

Introduction to Rock Art Research

SECOND EDITION



David S. Whitley

INTRODUCTION TO ROCK ART RESEARCH

Second Edition

To my Guatemalan friends and colleagues
Lucky de Batres, Marlen Garnica, and Edgar Carpio

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David S. Whitley

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PREFACE TO THE SECOND EDITION

My original hope in writing the first edition of this book was that it would advance the emergence of rock art research as standard archaeological practice: a methods textbook is essential for any disciplinary subfield, and, perhaps surprisingly, none existed for rock art studies in 2005. It has been gratifying to see the original volume serve that purpose and, even more, be well received, perhaps the best example of which was its receipt of a Choice Outstanding Academic Award for 2006 from the American Library Association.

But things change, including the status and emphasis of rock art research, and, half a decade on, it was clear that a revised second edition was in order. Although there are a variety of minor additions in this version, including especially an expanded discussion of rock art site management plans and procedures, two particularly important developments warranted coverage. The first of these involves the latest advances in chronometric dating—specifically, the Holocene calibration of varnish microlamination dating by Tanzhuo Liu (Liu and Broecker 2007, 2008a, 2008b), which has the potential to greatly enhance petroglyph dating and is already being applied internationally (e.g., Dietzel 2008; Whitley and Dorn 2010; Zerboni 2008). This technique should revitalize a research area that had been hampered by controversy and confusion but is fundamental to the advancement of rock art research.

The first edition foreshadowed arguably the most important disciplinary tendency of the last half-decade: the increasing importance of site management in archaeological practice—a circumstance that reflects the fact that the large majority of archaeologists are now employed in some form of cultural resources (or heritage) management, rather than in research or academia. Perhaps most basic to rock art site management is the need for condition assessments of sites: careful and knowledgeable evaluations of their physical

integrity and the natural processes of degradation that may be affecting them. Rock art sites worldwide have suffered from the fact that there are few professionally trained conservators who can conduct condition assessments, the studies are time-consuming and expensive, and, frankly, rock art management is poorly funded. As a result, we tend to use our limited resources to (in essence) “fight forest fires”—that is, to conduct condition assessments on sites that have recognizable but already critical problems, and then try to fix the ongoing damage. Until recently, heritage managers had few other options, but, as everyone will acknowledge, this is an inefficient way to use our limited funding and a poor approach to managing our sites. What we needed was a method that was standardized, inexpensive, and quick, allowing us to identify condition problems before they became critical and making true advance planning in site management possible.

Recognizing this problem, and also understanding (as geomorphologists whose research specialty is rock weathering processes) that condition assessments could be standardized based on a series of empirical variables, Ron Dorn, Niccole Cervený, and Case Allen have developed a rapid, replicable, and quantitative approach to this problem (Cervený et al. 2006, 2007; Dorn et al. 2008). Known as the Rock Art Stability Index (RASI), this allows an archaeologist with minimal training to evaluate the status of a rock art panel, site, or series of sites in terms of relative degrees of endangerment (or, ideally, stability). Not only does this allow a resource manager to identify potential preservation problems before they become critical, and thereby efficiently allocate available funding for conservation, but it also establishes a basis for future site monitoring, another vital component of any site management plan.

In the first edition, I expressed the hope that, if there was a subsequent version of this book, it would include a detailed discussion of the rock art ethnography of farmers. My wish was that, whereas hunter-gatherer rock art ethnography has been generally well covered, much more research would occur on this understudied but important topic and that it could be covered in detail in the book. Although there have been a handful of significant contributions in this regard (e.g., Hays-Gilpin 2008; Zubieta 2006, 2009), the topic is still poorly understood, especially from a global perspective. Perhaps, if there is a third edition, this subject will finally receive the description and discussion that it deserves.

