In the Land of the Delight Makers

Joseph Courtney White

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In the Land of the Delight Makers

An Archaeological Survey in the American West

Photographs and Text by Joseph Courtney White

University of Utah Press Salt Lake City, Utah

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Book design by Scott Engen/Booksmith, Salt Lake City, Utah

Library of Congress Cataloging-in-Publication Data

White, Joseph Courtney, 1960-

In the land of the delight-makers : an archaeological survey in

the American West / photographs and text by Joseph Courtney White.

p. cm.

ISBN 0-87480-370-5 (pbk.)

1. Bandelier National Monument (N.M.)-Antiquities.

2. Archaeological surveying—New Mexico—Bandelier National Monument. 3. Archaeology—New Mexico—Bandelier National Monument— Field work. 4. Indians of North America—New Mexico—Bandelier National Monument—Antiquities. I. Title. F802.B25W48 1991 978.9'57—dc20 91–50331

-50331 CIP This book is dedicated to the memory of my mother and father, Joyce Armitage White and Joseph Courtney White, Jr. There is no end to the good parents do



During the summers of 1988 and 1989 I had the opportunity to work on the National Park Service's Bandelier National Monument Archaeological Survey as a photographer. Initially I went into the field with the simple goal of capturing the "spirit" of the Survey for the Park Service archives, but by the end of the first summer I realized there was a book here, a book of photographs and text that could fill a niche. I discovered that archaeological survey was missing from the bookshelves, that no introductory work of any sort, as far as I could tell, existed on the topic. I decided to fill the void, in my own way, by returning to Bandelier National Monument for another summer's worth of hiking, camping, surveying, and photographing. I wish to extend a word of thanks to Bob Powers of the National Park Service for his support and encouragement. I also wish to thank the field archaeologists who, despite the heat, the long days, and the frequent interruptions by an inquisitive photographer, remained amazingly upbeat and cheerful. They were two summers I will long remember.

Preface

 Measuring a Koshare (the Delight Maker) in Painted Cave



I have created this book with three goals in mind: first, to introduce a long-neglected aspect of modern archaeological fieldwork to the reading public in an approachable yet serious manner; second, to contribute to the education of the archaeological enthusiast by providing a detailed introduction to the practice and terminology of the discipline; and, third, to place archaeologists, however incidentally, into the larger context of the modern American West by means of photographic interpretation. I have chosen to focus on one particular project, the National Park Service's Bandelier National Monument Archaeological Survey, as the best way to achieve these goals.

Survey can be briefly described as the systematic search over ground for cultural material. It is also the "lost child" of modern archaeological fieldwork. To the general public accustomed to two centuries of literary and visual images equating excavation with archaeology, survey has never existed as a visible or viable form of prehistoric inquiry. Even today, when archaeological survey accounts for the majority of all active field research in the United States, it remains an obscure if not completely unknown activity to most people. This is true despite, for example, the vastly increased use of survey in the past thirty years in response to new federal laws protecting our nation's cultural heritage. This obscurity is unfortunate because, once exposed, survey is not only revealed to be a vital, living component of modern archaeology, contributing much-needed data to everevolving theories of prehistoric life, it is also revealed as an exciting, vivid, and vet easily understood activity.

Survey contains many of the conceptual structures found in archaeology as a whole, thus becoming a convenient way to introduce basic archaeological precepts. In fact, the historical development of survey parallels the growth of modern archaeological theorizing in interesting ways. Survey was born during World War II when Gordon Willey conducted the first modern survey in the Viru Valley of Peru. Before this date archaeology had been a site- or ruin-oriented discipline, dominated by single-site excavations without any regard for regional interests or intrasite relationships. This changed when Willey's surveys, along with the new cultural resource protection laws of the 1960s (created in response to the increased destruction of archaeological ruins by vandals), provided the theorists with new ways of thinking about prehistory. Today survey is a sophisticated and widely used tool in archaeological analysis. Its impact on method and theory has been considerable.

In addition to its scientific heritage, modern archaeological survey fits into another type of regional analysis: it belongs to that group of people who live and work close to the land in the West. Possibly more numerous than cowboys for the past century, archaeologists are as much a part of the Southwest's heritage as any other, more familiar, archetype. My interests as a photographer involve profiles of different types of people at work and at play in the modern West, especially those who have been obscured by one hundred years of accumulated layers of myth and expectation. To me, the heart of the American West has always involved the gut-level physical and emotional responses of individuals to the beauty of the land. You either love it or hate it or want to exploit it or defend it or write about it, paint it, buy it, or explore it, but the physical beauty of the land will move you. It is this movement, the meeting line between the physical and the human landscapes, that is the focus of my photography.

Last, but not least, I wish to present some of the specific goals and achievements of the Bandelier Survey itself—some of the details, the discoveries, the artifacts, and the day-to-day grind of field life as it existed on one particular project. While I am not prepared to say the Bandelier Survey is typical of all survey projects everywhere, I can say it must be close.

Whatever else survey is, it is a blast. Where else can you get paid an hourly wage for hiking and camping in the great outdoors? Just look at the benefits: wide open spaces, incredible views, the thrill of

Introduction





discovering new ruins, getting a tan while you work, sleeping under the stars. . . . I have tried in this book to capture the *spirit* as well as the facts of survey. To accomplish this I tried, in the field, to charge my photographs with a certain degree of humanity and curiosity; and I have tried, in this book, to choose a format that retains a level of casualness without short-changing its educational aspects.

To do this I have collapsed two summers into one semifictional work week and presented the text in a conversational tone.

My hope is that the reader will discover the sense of élan I found in the field. The Survey was, after all, enormously fun, and the people I met absolutely delightful. This book is, then, a tribute to those surveyors and their work.





"We look like a bunch of CIA commandos," I joke, "about to invade some Third World nation." "Yes, but parts of New Mexico would

qualify as the Third World," someone jokes back. We stand at a helipad waiting for a helicopter to arrive so it can begin ferrying eight days' worth of food, water, and gear as well as twelve well-trained men and women, one cook, and one photographer to our new backcountry camp. As we wait, some consult enlarged topographic maps, pointing at the thick blue lines with pens; others wait patiently, backpacks at their feet. Yet despite our flight suits and helmets and maps we are not commandos, we are archaeological surveyors working for the National Park Service in northern New Mexico's Bandelier National Monument. It feels like a TV movie but will play more like a Ph.D. dissertation.

This particular Monday we find ourselves in the midst of the third of five field seasons of the Bandelier Archaeological Survey Project. Funded and directed by the National Park Service, the Survey is part of a broad multiyear, multipark regional inventory program intended to investigate and map the archaeological contents of the nation's public lands in order to fulfill the mandate of preserving and protecting our national heritage. Or, in one surveyor's words, "Congress wants to know what it owns." Recently, the Park Service had completed inventory surveys of Chaco National Historic Park and Wupatki National Monument. Now it was turning its attention to Bandelier.

