaware of this policy. Others felt they could not use the park in the presence of park rangers and other visitors. Nevertheless, past attempts by Pipe Spring managers to welcome Paiutes to the park were remembered with fondness.

One year...we had an Indian program here - [a] barbecue there. We had fry bread, you know what the Indian people used to eat. So they did all that over there, they made a big pit there, and we had...Indian dancing...among the kids and adults, they had a lot of dancing down here. I thought that was real nice. We really enjoyed ourselves here.

Interpretative Displays

When Pipe Spring was established, Mormon pioneers were in control of the fort (see Chapter Six). Thus, despite the cultural significance of the spring and surrounding region for Southern Paiutes, the monument was focused on Mormon history. There are a few displays of Southern Paiute baskets and other artifacts in the monument and pan-Indian materials in the gift shop, but Southern Paiute representatives do not perceive their interests are adequately represented. For example, signage throughout the monument describes Mormon cattle grazing, one activity the Paiutes argue contributed to the decline of the native plants upon which they depended for food (see Chapter Six). Though there is mention of the environmental damage attributed to cattle, its impact on Southern Paiute culture is not described. One sign suggests that Southern Paiutes were wanderers who did not farm, thus implying that they did not own the water at Pipe Spring (see Figure 8.4).

In addition to the general recommendations provided above, the SPC recommends that money continue to be set aside to hire tribal members to help in the Pipe Spring interpretive program. Also, as stated above, Southern Paiute elders are interested in working with NPS

representatives on interpretive displays. Activities such as Southern Paiute powwows and ceremonies can help make the park a living monument to the multiple cultures for which it holds meaning.