I would like to thank Mitch Allen for publishing the first edition as his first book for then-nascent Left Coast Press, and making this revision the press's first second edition; and my old friend Carol Leyba, for shepherding the manuscript into print. And thanks to Carmen Whitley for her dedicated work on the index

Tehachapi, California
September 2010



PREFACE TO THE FIRST EDITION

I was twelve years old when I decided that I would spend my professional career studying rock art. (I had already determined, as a three-year-old, that I would be an archaeologist “when I grew up,” causing me to wonder, ever since, whether it was a wise age to make a major career choice.) What tilted me toward rock art was a somewhat serendipitous visit on my first European trip to the cave of Niaux, France, with its remarkable corpus of Paleolithic art. (I knew about the caves near Les Eyzies and had planned to visit them with my parents on this trip, but we unexpectedly encountered Niaux in the Ariege first, before we got to the better-known Dordogne.) I remember being transfixed by the Pleistocene images on the walls of this impressive cave, and I recall spending much of the next year reading everything I could find about Paleolithic art—which (as these things tend to go) wasn’t much. Little did I know, at that time, that rock art research was a marginal topic in Anglophone archaeological research, or that I would eventually become a colleague and friend of the primary researcher at Niaux, Jean Clottes (e.g., Clottes 1995), our leading authority on Paleolithic art (e.g., see also Clottes 1997a, 1998, 2003; Clottes et al. 2005). Sometimes youth and innocence can be blessings, if not portents.

By the time I began to prepare for my Ph.D. dissertation (with the kind encouragement and support of Clem Meighan at UCLA), I realized that, to study rock art seriously, I had to figure out for myself how rock art research should be conducted. There was no manual or guide or handbook available in English in 1980. Indeed, rock art research was not then taught in American universities; nor was rock art research included in books on archaeological theory, methods, or field techniques; nor was the topic even included in histories of the discipline. And, although the history of French rock art research differs dramatically from the American case (Whitley and Clottes 2005), the history for the remainder of the Anglophone archaeological world appears to

parallel the American example, not the French: rock art was ignored, not just in America but in much of the English-speaking world. In 1980, in fact, there were pathetically few good empirical studies in the Anglophone world upon which a rock art research project could be modeled. The result has been a career that, for better or worse, has tacked from theory, to method, to analytical technique, to fieldwork, to empirical case studies, all directed toward understanding the prehistoric (and sometimes historic) images left on rock and cave surfaces.

Luckily (or, again, serendipitously), my interest in rock art research developed at the same time as that of a series of other archaeologists worldwide. Indeed, I am privileged to have worked during what I predict one day will be termed a golden age for rock art studies, marked by major interpretive advances, the development of important new techniques, and groundbreaking discoveries. In addition to my friendship with Jean Clottes, who has provided international leadership in rock art research during this period, I have benefited greatly from my work with David Lewis-Williams (e.g., 2002, 2003), who is responsible for elevating rock art research from little more than a descriptive activity to a theoretically sophisticated research domain, and my collaborations with Ron Dorn (e.g., 1998a, 2001), who is the creative genius behind the chronometric dating revolution in rock art research. I am encouraged by the fact that each of these three researchers has received widespread professional acclaim for their contributions and studies (e.g., Jean Clottes was inducted into the French Legion of Honor; David Lewis-Williams was awarded the Society for American Archaeology Excellence in Archaeological Analysis Award; and Ron Dorn received a Presidential Young Investigators Award, among numerous other honors.)