The key word here is inventory. It is the primary goal of the Survey. Although Bandelier National Monument was established as an archaeological park in 1916, no systematic inventory, or catalog, of its ruins had ever been conducted. Thus the Monument's administration, whose mission was to preserve and protect the cultural resources in the park, had no idea what was out there. An inventory survey can correct this by providing information on the location, size, diversity, nature, and condition of these cultural resources by systematic investigation of the land. On foot.



"It's late," someone remarks aloud. "There must be a forest fire somewhere. If so, we're in trouble." A forest fire might mean the loss of the helicopter because fires take precedence over archaeology, an understandable but frustrating priority. "Will they send us home?" one of the volunteers asks. "No," interjects the Project Director from behind us, "you get to hike in." The Survey relies on helicopters, despite their expense, because Bandelier's backcountry is so rugged, isolated, and dry that any other form of supply-transportation would be impractical. We don't mind hiking, but we don't mind waiting, either.

The Survey began in mid-May and will continue through August with crews working ten-hour days in eight-days-on, six-days-off sessions. Still, after the completion of the fourth field season next year the Project will have surveyed, at best, only 40 percent of the Monument. This is intentional; the Park Service has chosen, for budgetary and other reasons, to conduct a *sample inventory survey*, meaning they have a research design that will allow them to sample different parts of the park in a scientific manner so that later they can make educated guesses at the rest. At least this is how I understand it. No matter, we can all hear the approaching helicopter. It's time for the best part of the day, the aerial tour.

My turn. The flight to camp takes only a 10:00 few minutes but I am glued to the window the whole time. Bandelier is impressive; its geology is primarily volcanic, the result of successive eruptions in the nearby Jemez Mountains. The resulting layers of pumice-rock were quickly eroded into the steep-walled canyons you see today.

The second main goal of the Survey is to apply the newly discovered facts to theoretical questions. For example, as we fly over San Miguel Ruin I begin to see how surveys go a long way toward answering questions of *regional* interest-how did prehistoric peoples live and settle over a wide area? But more on this later.

Monday



▲ Each survey crew consisted of three archaeologists and one volunteer





A word of advice:

Despite its elevation of 6,000–7,000 feet, Bandelier is dry country. Although dominated by piñon and juniper trees (informally referred to as PJ), the Monument also harbors a species of prickly-pear cactus. Permanent sources of water are scarce, and rain, when it comes, falls with a vengeance. Hiking in Bandelier is hot work during the summer; if you visit, bring an extra canteen.

◀ ◀ A portion of Bandelier's rugged backcountry

An aerial view of San Miguel Ruin (LA 370)

10:15 Our camp is located on a small mesa near the flanks of the San Miguel Mountains. Since this is a new camp, most of the day will be devoted to unpacking, putting up, and rearranging. It should be a good camp; it has a spectacular view and plenty of space for our tents. My only worry is lightning: New Mexico summer storms can be as flerce as they are brief. Although the odds of being struck by

lightning are the same as winning the lottery, they are not odds I wish to play.

10:30 Once everyone has arrived, the crew chiefs gather at one of the tables, pull out those blue topographic maps again, and begin to sort out who goes where. But it isn't easy—some of the sample survey areas are far away, maybe a two-hour





hike from camp one way. Which of the three crews will get those areas? No one volunteers so, being good scientists all, they draw straws.

Bandelier National Monument is named for pioneer archaeologist and ethnographer Adolf Bandelier, who "discovered" (Cochiti Indians were here before him) Frijoles Canyon—now the location of the Monument's Visitor Center and Headquartersin 1880 and proclaimed it to be "the grandest place I ever saw." Enamored with the prehistoric ruins he found in Frijoles Canyon and drawing on subsequent ethnographic observations made at nearby villages, Bandelier published in 1890 a novel of prehistoric life in Frijoles entitled *The Delight Makers*. It is a thoroughly enjoyable book.





Although humans have lived in Bandelier for over 7,000 years, the earliest visitors left little evidence of their passing. It was only during the twelfth to sixteenth centuries, when prehistoric peoples built their largest villages, as well as much more recently, that we have made an impression upon the land.

Yapashi Ruin is a 300-room Classic period ruin (LA 270)

◄ Sorting out survey areas

14:30 Tents erected, tarps slung, loo dug, food put away, coolers stacked and covered, I decide to take a little hike as relaxation. The crews left after lunch for as much survey as they could do in a half-day, so I forget about catching up and opt for a short trip to the narrow end of our little mesa. I find it overlooks a steep, spectacular, silent canyon. Bandelier is full of amazing views, and silence. Wildlife seems scarce in this part of the park for

some reason—in two summers I have seen only one wild animal, a raccoon that would break into our cook tent every night. Birds seem rare too. Here, at the canyon's edge, I hear only the lonely, descending song of a solitary canyon wren.

Archaeologists classify the prehistoric peoples of Bandelier as *Anasazi* (a Navaho word loosely meaning ''enemy ancestors''), a cultural label given by archaeologists to all prehistoric sedentary agricul-



turalists who lived in the northern Southwest from A.D. 500 to A.D. 1600. Prior to the Anasazi, the area within Bandelier was frequently traversed by Archaic period hunter-gatherers who traveled in small bands from roughly 2,000 B.C. until the time of the Anasazi. Specifically, Bandelier's prehistoric people are part of what archaeologists call the Northern Rio Grande Anasazi, whose culture history is broken into the Developmental, Coalition, and Classic periods.

The Developmental period (A.D. 500–1200) covers the intial Anasazi occupation of the Monument and is marked by increased reliance on agriculture and by the appearance of permanent habitation structures. The Coalition period (A.D. 1200–1325) sees a marked increase in population and structures as well as an expansion of land use. During the Classic period (A.D. 1325–1600) most of the population lived in large villages until abandonment in the 1500s. Theories vary, but this final abandonment may have been the result of a breakdown in trade networks or exhaustion of natural resources or severe drought. In any case, the Anasazi had moved out of Bandelier, most likely becoming the modernday Pueblo Indians of the Rio Grande Valley, prior to the arrival of the Spanish in the mid-sixteenth century.

19:30 Returning from his tent, one of the archaeologists says almost casually: "Watch out, there's a rattlesnake under a tree over there." Everyone stops reading, writing, or whatever else he or she is doing to look up. "What?" is in our eyes. Half a dozen of us rise for a look; we have not seen many rattlers this year, especially near camp. The rest return to their evening activities, professing noninterest in the subject. I go; years ago I almost stepped on a rattlesnake, before I gained sufficient experience to distinguish between the rattling of desert cicada bugs and a snake. This time I wish to study one under less perspiring conditions. I suspect the others feel the same way. Who's watching whom? A rattlesnake in camp



The day begins with the plastic cry of an 05:45 alarm clock followed by the ritual rubbing of the eyes. Then, in strict order, come the dressing, the bootlacing, the washing, the combing, and the slow early-morning trudge directly to the coffee. It'll be like this for the next six days.