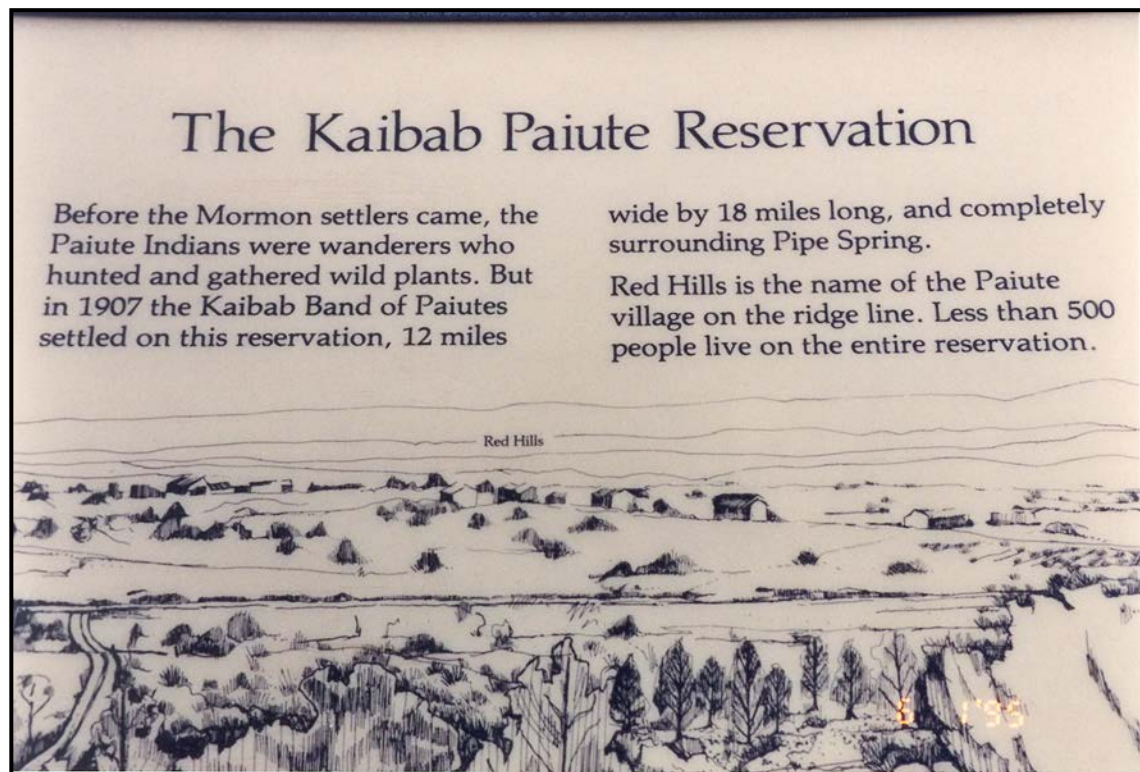


Figure 8.4 Sign in Pipe Springs National Monument

Coordinating and Integrating Resource Management Outside Park Boundaries

The size and location of Pipe Spring necessitate that its management be coordinated with individuals and institutions beyond the monument's boundaries. Southern Paiute representatives visited other locations within the Kanab Creek ecoscape during this study so they could help identify concerns outside the monument. Located within the Kaibab Paiute Reservation and strongly tied to local Mormon history, the monument must work with local and tribal governments. In addition, the land surrounding the reservation is owned and managed by state and Federal agencies. Southern Paiute representatives expressed concerns about the general condition of the region's environment.

Too many ranchers and cattle companies run the area. [It's] hard to protect. They should leave it alone.

I think that today we don't have very good air, like we used to in those days. People make the water dirty, they throw things in it. The air is probably not too good with the airplanes going by and the pollution that comes from all around, comes from the cars that go by... (CG5)

In addition, Southern Paiutes' concerns about resources within the monument were affected by their knowledge of what was happening outside the monument. One woman discussed her perceptions of the condition of the plants:

They're still growing good... as long as nobody plows the ground up or makes roads over them. As long as they stay on that one road, it's all right, but if they start digging around it there's no more. Like on this highway that goes that way [State Highway 389], I was talking about them. A tea we used to get up along that [highway], near Fredonia on that hillside, I know they've grated all of that area and smoothed the whole road out and there's no more tea there. (CG1)

This elder made the following comments at a site outside the monument:

Those homes are growing up all around us, even around Kanab... There are no more deer. That area used to be so full of deer that we had to just practically crawl around and [get them]. When we go back to Kanab late in the afternoon when it's almost toward evening, you had to practically crawl because the deer were in the road. There were so many of them and I was afraid I might hit one of them so I had to drive real slow. Now I don't even see one deer on that road - not one. It used to be just packed with deer, years ago. And when they were building that highway, when we ran out of meat, they wanted fresh meat. All they had to do was go at a camp and get a deer. And my grandfather was forever drying deer meat because we would eat all of it so we didn't want it to spoil so he'd be drying it and that way we had dry deer meat all the time. Nowadays, I don't even see one deer on the road, so they're disappearing, too. (RS3)

Another elder made the following comments when asked what was affecting the plants at the site:

When they set up housing and stuff they scrape off everything that's in sight. Then there's no more of the natural plants growing there... Back in the old days where we didn't have, in Kaibab, any bull horns or stickers or the tumbling weeds, we didn't have that so we'd go barefooted all the time in our teenage days. There was no glass broken... I think people make homes in the area, too many roads, too. That has never been there, and I think that's what spoils the scenery and the conditions of the land. (CG2)

Certainly, as development increases near parks and the ecosystems are disrupted, the resources within them can become more valuable. The Southern Paiute consultants anticipate the increased impacts.

Several archaeological features extend beyond the boundaries of Pipe Spring onto the Kaibab Paiute reservation. Decisions about how sites should be managed require collaboration. For example, a village site, attributed by archaeologists to the Virgin River Anasazi, is located directly south of the monument's southern boundary. The site is located primarily on the Kaibab Paiute reservation but extends onto NPS-administered lands. Other archaeological sites located

within the monument extend outside its boundaries as well. During the 1993 archaeological survey at Pipe Spring, active erosion was observed to be potentially threatening one of those sites.

If intact deposits are present in this location, further erosion could be prevented by construction of a low berm along the fence line to divert water in a more southerly direction. Any further stabilization of erosion would have to take place on lands managed by the Kaibab Paiute and may impact the portion of the site located on those lands (Fox 1993:15).

8.4 Conclusions

Managing natural and cultural resources is a tremendous challenge, especially in periods when financial support is uncertain. Successful long term relationships among groups require time and a financial commitment. Therefore, creative approaches to resource management are needed.

The NPS and Southern Paiute tribes have knowledge and skills that, when combined, can enhance the natural and cultural resource programs at Zion and Pipe Springs and within the larger ecoscapes of which they are a part. Specific projects, such as this ethnographic overview and assessment, bring the groups together and provide opportunities for partnerships to be established. Such projects also allow the partners to become familiar with one another and uncover new possibilities for collaboration. To this end, the Southern Paiute Consortium has identified the following priorities for the future:

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