In addition to these three key figures, my work has been enriched by a series of other colleagues and good friends who have influenced my thinking in a variety of ways. They are: Jean Auel, Todd Bostwick, Carolyn Boyd, Kevin Callahan, Phil Cash Cash, Niccole Cervený, Duane Christian, Meg Conkey, Thor Conway, Elisabeth Culley, Phil Dering, Carol Diaz-Granados, Julie Francis, Hector Franco, John and Mavis Greer, Kelley Hays-Gilpin, Don Hann, Russ Kaldenberg, Jim Keyser, Tanzhou Liu, Larry Loendorf, Jan-nie Loubser, Peter Nabokov, Jim Pearson, Peter Pilles, Eric Ritter, Marvin Rowe, Linda Schele, Richard Shepard, Dimitri Shimkin, Joe Simon, Linea Sundstrom, Solveig Turpin, Chris Van Pool, Peter Welsh, Tamy Whitley (well, more than a colleague and friend), and Michael Winkelman in the United States; Richard Bradley, Chris Chippindale, Paul Devereux, Marga Diaz-Andreu, Thomas Dowson, Bob Layton, Peter Jordan, George Nash, and Neil Price in the U.K.; Knut Helskog and Trond Lødøen in Norway; Ulf Bertillon, Joakim Goldhahn, Johan Ling, and the late Åke Hultkrantz in

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Sweden; Julio Amador Beck and Leslie Zubieta in Mexico; Iain Davidson, Jo McDonald, Mike Morwood, Claire Smith, Paul Taçon, and Peter Veth in Australia; Geoff Blundell, Janette Deacon, Tom Huffman, Lara Mallen, Sven Ouzman, Johnie Parkington, David Pearce, and Ben Smith in South Africa; Norbert Aujoulat, Dominique Baffier, Valérie Féruglio, Carole Fritz, Yanik LeGuillou, Jean-Michel Geneste, and Gilles Tosselo—"Team Chauvet"—in France; Angelo Fossati in Italy; Manolo Gonzales Morales in Spain; and Andy Rozwadowski in Poland. I owe them all considerable thanks.

Many of the examples used in this book result from research and management projects that I have conducted on public lands in California with Joe Simon and Jannie Loubser, two very talented friends. I am grateful to the Commander, China Lake Naval Air Weapons Station for permission to work in the Coso Range; the Bureau of Land Management for support in the California Desert and especially the Carrizo Plain National Monument; the National Park Service at the Lava Beds National Monument; the Commander of the Fort Irwin National Training Center; and Mike McIntyre and Doug Milburn with the Angeles National Forest. I also thank the Little Lake Duck Club.

The last three decades have witnessed a revolution in rock art research. This is partly due to the people just mentioned, who (among others, and like me) have spent considerable time working on better ways to record, analyze, date, and interpret rock art. In part, too, it can be attributed to one of the (rare) beneficial effects of postmodernism: a revived archaeological interest in art, symbolism, and belief. But it also has been influenced by the increasing prominence of heritage management or, as it is labeled in the United States, *cultural resource management*. While archaeological research conducted under the guise of an explicit research design has the luxury of ignoring aspects of the archaeological record that fall outside its narrow intellectual purview, resource managers have no such option. They are responsible for the archaeological record in its entirety and must exercise concern for all of it, including rock art sites. As much as anything else, this management demand has helped bring rock art into the archaeological mainstream. Moreover, it guarantees that it will continue to be important: while research interests may shift over time, management requirements are, literally, codified in law and are for this reason less prone to change. The simple fact is that rock art research has experienced great growth in the recent past.

This growth may be particularly evident in English-speaking countries like South Africa, Australia, and the United States, but it is not limited to them. One region where rock art research has also blossomed is Latin America, where numerous researchers are now conducting studies and national organizations and yearly meetings are flourishing. A good example of this is

provided by Guatemala. Although that country is rightly renowned as the focus of Classic Maya civilization and famous for an archaeological record that is rich in ruined cities, soaring temples, and complex hieroglyphic texts, archaeologists from the Universidad de San Carlos alone are currently conducting three separate rock art field projects; the government Instituto de Antropología e Historia (IDEAH) has recently created a Rock Art Section within its Department of Prehispanic and Colonial Monuments; and, in 2005, Guatemalan archaeologists organized their sixth international rock art colloquium. No example better illustrates the growth of rock art research, worldwide, than Guatemala.