"Amazing," I say as I pile my plate with 06:30 breakfast (today it's blueberry pancakes. sausage, and toast], "completely amazing." "Truly," replies a crew chief, thinking I am talking about our bountiful and delicious food. "No," I say, looking up, "listen." As if on cue hearty laughter rolls in from the dining area. "Oh, that," she says with a smile, "must be the coffee." This group is a merry lot. The good-natured joshing and story-telling begin long before sunrise and will continue through the day, flagging only a little in the afternoon heat. It is an unusual achievement and a positive sign for a group of human beings to be so jocular so early in the day.

07:00

work. After packing their lunches, filling their water canteens, checking their survey packs, and gathering their share of pinflags, the three separate crews form up and depart for their respective survey areas. Each crew includes a minimum of four people: an architecture-specialist, who also acts as the map-maker; a ceramics-specialist; a lithic (rock artifact)-specialist; and a volunteer, who is generally an unpaid college-age student with a professional-sized interest in archaeology. One of the three specialists will double as the crew chief. Sometimes the crews are augmented by additional volunteers (such as a photographer), but a survey crew of more than six people is too big, too unwieldy. Four is perfect.

It's the official start of the day, time to



Upon reaching yesterday's stopping point, the crew spreads itself out and prepares to resume the survey. Archaeological survey consists of two phases; the first phase is the act of survey itself, the process of discovery, the walking. It is the part I like best.

One swath, in this case four people wide, across the land is called a transect. The surveyors mark the edges of each transect with pinflags. The far-end person will place pinflags in the ground as he or she walks so that when the crew reaches the survey boundary, the area chosen for survey by the Project Director and placed on the enlarged topographic maps that each crew carries, he or she can turn around and follow the pinflags back, surveying the land systematically. As one line of flags is picked up another is being placed down. Simple.

To survey, the crew members spread ten to fifteen meters apart (archaeology, being a science, uses the metric system) and sweep back and forth in transects across a selected piece of land, searching for any sign of prehistoric or historic activity. They scan the ground as they walk, looking for anything archaeological-artifacts, prehistoric structures, unusual rock alignments, petroglyphs-anything, essentially, unnatural (i.e., "human"). Up and back. up and back, survey is the methodical and systematic investigation of the land.

The surveyors are primarily looking for archaeological sites. Just what exactly constitutes a site is a hot topic of debate today in archaeological circles, but for the Project the definition is broad: five or more artifacts of prehistoric or historic origin in close association can be considered a site. This includes everything from large, multiroom ruins with thousands of artifacts all the way down to solitary clusters of potsherds and lithics. But no matter how big a site is, once it has been discovered it must be cataloged, and this is the second phase of survey, the recording.

"Hold on," someone calls out, "I have a 09:15 wall. I see rooms. Looks like a site." So much for the walking. I join the rest of the crew at the site, saying, "What can I do?" The crew chief points and asks, "How about flagging artifacts?"

Tuesday



▲ The prehistoric wall of a ruin

Key Words in Survey:

Transect Pinflag Boundary Site



Now things happen pretty quickly—by this point in the summer everyone knows the routine. The crew chief pulls out the paper work and the map-maker begins a map as the rest of us fan out and begin the search for artifacts. Anything significant or unusual is marked with a pinflag. I'm on the prowl for my first projectile point of the summer, with my fingers crossed. 10:30 Later on I help the lithics-specialist take measurements for the *site form*—important paper work that allows every site to be evaluated by a common set of criteria. "You like site forms?" I ask her. "Not really," she sighs. Site forms are a chore shouldered by each member of the crew, including the volunteer. Last year she was a sophomore-age volunteer; this year she has returned as a paid professional. One of the goals of the Project is to



◀ ◀ Looking for artifacts on a site

teach the volunteers the basic skills necessary to become archaeologists.

The crew has finished two sites in three 12:00 hours, plus a little more surveying, which is making good time, but now everyone needs a break. Another crew has been working nearby so they join us in the shade for lunch.

I pick up my conversation with the lithicist:

"How's school? You getting enough archaeology there?" She attends a small liberal arts college, as I did. "Yes," she answers enthusiastically, "plenty. Last semester I took a course in Mesopotamian prehistory and American Indian history and next year I'm going to write a paper based on the Bandelier lithics we found." I'm impressed, and so are the others. She is moving quickly. "It's lucky you got on this Project," I continue. "Some surveys don't take

Recording—Every Site Needs These:

—A Map: The map includes the size and boundary of the site, any and all structures, any artifact sample areas, and any other cultural or topographic features of significance.

—A Ceramic Analysis: The ceramicist collects, sorts, counts, and analyzes a site's pottery fragments, mostly to determine the chronological age of the site.

—A Lithic Analysis: The lithicist will measure and analyze a site's prehistorically utilized rock artifacts in order to determine what types of activities took place there.

—A Photograph: Shot both in black and white and in color and taken from representative angles, this documentation will go into archives for future reference.

—A Site Stake: Each metal stake is imprinted with the site's newly designated official number (Laboratory of Anthropology or LA number), which facilitates relocation of every site.

—Marking on an Aerial Photo: Detailed aerial photographs of the region enable surveyors to mark the precise location of newly discovered sites.

—And a Site Form







volunteers, much less teach them the ropes." She smiles, knowing she earned her spot on the Survey. "You going to stick with it?" I ask. She nods and smiles. "Good for you," I say, and mean it.

Most sites contain at least one *structure*, or ruin, in which the Anasazi may have lived or stored their food. Often structures were constructed by arranging blocks of natural or shaped Bandelier *tuff*, a pumice-



like rock and the predominant building material in the area, into *rooms*, often two meters on a side. A large site containing maybe six or more rooms is referred to generically, in northern New Mexico archaeology, as a *pueblo*, a Spanish word meaning ''town.'' But sometimes a structure can resemble a natural pile of tuff so much that even trained archaeologists have a hard time deciding what they are



looking at, which is why "Come here" or "Take a look at this" is heard often. Sometimes four pairs of eyes are better than one.



We are surveying again. In many ways a surveyor is like a detective looking for

clues at the scene of a crime: you must be eagle-eyed and well versed in the facts. The first clue is an arti-

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fact. As you survey you scan the ground at your feet. If you see a potsherd or a lithic you call out loud "sherd" or "lithic" and keep walking, looking for a site. Calling out alerts your fellow detectives to look closely, because something is afoot.