But growth, including academic growth, requires training, resources, and infrastructure. Fundamental to these is an introductory text, intended for college students but also useful to professional archaeologists and resource managers who, at some point in their career, develop an interest in, or need to study or protect, rock art sites. This book has been written to serve that purpose, but its origin lies as much in the growth of Central American as in North American rock art research.

I was contacted by Lucretia de Batres, a Guatemalan archaeologist associated with San Carlos, to teach a short introductory course in rock art research at that university in 2004. To do so, I realized that I had to prepare an introductory text. This short book is the result. It is intended as a starting point for students and archaeologists interested in rock art research (and is not meant to be the final word on how this research must be conducted). As is to be expected, it reflects my own experience, interests, agendas, and biases. Chief among these is the fact that I work primarily in western North America, studying shamanistic hunter-gatherer cultures where substantial ethnography is available to aid interpretation. But, in my defense, I have also conducted various kinds of archaeological research in Guatemala, off and on from 1977 to 1987 (including the recording, with Ed Shook, of the Olmec pictograph at Amatitlan, in 1977); have worked for two years in southern Africa at the University of the Witwatersrand; have spent considerable time looking at and reading and thinking about Western European rock art (Whitley 2009); and have benefited from a large network of international colleagues. I brought this additional background and experience, and these international experiences and resources, to bear in preparing this book, although I am sure that international readers will still find it largely American in tone.

The underlying theme of this book is that rock art research requires an integrated effort that is equal—or at least roughly equal—parts theory, method, fieldwork, analytical techniques, and interpretation. Rock art research is, simply, one approach directed toward understanding or explaining the prehistoric past, and for this reason it is best conducted in conjunction with, or

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within the context of, broader archaeological theory, research, and information. And, in the twenty-first century, it is a kind of research that must always be framed by long-term site management and conservation concerns and goals.

This book reflects these attitudes and concerns. Avowedly, it is not just a manual for rock art fieldwork, although it does contain a chapter on this important topic. In hindsight, I recognize that, traditionally at least, an introduction to rock art probably would have been conceptualized solely in terms of just such a field manual. Some readers may have come to this volume expecting this kind of emphasis. My intent, instead, is to provide a guide for the minimum level of field recording, balanced against the numerous other issues of rock art research. The message here is simple: professional fieldwork cannot be divorced from all of the other commitments and tasks related to research. (Anyone who still thinks that rock art research is just fieldwork is, in my opinion, not conducting research.) There is information on rock art field techniques here, but it is simply one component of a much more involved, multifaceted kind of archaeology.

This warrants a few explanatory comments.

First, while I believe that our theoretical presuppositions are embedded in all of our professional work, and that they need to be kept explicit whenever possible, the book does not contain a discussion of theory *per se*. There are a number of reasons for this exclusion, but the main ones are that such a broad topic is beyond the scope of this short text; that theory in rock art research necessarily needs to be linked to the theoretical issues in archaeology more generally, not isolated as a standalone topic; and that books on archaeological theory are readily available elsewhere (e.g., Preucel and Hodder 1996; Whitley 1998c).

Instead, I have focused on the topics that are unique or particularly important to the study of rock art, with one key exception.

Second, this exception is scientific method—that is, the means that we use to select a preferred interpretation or explanation from possible alternatives. I believe that, for a variety of reasons, scientific method has been widely misunderstood, ignored, or overlooked by archaeologists. Perhaps the most recent example of this is the postmodernism (or, in archaeology, post-processualism) of the 1980s and 1990s, which presented a strong critique of science. One result of this critique was the disavowal of “scientific” research by many archaeologists. I have already presented my opinions on this topic (Whitley 1992a, 1998a), and they don’t need reiteration. Suffice it to note that the concept of science involves many things: a body of knowledge, a Western intellectual tradition, a series of laboratory and field techniques, a technological complex, a set of value-based goals and agendas, specific philosophical commitments and beliefs, and a variety of competing methods. These different

aspects of the concept of science traditionally have been conflated into Science (with a capital S) as an all-or-nothing proposition. But anyone can use scientific method in their decision-making processes, regardless of their interest in, or commitment to, other aspects of Science—just as a postmodernist can use the Internet and a home computer to rail against the evils of the Science that produced the innovations for expressing those same opinions. Scientific method, in other words, is a powerful approach to intellectual decision-making, and rock art research conducted with an eye toward this method will always be stronger because of it, regardless of our commitments to, or interests in, other aspects of a scientific agenda or approach.