15:10

Years ago, when I was a young, wide-eyed archaeologist in Arizona, I discovered an



▲ Filling out a Site Survey Form



Structure, Tuff Rooms, Pueblo ''Come Here''



unwritten rule about survey: the faster you go, the more you have to do. Looking over the shoulder of the crew chief, I notice we have bumped up against a thick blue line on her map. Sensing my question, she says: "It's the survey boundary for our area; we have to do all this." She makes a circular sweeping motion with her finger. "What do you do if you finish?" I ask innocently. She flips the map over and points. "This," she smiles, "the Bonus area." 16:30 The crew has stopped briefly to record an Isolated Occurrence (IO), which, in this case, is a stone tool. IOs are single isolated features or artifacts; they can be points, cairns, rock art, or isolated ''goodies'' (pots, axes, etc.). The recording procedure is much less elaborate for an IO than for a site. IOs get an IO number and a form, are placed on the aerial and the topographic maps, and are then collected if possible or necessary.



- ▲ Surveyors must be good map readers
- Recording a site can take anywhere from two hours to three days
- Discussing strategy

17:30 "How was your day?" someone asks as a crew enters camp at the end of the work day. "Long," "Good," "Hot," "Slow" are some of the responses as the crew members head straight for the shade of the dining-table tarp to gobble down as much salty stuff and lemonade as they dare. "Who's in the shower?" I ask. Shower? That's what I thought the first week I worked out here, but I was amazed to learn what you can do with two and a half gallons of

sun-heated water, that includes washing your hair.

19:00 "Curt," someone asks, stepping into the sizzling, aromatic cook tent with us, "what's for supper?" Curt smiles, "Oh, I don't know, what would you like?"—a joke because he has everything planned out to the last victual. "Smells good" is a commonly heard phrase around camp. I refer to Curt as our chef. I worked on another survey,

In the Land of the Delight Makers



▲ Our showers

▶ Our chef



years ago, where we had to cook our own meals by crew every day, which was fine except that we were so tired that supper inevitably consisted of canned tuna-something. On this project we have Curt, who was so talented and gracious and invaluable that we all pitched in this year and bought him a gas barbecue as a gift. Another lesson learned: never underestimate the effect of good food.

21:00 It is late. Only two of us remain at the dining table, myself and an archaeologist/Park Ranger who is attempting to complete work on a journal article about the historical excavations in Frijoles Canyon. I say "attempting" because staying up late can become an ordeal, due not to tiredness so much as to the endless rain of suicidal night-insects that pelt our lanterns. It becomes a



test of wills. How many timeouts from reading or writing for bug-clearing detail is one willing to endure? It becomes comical. After a while the Park

Ranger laughs, "Forget it," and turns out his light. I carry on, but my solitary beacon attracts too many dumb bugs. I'm gone.



10:30 This morning I work with a crew on a twenty-room pueblo which was first discovered in the mid-1950s but never fully recorded. The map will be a big job so I assist the architecture-specialist with his chores. As I hold the stationary end of an unwinding thirty-meter measuring tape I query him on the other end about his job. "Just what is it exactly that you do?" I ask. "I make the maps" is his retort. "OK," I continue, "but why? What is the significance of a site's architecture anyway?" "Beats me" is his smart reply.

He goes on to explain that archaeologists use architecture to describe the *types* of sites in a given region, to create a standardized typology for research. For example, if a site contains only a oneroom structure, then it might be described as a "fieldhouse" site; if it has twenty rooms and includes walled grid gardens, it might be classified as a "large pueblo with grid gardens." Types are significant because they enable archaeologists to compare similar sites to one another, apples-with-apples, oranges-with-oranges fashion, which, in turn, allows them to build larger pictures of a region, especially in regard to questions of settlement patterns and environmental influence.

On the other hand, these issues do not involve the surveyor generally; the surveyor's job is to follow procedures set down in the Project's *research design*, a blueprint for investigation created by the Project Director. The surveyors are not walking willy-nilly over the land hoping to stumble across something interesting; they, like other scientists, go in with specific questions they want answered, and every action of a field crew is intentional. Still, the ''beats me'' reply is not quite fully a joke—the map-maker's job is to determine the type of site in front of him or her and then to draw an accurate map of it. The answers come later.

One of the jobs of the map-maker is to determine the *dimensions*, or size, of the site. When a site is first discovered the crew will quickly spread out and mark the site's boundaries with pinflags—a boundary is usually where the artifact density falls off. The map-maker will transfer that circle of pinflags onto graph paper and then begin to fill it in with the site's *features*, or non-portable cultural parts. Features can include structures, artifact scatters, kivas, hearths, check dams, rock art, trails, outstanding artifacts, and evidence of specific activities, such as a rock-chipping station. One type of feature that requires a practiced eye is rock *alignments*—these can sometimes be walls of rooms or parts of grid gardens or terraces or nothing at all.

After this the map-maker will add trees and shrubs to the map, contours of the landform surrounding the site including any water courses, rocks of note, sample areas of artifact analysis, site stake, photography viewpoints, north arrow, and so forth. Also, it's a rule of thumb that no matter how big or small a site, no matter if there isn't one sherd or one lithic on the whole site, there still has to be a map. This is why, by summer's end, the map-makers have the best tans.

11:45 Climbing down from taking a photo from a tree, I am waved over by the map-person, who wants to show me something. "Take a look at this; know what it is?" he says. I can see it is a piece of Bandelier tuff that has been shaped into an L by prehistoric hands, but mimicking his earlier attitude, I shrug: "Beats me." He laughs and suggests: "You might want a picture. It looks like a corner piece to a structure. They tended to stack tuff as rectangles rather than shape the tuff into corners, so this is pretty rare."

The study of architecture is important to archaeology because architectural types reflect a culture's values and can thus be used as clues in reconstructing a prehistoric society. Just as people do today, the prehistoric peoples of the Southwest faced numerous daily choices. Why did they choose this building material instead of that one? Why choose to live in bigger and bigger pueblos? Why build here instead of over there? Their decisions were meaningful and comprehensible to them in their own particular cultural context; this ''logicalness'' should be evi-

Wednesday



An unusual corner-shaped piece of tuff

Key Words in Architecture: Dimensions Features Alignments

The photograph and the map are of the same site (viewpoint 38–24). This small structure typifies the condition of structures found on this survey—a collapsed, single-story structure constructed of shaped Bandelier tuff.




Architecture types include:

Pueblo Cavate Pueblo Small Structure Cavate Structure Unknown Structure Rockshelter Historic Structure Kiva Camp Storage Water Control Other

Overleaf:

- Can you see it? This site contains a 20-room pueblo (LA 3836)
- ► A view looking north (LA 3836)

dent in everything they left behind-every artifact, every type of architecture, every kernel of maize, and every flake from every stone tool happened for a reason. It's the archaeologist's job, as well as pleasure, to figure out why.



It is a lovely, clear, mellow day. Sometimes I am bowled over by the beauty of the land and how fortunate we are to work in it and share it. Memories come flooding back as I stoop to join the paper-pushing crew chief in the shade of a juniper tree. As I change film I turn these thoughts into a question: "So what is archaeology," I tease, "science or romance?" Used to this question from me, she tosses a granola-bar wrapper at me without breaking literary stride. "Both," she finally says, looking up, "in the field." "What about school?" I say. "Well," she smiles, "back at school it's differ-











Cavates

Cavates are small, human-made caves that have been used, prehistorically, as living space, cooking space, or storage space, or as all of the above.

Terraces

Terraces are soil- and water-control devices. They are constructed to retain water in an arid climate so that crops—in this case corn, beans and squash—might be grown.

Mapping a cavate pueblo (LA 65684)

◀ Streamside terraces (LA 65636)

ent. At least we have the summers." Thank God for summers, think I, as I wind my camera. Field archaeology does have it both ways, the drive and focus that go with active research while you hike about and camp on the land; a blissful marriage of cool rationality and sunny romance.

14:45 Surveying on a small knoll near the creek bed, someone calls out, "Cans." Uh-oh, that can only mean . . . "A site; we got another camp here," the voice to my right proclaims. It is our first *historic* site of the week. Although focused primarily on prehistoric sites, the Survey will record





any historic site (from Spanish contact up to 1960) of significance. So we stop. The first thing you notice on almost any historic site in Bandelier are the cans, the rusted cans, mostly Prince Albert tobacco cans, found primarily in old sheepherder camps of the 1920s and 1930s. Last summer we discovered thirteen Prince Albert cans on one site alone. Other historic artifacts include corrals, barbed-wire fences, glass, nails, and wood.

Today's site is small and, except for the unusual metal tub, unspectacular. Historic sites are treated with the same procedure as prehistoric ones; only the paper work is different. Since there is no metalsspecialist on the crew, the artifact analysis becomes more of a group effort, with lots of diagrams and definitions being consulted. "Are the seams welded? Soldered? Punched? Punched! What's that?" Bullet casings are artifacts too. These were



- ▲ A storage structure (LA 65575) View N
- A rockshelter (LA 70952)
 - ◀ A historic camp and tub (LA 65630)

Storage Structures

Found infrequently, storage structures might have been used for caching food and water jars for long trips.

Rockshelters

Occupied, on and off, over many thousands of years, rockshelters have yielded significant information to archaeologists about the prehistoric, especially Archaic period, peoples of the Southwest.





▲ Modern 30.06 casings

◀ ◀ Corral remains (LA 70871)

◀ Tuna & tobacco?

found earlier this summer on a rocky knoll deep in the backcountry. Judging by their relative newness, these shells indicate that poaching remains a problem in Bandelier—hunting is forbidden in our National Parks.



Finished for the day and heading back to camp, we discover only 200 yards down-

hill a historic corral. The crew will record it tomorrow, but for a few moments now we indulge ourselves in shameless romanticism as we stroll around the broken fences. It can't be helped, there is something intrinsically poetic about a run-down corral, something nostalgic, something physical, something, well, western.



As I am rummaging around in the lab 08:10 tent for more film, an interesting message comes over the lab director's walkie-talkie: "Ah, could someone there bring us a box?" "Uh oh," the lab director smiles at me, "they found something good." She radios to the crew: "Uh, how big a box?" I am surprised at the conspiratorial tone of the conversation. "Oh, uh, you know . . . big." Now I am frowning. "They must have found a pot," she explains to me, "a whole one." Eyebrows up in wonder now. "But why the secrecy?" I ask. She shrugs, "I guess because the radio is on a public channel-you never know who is listening." We grab a box, radio for directions, and head down the trail quickly.

It is an unfortunate sign of our times, think I as we walk, that professional pothunting, the looting of archaeological sites for profit, is so bad we cannot feel safe here, buried in the heart of a national monument. Although the Monument itself has remained relatively undisturbed by pothunters, the lab director explains, the surrounding mesas have been widely looted, thus prompting the cautious procedure. Sounds sad but reasonable to me.

The pot is indeed beautiful, not exceptional, but whole and therefore significant. It was found in a small niche in the canyon wall, in all probability undisturbed for five hundred years. Its style is what archaeologists call Espinoso polychrome, and it was probably manufactured at Tongue Pueblo, near modern Albuquerque, between the dates of A.D. 1425 and 1490 and traded into the Bandelier region shortly thereafter. How do the archaeologists know this? They don't, for sure, but nearly one hundred years of pottery analysis have made them well-educated guessers. It's still true today, as time passes styles change-just as we associate Art Deco with the roaring '20s or fish-finned Cadillacs with the '50s, archaeologists can associate an Espinoso pot with a certain era, in this case the roaring fifteenth century. Time is the gift of potters.

Whole pots are very rare; what you find on most archaeological site are *sherds*, the broken pieces of

bowls and pots. Sherds are collected and analyzed by the ceramics-specialist so that occupation dates can be assigned to the site. This is possible because decorated (painted) sherds of northern New Mexico have been tightly tied by individual style to a chronology. a time-line which was established by previous archaeologists through stratified excavation and which continues to be refined yearly. Artifacts are analyzed on a site in samples, or discrete units of collections; i.e., on a large site, with thousands of sherds, the ceramicist may take four samples, one from inside the structure, one from outside, one in another feature, and one near the site's perimeter. In this way archaeologists can get a general idea of the site's chronology without having to analyze every sherd.

The quantity and ratios of ceramic styles will indicate the most likely period of occupation; thus, if the specialist finds mostly Santa Fe black-onwhite sherds on a site, then he or she may, by crosschecking a printed copy of the chronology, assign the dates A.D. 1175–1350 as the probable age of the site. This, then, is the primary goal of the survey's ceramicist—to fit a site into the Anasazi chronology via its ceramic artifacts.

One way to determine the age of a site is to examine its glazed *rim* sherds, which change shape at known points in time. To do this the archaeologists often will compare the rim sherd to a diagram—the differences can be subtle but important.

11:00 Standing on a short ledge of tuff, I scatter sherds to the four winds. It is a job I regularly volunteer for; I like the feeling of returning artifacts to the ground, where they belong. This survey does all of its artifact analysis "in-field" instead of brown-bagging them for eventual study back in a laboratory as some other surveys do. This minimalimpact method has advantages: it leaves the artifacts "on site" for future investigators, it enables the surveyors to relate artifacts more closely to the subtleties of a site, and, in a way, it respects the integrity of a site; there is less of a sense of violation or theft.

Thursday



▲ Sorting ceramics by style and shape

Key Words in Ceramics:

Sherds Dates Chronology Samples



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But there is a major disadvantage as well: the survey's emphasis on chronology means much information is left behind. Sherds hold many, especially microscopic, secrets, which is why they are valuable to archaeologists—to leave them unopened, essentially, is a painful thing to do. But this is typical of the difficult decisions archaeologists are forced to make. A balance of budgetary decisions, time constraints, and overall research goals imposes limitations.