Even when researchers conceive of themselves as historians or humanists, I believe they can use scientific method to improve the strength of their conclusions. This particular section of the book is directed toward that aim.

Third, I had intended to “borrow” sections of this book from some of my other publications, where appropriate, since I saw no great value in rewriting discussions simply for the sake of creating a false kind of originality. This is not a presentation of new research conclusions, after all, but a road map to conducting rock art research. As the book turned out, however, there were only two consequential repeats, and even these were modified in various ways. One involves the section on chronometric techniques, which is derived from a discussion I wrote in the *Handbook of Archaeological Method and Theory* that I jointly authored with Larry Loendorf (2005). The second involves the discussion of scientific method and the related review of Heizer and Baumhoff’s (1962) Great Basin study, portions of which were also presented at the Seventh Oxford Conference on Archaeoastronomy, in 2005 (Whitley 2006a).

Despite this and other minor derivations, this book ultimately has its origins in Guatemala. I am thus particularly indebted to Lucky de Batres and Marlen Garnica, head of the archaeology program at San Carlos, who, ultimately, set the events in motion that resulted in its writing. I also thank the Escuela de Historia at the Universidad de San Carlos and, also at the university, my good friend Edgar Carpio; as well as the Guatemalan Instituto de Antropología e Historia and, at the IDEAH, Manuel Colon and Ramiro Martinez—the newly formed Rock Art Section—and Tomas Lacayo, conservator. I am indebted to Ida Heckenbach and Carmen de Foncea, in the Cultural Affairs section of the U.S. Embassy in Guatemala; and the Fulbright Senior Specialist Grant program, which gave me the opportunity to teach and work again in Central America. Mitch Allen is due significant thanks for encouraging this book and bringing it out in his new press. I am also grateful to Judy Johnstone and Detta Penna, who edited and designed this book, for their valuable contributions and the pleasant camaraderie they both brought to

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these usually tedious tasks. Joanna Ebenstein artfully composed the cover; Héctor Lavoe (“el rey de la puntualidad”) pulled together the index. Jean Clottes, Jannie Loubser, Ron Dorn, Joe Simon, and Mike Taylor have generously provided me with some of the illustrations used here; Dean Snow and Suzanne Villeneuve graciously provided copies of their unpublished research. Finally, I thank Tamy, Carmen, and Margaret Whitley, who managed to keep busy (mostly by salsa dancing and riding mules) while I was busy writing, when we were all in Guatemala. All of these individuals were important catalysts in the appearance of this short book.

Antigua de Guatemala
August 2004

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CHAPTER 1



INTRODUCTION

Rock art is an archaeological phenomenon found in many regions of the world. Despite this fact, and for a complicated series of historical reasons, it has long been ignored by most Anglophone archaeologists, whether working in the Americas, Africa, Europe, or Australia (e.g., see Whitley and Clottes 2005). The status of rock art research has started to change, however, with recent studies showing its importance in reconstructing symbolic and religious systems (e.g., Boyd 2003; Bradley 1997; Garlake 1995; Keyser and Klassen 2001; Layton 1992; Lewis-Williams 1981, 2002; Lewis-Williams and Dowson 1989; Lewis-Williams and Pearce 2004; Rajnovich 1994; Rozwadowski 2004), defining gender relations in societies (e.g., Hays-Gilpin 2004, 2005, 2006; Sundstrom 2008; Zubieta 2006, 2009), identifying cultural boundaries (e.g., Francis and Loendorf 2002) and cultural change (e.g., David 2002; Whitley et al. 2007), and studying the origins of art and belief (e.g., Clottes 2003; Clottes and Lewis-Williams 1998; Lewis-Williams 2003, 2010; Whitley 2009)—among other topics.