12:15 During lunch, the crew's young volunteer inquires into the backgrounds of his comrades. How did they become archaeologists? For some reason this question provokes a long, infectious, rolling chuckle from one of the older surveyors. The ceramicist tells us a story about happily returning to school after burning out as a professional drug counselor. The crew chief recalls reading books on the Maya as a child and cites her long but

- ◀ ◀ Analyzing sherds in a rockshelter (LA 65697)
 - Lunch behavior





- ◀ ◀ Archaeologists' skills are infinite
 - Getting back to work

positive years in graduate school as influences. I recount dropping out of the field when I felt the call of other interests. I sense the volunteer is trying to decide for himself.

As I listen I ask myself a rhetorical question: Who are archaeologists? I mean, what sort of person is drawn to survey, to the long days, the academic focus, and the financial poverty that is modern archaeological fieldwork? I'm no sociologist, but I can pass along a few observations:

-Your average surveyor might be around thirty years old, Caucasian, liberal, well educated, as likely female as male, as easily from Los Angeles as from Santa Fe, most likely still in graduate school, certainly in need of employment. Interestingly, at least half will not pursue archaeology as a career.







—Surveyors are mobile. They are part of what I call the Interstate Generation, a group whose coming-of-age coincided with the flowering of the Interstate highway system, a group who grew up on the road, a generation of Americans who think nothing of eight-hour drives for weekend vacations or threestate hauls for a summer's worth of archaeology. It is a generation whose aesthetics, needs, and goals are fixed at 65 mph, whose cosmography ranges from

the proletarian delights of fast food and the daily flux of gasoline prices all the way to a burgeoning sense of regionalism and environmental awareness. It is a generation whose mind has been opened and closed by the road; and in this way archaeologists are like cowboys—some will drift from project to project, sometimes not really calling anyplace home.

In three summers the Survey had employed forty archaeologists and volunteers. Only four surveyors



had returned for all three summers—indicating the itinerant nature of archaeological fieldwork.

14:30 We have completed a transect and stand at the brink of a magnificent canyon view. As others double-check our position on maps I mop my brow and continue my ruminations: if I rounded up a handful of these surveyors, stuffed them into a bar, plied them with beer (they'd all volunteer) and asked them what it was that they liked best about the Survey, I would probably get variations on the same answer: the land. Outdoors, under the sun, all-day hiking, the dirt, the lightning storms, the mesa views, the silence at night, the clean air and hard work . . . who could say no?

In a way surveyors can be considered the footsoldiers of modern archaeology. They follow orders in a sense, in this case a research design, which details their objectives and methods. They are highly trained individuals; their observational skills, their abilities to discover, record, and report are *critical* to archaeological research. Without a solid foundation of fieldwork, survey as well as excavation, modern archaeology has nowhere to go. It needs good survey.

As far as the surveyors go the feeling is, I'm sure, reciprocal. Survey is satisfying—it is replete with a sense of contribution and discovery. Giving new archaeological sites to the world is an energizing feeling; even if no one comes out and says it, surveyors have a certain pride in their work, not academic hubris, but a genuine sense of achievement.

20:00 Bandelier Croquet, anyone? Tonight our chef, an avid golfer who sometimes hikes out of the Monument after breakfast to play a round at the nearby Cochiti Golf Course, beats all of us.



Survey with a view



09:15 Chert, basalt, obsidian, rhyolite, quartz, or felsite—I have to admit rock artifacts are a bit bewildering. Sherds at least "look" the way artifacts should, hand-made, but rock artifacts, call *lithics* by archaeologists, just look like, well, rocks. I pass this comment along to the lithic-specialist who smiles patiently as she checks the angle of the rising sun with an outstretched hand. "I like them," she says. "Let's work in the sunshine." Happy to help, I take pencil and paper in hand and follow her to open ground.

"Shoot," I say. The measurements come fast: "01, 02, 02, 00, 00, 18 cm, 23 cm, 7 cm." The numbers are cortex, item condition, use-wear, technological type, and functional type, length, width, and thickness of a single lithic, the first five in computer code. "Obsidian, right?" I ask. "Of course," she says nicely, "I always do obsidian first. 02, 02, 01, 01, 00, 31, 10, 5." "Whoa, slow down." Every lithic in the sample will be measured in this way. The lithicist's job is to measure, analyze, and call out—it is my job to keep up.

Lithic-analysis is survey at its most scientific. After a one-hundred lithic sample has been collected, the artifacts are spread out on a random-numbers board so each rock can be assigned a number. Then the lithicist, consulting a random-numbers table, will select only thirty artifacts for analysis. In this way the thirty-artifact group, being chosen randomly, will be representative of the whole site and therefore useful for various sorts of extrapolative theorizing later, in the lab. (The thirty-lithic limit was set by the Project Director as a sample that would be representative of the variability in most archaeological features.) After the selection come the measuring and the inspection; the lithicist searches for evidence of striation, polish, microflaking, bidirectional edging, frosting, and rounding; he or she needs to determine if the artifact is a biface, a notched flake, a core, or a point; if it is complete or severely broken; if it has cortex (natural stone surface), was it utilized, and if so, how? . . . Bewildering.

The most prolific type of lithic is the *flake*, the stone debris left from the manufacture of a stone tool. Tools include scrapers, drills, knives, axes, and projectile points ("arrowheads" to some), all of which were critical to the everyday economic existence of prehistoric peoples. The process of creating a stone tool is called reduction and involves choosing a proper rock, then knocking flakes off it with a deer antler or another rock until the desired product is achieved or fashioning a flake into the tool needed. Taken together, a site's peculiar balance of tools, flakes, and other lithics will reveal what sort of activity, or cultural behavior, took place there. A high density of points might mean the site was a hunting camp, or an abundance of flakes might mean the site was a center for tool reduction. In any case, lithics help archaeologists formulate models.

For example, I quote from the Project's research design: "Reflecting substantial reliance on hunting, the ratio of projectile points to other lithic tools should be higher at Coalition sites than at Classic sites." The model might be that Classic sites relied more on agriculture than hunting and would have proportionately fewer projectile points than earlier sites. Nice, but is it true? You cannot discover any answers if you don't make a few assumptions.

It takes a practiced eye to distinguish between naturally fractured rocks and lithics. The first time you learn, you are constantly picking up and throwing away rocks—Yes? No. Yes? No. But once you get the hang of it you will be surprised at what lies under your feet. It seemed to me that lithics were the most numerous artifact on any site.

11:30 Nearing the end of a mesa-wide and very long survey transect I discover, as I wedge backward through two entwined juniper trees, a surprise between my feet. Glancing down I notice what seems to be just another flake, half-buried in the soft pumice loam, but when I pull it free I see it is a projectile point! It is my first. I call out and soon it is being passed from hand to hand among the crew. The point is in good condition, as they go; made of

Friday

▲ Tools of the trade—a lithicist's work area

Key Words in Lithics:

Flake Tool Reduction Activity





basalt and unnotched, it is probably an "archaic" point, one used by the hunters of the Archaic period, maybe 7,000 years ago. It is also whole (no missing parts), which means it will be collected, bagged, and taken back to the lab in Santa Fe. This is done for pragmatic as well as scientific reasons. The Park Service is very concerned about theft ("unauthorized artifact collecting"). Everyone knows what damage pothunters, professional vandals, do to archaeological sites by their activity, but few realize the impact of casual theft. When someone carries off a projectile point or a pot or even a single sherd, valuable information is forever removed. *Every* artifact is critical to the archaeologist; the puzzle is difficult enough as is.

23

Another component of lithic-work is the analysis of a site's *ground stone*, or stones used in the grinding of food. Ground stones include the familiar

◀ ◀ A gathering storm

- ▲ The lithicist uses calipers
- "Recovered" points—the two on the right are Archaic period points







▲ ▲ Examining a piece of ground stone

A stone axehead made of Pedernal chert

manos and metates and are distinguished by their smooth, polished surfaces.

Busy at work on a small fieldhouse site, 13:10 we nevertheless keep a wary eye on the clouds. They have been building steadily since lunch, threatening to break a week-long drought. Summer weather in northern New Mexico is unpredictable and sometimes violent. There is a pattern:

clouds build into towering thunderheads, drift northeast until they rain like hell somewhere, then dissipate back into nothingness. Showers are brief; it is not unusual to be sweating one moment, soaking wet from rainwater a half-hour later, and then sweating in sunshine again thirty minutes after that. Once it hailed marbles on us. Then there is the ever-present lightning, which you sense acutely on exposed mesa tops. Yes, Bandelier's weather keeps you on your toes.







 Communication between crews was done by walkie-talkie

13:50 Rain is hardest on the map-makers. At least everyone else can cover up and continue working, more or less. But rain relegates the map-maker (and photographer) to the nearest tree, in this case mine. As we wait we hear a plane, and I notice his attentiveness. "How's the license coming?" I ask him. Recently married and working toward a pilot's license, he is reluctantly giving up archaeology after this summer for a more lucrative career. "Good," he responds, "but I need more hours in the air, which we can't afford." It's hard to provide for a family on surveyor's wages—seven dollars an hour minus taxes and food for the eight days (no per diem). Pay is a common complaint in archaeology, and it seems a shame. We joke, if only someone could find a way to make archaeology a national security issue, get the Pentagon to pay for survey, we could say, "The Russians have more sherds than we







Clearing

▲ Camp stills

do'' or, ''The Anasazi made better bombs.'' Anything. The rain has stopped.

16:00 Since we are close to camp, I drift away from the crew, leaving them to complete their site in relative quiet. As I photograph around camp I think of the frontier photos of the U.S. gov-

ernment surveys and their camps—not much seems different a century later. Here I see a lab tent, two cook tents, dining tables and tarp, coolers, lots of water "cubies," individual tents, and a loo. It is a comfortable place, the scene of much good-natured, after-hours relaxation.



09:00

OO Today broke unusually overcast, so much so that it actually began to drizzle shortly

after the crews left for work. I sit sheltered under the dining tarp, taking this rainy interlude to review notes and photographs from previous weeks, a very pleasant way to spend a Saturday morning. My review covers the following:

Architecture, ceramics, lithics; these three major components of the Survey when mixed together will reveal an overall picture of any specific archaeological site.

Architecture reveals the *type* of site. Ceramics reveal the *age* of the site. Lithics reveal the *activities* that took place at the site.

Add to this a site's physiographic character, i.e., its geographic location, elevation, type of terrain, topography, nearness to water, and so on, and you can begin to build larger parts of the puzzle. This constitutes the *second* major goal of survey: the application of field-generated data to broader research questions. Besides being an inventory of what and where, the Survey can, through its research design and careful field techniques, make substantial contributions to archaeological theorizing.

Additionally, the Survey enables the Park Service to interpret its holdings more completely for the public. I quote again from the Survey's research design: "Research is not an end in itself, but it is the means for expanding and revising archaeological fact and theory. Fact and theory are the bases for public interpretation of the cultural resources the National Park Service is charged with preserving. Without understanding the significance of a resource, it is hard to justify its preservation simply because it is old."

Archaeologists are very much interested in *patterns*, or regularities in cultural behavior over time. Discovering patterns enables them to conduct *regional analyses*, which means comparing sites across a geographical area. For example, the Anasazi of Bandelier were only a small part of the people who lived on the whole Pajarito Plateau; by comparing what happened in Bandelier to what happened elsewhere, archaeologists can come to an understanding of the northern New Mexico Anasazi *as a whole*. One type of pattern studied is *settlement*, or the way in which prehistoric peoples came together, built their homes, lived, died, and then moved away again. Survey is especially useful for the study of settlement because it fills in maps—it reveals what, when, who, and where. It will take more time to figure out the how and why.

For example, the *major research focus* of the Survey is an explanation of why the Anasazi developed large communal settlements (pueblos) during the Classic period. Did the Anasazi gather together into pueblos as a response to food shortages? To climatological or environmental stress? Was it simply a better way of dealing with resource unpredictability? And why was the area so dramatically abandoned in the sixteenth century? Did the development of large pueblos encourage or discourage this event?

In addition to theories about Anasazi settlement, the Survey collects important data on the condition of archaeological sites, information essential to their proper preservation and protection by the Park Service. Archaeological ruins must endure any number of threats, including looting by vandals; erosion by natural forces such as snow, wind, and rain; and growth of trees whose root systems can pull a site apart slowly over the years. The Survey will help the Park Service develop plans to combat these threats.

This summer crews surveyed and mapped two large ruins, Yapashi and San Miguel pueblos, as well as the famous Stone Lions' Shrine. The ruins were large projects; Yapashi itself required two crews, a mapping table, alidade, and three days to record its 350 rooms, 6 kivas and 3 reservoirs. Crews took 24 photographs, collected 19 sample areas, analyzed over 1,200 artifacts, and filled out nearly 100 pages of paper work. It was the first systematic mapping ever of these ruins. Saturday



More Key Words:

Patterns Regional Analyses Settlement







Archaeologists know that the pueblo of San Miguel, a Classic period ruin of 100 rooms, was abandoned around A.D. 1475—but they don't know why. The Survey will provide a map and artifact analysis, clues for the questions.

 Detail from Painted Cave—note the Koshare on the right



◀ The Stone Lions' Shrine (LA 3927) View E

◀ ◀ A small shrine (LA 65811)

The Stone Lions' Shrine was less complicated. The shrine consists of two natural outcrops of tuff that were shaped, prehistorically, into the forms of crouching lions, surrounded by an outer ring of upright rocks; the inner ring of deer antlers is of more recent origin. It is considered a hunting shrine, still used and maintained by Native Americans, in this case members of the Cochiti Pueblo, who claim the Bandelier area as their ancestral home. It is also a destination for certain members of another tribe (a tribe I refer to as Later Americans), the ones who come and leave various crystals hanging from the antlers.