Rock art sites are also highly valued by indigenous peoples, who generally view them both as sacred and as important components of their cultural patrimony (e.g., see Utemara with Vinnicombe 1992). The art has captivating aesthetic qualities, causing it to be highly regarded—and exploited—by the general public in ways that the dirt archaeological record cannot match (indeed, rock art T-shirts are as common today as rock band T-shirts). Rock art sites may be attractive

for cultural tourism and thus contribute to the economic health of a community or region. All of these are reasons for studying, managing, and preserving rock art, although its inherent fragility sometimes makes this a difficult task.

This book presents an introduction for archaeologists, cultural resource managers, and students interested in studying, managing, and preserving rock art and rock art sites. Such a book is necessary because, even while rock art research is a subdiscipline within archaeology (e.g., see Morwood 2002), it requires different techniques, addresses slightly different analytical problems, and has its own specialized body of literature. Moreover, American archaeology students do not usually receive any formal training in rock art research. My purpose in this short book is to provide a bridge into rock art research and its literature in order to encourage the study and preservation of this important aspect of the archaeological record.

This chapter introduces some basic definitions and takes a brief look at rock art production techniques. (For a more detailed analysis of rock art techniques, see GRAPP 1993.) Chapter 2 presents an introduction to rock art fieldwork, which differs in important ways from the standard archaeological techniques used in excavation and regional surveying.

Chapter 3 addresses the important analytical problem of classification. This problem, as you will see, has vexed rock art research for the last century, yet it is always the starting point for analysis. Classification is followed in Chapter 4 by a discussion of approaches to dating. Chronology has been a difficult issue for rock art researchers. While chronometric rock art techniques still require much basic research, there is nonetheless cause for substantial optimism about our ability to date rock art.

A series of related chapters then sets forth the topic of rock art interpretation. My premise in writing these chapters—as in conducting my own rock art research—is that our interpretations must adhere to scientific method, whether we are concerned with reconstructing a symbolic system in its own terms or with explaining the part a symbolic system may play in adaptation to the environment. Chapter 5 thus begins with a brief description of scientific method (that is, an approach to selecting a preferred hypothesis from a series of competitors) before considering rock art interpretations in terms of two broad

categories, as suggested by Taçon and Chippindale (1998): informed and formal methods.

Informed methods, outlined in Chapter 6, emphasize *ethnography* and *symbolic analysis*, and thus aim to provide an insider's understanding of the art—that is, an interpretation identical or similar to that of the art's creator. *Formal methods*, in contrast, concern outsiders' perspectives. These are considered in two sections: Chapter 7 describes neuropsychological analyses, whereas Chapter 8 considers quantitative, landscape, archaeoastronomical, and other approaches to rock art interpretation. Chapter 9 turns to site management and conservation, a topic important to all who study rock art. I conclude this book with some brief comments on the future of rock art research.

DEFINING ROCK ART

Rock art is *landscape art* (Whitley 1998b). It consists of pictures, motifs, and designs placed on natural surfaces, such as cliff and boulder faces, cave walls and ceilings, and the ground surface. Rock art is also sometimes referred to as cave art or *parietal* (wall) art. Regardless of designation, the defining characteristic of rock art is its placement on natural rock surfaces, thereby distinguishing it from murals on constructed walls, paintings or carvings on canvas, wood, ceramics, or other surfaces, and freestanding sculptures.

Rock art includes *pictographs* (paintings and drawings), *petroglyphs* (engravings and carvings), and *earth figures* (intaglios, geoglyphs, or earthforms). Some researchers also include pecked *pits and grooves*, sometimes called *cup-and-ring petroglyphs* or *cupules*, as another form of rock art. Pictographs and petroglyphs are found on rock art *panels*. These are approximately flat surfaces that are the fracture or weathering planes of a natural rock outcrop.