17:45 Returning from my tent I am surprised to see a row of cameras confronting a rather cheery-looking crew chief. Joining the fracas I discover the source of her smiles—her crew found a




hafted axe on survey. A hafted axe is an axe that still has the wooden handle intact. Axes themselves are not unusual, but to find remnants of the wooden handle, especially if attached to the axehead itself, is worth a photograph. I go for my camera.

Later as the archaeologists crowd the artifact on the table, I am struck by the innate sense of curiosity that drives most humans. Why this need to touch, to see, to know? What, as cynics are wont to ask, does a hafted axe have to do with the price of corn? I'm not being facetious. I'm reminded of the question high-schoolers ask their math teachers: Why algebra? What possible difference will the quadratic equation make in my life? I see now that the answer has something to do with the process of learning, with sparking curiosity, the way a hafted axe sparks a group of archaeologists. We have a need to know and to learn. I don't know why—we just do.



- A Petroglyphs (IO 597)
- An unusual find (LA 65742)
- A stone axe with original wooden handle (IO 632)

Some other things we found:

Petroglyphs, or figurative images pecked into stone, abound in Bandelier. Their meaning is obscure to us today, but their abundance indicates they were important to the prehistoric peoples who lived here.

This is a unique object; it is best described as a scale model of a modern Native American pueblo carved, sculpturally, into a medium-sized boulder (note the 4-inch by 5-inch pinflag for scale). It is probably of historic origin, possibly the work of an artistically inclined sheepherder.





20:30 Speaking of learning, tonight Curt brought out his radio and taught us the two-step, the Tush Push, and Slapping Leather. The sounds of country-western music and laughter filled the night.



Speaking of sheepherders, the Survey discovered this sheepherder cavate-camp just last week. Note the tin stove on the left, an unusual find, and the engraved names on the upper right face of the rock. Joe (Joachim) Armijo(?) Abra Baca(?)

◀ ◀ A cavate with sheepherder's tin stove (LA 70940)



Sunday

07:30 "If we swing left here," someone says tersely, pointing at a map, "we can save at least three transects." "But look at that slope," the crew chief objects, "you'd have us going up and down all day. I say we go straight across." Heads nod, and the first speaker frowns and says "Fine" with a wave of the hand. It is the first argument between crew members I have heard all week. We stand in the cool of a creek bottom as the day above us unfolds clear and warm. No one wants hot weather. By the seventh straight day of transecting, classifying, measuring, analyzing, and sweating under the sun, everyone is ready for a rest.

Archaeological survey is, after all, work, and as work it has its routine, its boredoms, its redundancies; after a while one site seems like another, one map looks like the next, and so on. As workers, the surveyors are subject to periods of fatigue, testiness, and ennui, but these are acceptable aspects of the job—after all, the surveyors are here not out of altruistic impulses, but rather to earn their paychecks [except, of course, for the volunteers].

What makes it different from other jobs is what I call the *recipe*, a daily mix of three ingredients:

1) Archaeology

2) Terrain

3) Weather

Each day includes different percentages of ingredients. Once I heard the crew chief of one crew tell another about their day with these words: "All hiking, no archaeology." Some days it is the reverse, some days a crew will do seven sites and cover only one transect, or some days it will rain hail, or some days the crew will have to survey the steep talus slopes of a canyon. Or all of the above. Every day is different and every day is out-of-doors and that is enough. It's not really work if you love what you do.



























20:00 It was time for our annual champagne/ steak formal supper, a party we throw ourselves for no real reason. I don't remember a whole lot of it after the realization there was a full bottle of the bubbly for each of us. Oh, I do remember wondering when we would wake up the following morning.

Construction of the



Mid-morning

After the crews had departed for a final day of survey, it fell upon

those of us who remained behind to close up camp for the week. This involved different sets of closure: bags were packed, garbage was sacked and tied, tents were swept, coolers were cleaned, and the loo was backfilled. Around 11:00 the horsepackers arrived and added a little levity to our morning chores. Since the helicopter was restricted by the Park Service to just the big hauls, outfit boss Huey and his buddy came in weekly to pack out the coolers and garbage and provide a few guffaws and swearing in the hot sunshine. Their arrival marks the end of the work week and the beginning of our "return" to the civilized world. The week has slipped away too quickly.

By summer's end the Bandelier Archaeological Survey, in three field seasons, will have discovered 1,200 new archaeological sites, surveyed 1,034 acres of difficult Bandelier backcountry, mapped 1,305 structures, analyzed over 135,472 artifacts, recovered 437 projectile points, taken 2,553 photographs, measured 202 petroglyphs, and collected 5 whole pots. It will have also gone a long way toward answering research questions concerning prehistoric settlement patterns, subsistence, demography, site typology, material culture, and chronology. It will also have been a great deal of fun and hard work for everyone involved.

Or, as I heard Huey explain to his assistant who asked him, quietly, how archaeologists could find so much out here:

"Well, I guess you just gotta know what you're looking for."

Monday (epilogue)



Thanks: To each of the surveyors for their cooperation, patience, and kindness. To Bob Powers of the National Park Service for his encouragement and guidance. To Jan Orcutt and Judy Miles for facts and figures and office support. To Gen for being so wonderful.

I also wish to thank the fine folk at Central Photographic in Albuquerque; the National Park Service in general; my parents for their support; the University of Utah Press; Connie and Rollin Head; Duncan Metcalfe; Lou Stoumen; Dave Noble; Betti Albrecht; Lisa LeCount; Monica Smith; and many others. . . .

An especial thank-you goes to my bosses Bob, Andy, and Sharon at my day-job at UCLA for their generosity and understanding.

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The Surveyors:

Kevin Callahan Tom Chadderdon Dave Cushman Sue Eininger John Evaskovich Curt Fladager (chef) Rory Gauthier Karen Harry Jenny Hatgi Genevieve Head Sarah Herr **Becky Hutchins** Tom McCalla Judy Miles Bob Miller Howard Newman Ian Orcutt Alberto Prieto Robert Powers Judy Snare **James** Snead Mike Starohin

In the Land of the Delight Makers



The End



This unique book presents the essence of archaeological fieldwork by providing an accessible introduction to the experience of archaeological survey. Joseph Courtney White captures the ''spirit'' of survey with a daily narrative text and photographic essay representing a typical week. White explains fairly complex methodology and terminology in a voice that readers can easily comprehend. During the summer of 1988 and 1989, White worked with the National Park Service's Bandelier Archaeological Survey as a photographer. The survey team examined the Rio Grande Anasazi Indian culture within Bandelier National Monument in northern New Mexico. *In the Land of the Delight Makers* presents surveying as an exciting and easy-to-learn activity, sure to inspire readers to set out on their own adventure as a survey volunteer.

Joseph Courtney White is a writer and photographer based in the Southwest.



ISBN: 0-87480-370-5