Although there are exceptions, most rock art made by traditional, non-Western cultures was created during rituals of some kind. For this reason, rock art research is a kind of archaeology of religion (Lewis-Williams 1995; Whitley 2001, 2008a; see Steadman 2009). Some researchers object to the inclusion of the term *art* in “rock art,” implicitly or explicitly arguing that the Western concept of art is not appropriate for traditional, non-Western cultures. They hold that the use of the term

rock art is an essentialist projection on the past, a way of applying our own contemporary cultural conceptions inappropriately to others. They suggest, as alternatives, terms like *rock graphics* or the hyphenated *rock-art*. I prefer the old, unhyphenated term *rock art* for a variety of reasons, not least of which is my interest in continuing reasonable and long-standing archaeological traditions. As an archaeologist, my concern is with preserving the past. This necessarily includes archaeological traditions, unless they are convincingly shown to be pernicious or simply wrong.

More important, it is clear both that our Western artistic tradition includes the kinds of performative and religious art found in rock art created by non-Western, traditional cultures, and that these same non-Western cultures are capable of appreciating the aesthetic qualities that are (for some) the hallmarks of Western art. As Sven Ouzman (2003) has sagely observed, the argument that the term *rock art* is somehow inappropriate for traditional non-Western cultures necessarily implies that “we” create “art,” whereas traditional cultures create something else—and something less. This seems unreasonable. Accordingly, I use this term without apology throughout this book.

PICTOGRAPHS

Pictographs are paintings or drawings made, worldwide, with common mineral earths and other natural compounds. Red, a frequently used color, typically is made from ground ocher; black is usually made from charcoal, but sometimes from other minerals (e.g., manganese); white is from natural chalk, kaolinite clay, or diatomaceous earth. Other, rarer, colors are also made from naturally occurring mineral or plant sources.

Regardless of source, the pigments are usually ground and then mixed with a liquid, such as water, animal blood, urine, or egg yolk, and applied as a kind of wet paint (Fig. 1-1). Or, they may be dry-applied as a kind of “chalk” or pencil (Fig. 1-2). A simple piece of charcoal, for example, works very well for drawing on a rock surface.

Pictographs can thus be divided into wet-applied paintings and dry-applied drawings. Wet-applied paints are continuous, even over a rough rock surface; dry-applied drawings often show concentrations of pigment on high spots on the rock face. Drawn lines thus may be discontinuous when examined with a hand lens.

INTRODUCTION

Figure 1-1a Pictograph created with wet paint. This example, a grid, is from the “Antelope Well” site in Lava Beds National Monument, California. It was made with a highly liquid black paint (probably charcoal and water), and runs of paint can be seen along the line margins.

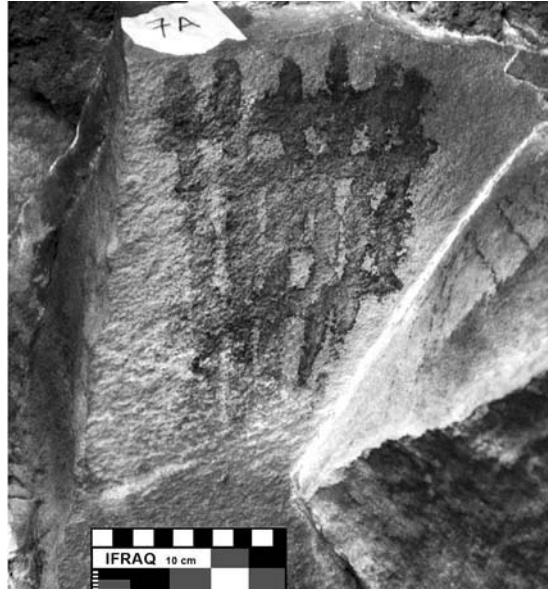


Figure 1-1b Most wet paint is more viscous, causing it to pool or puddle across minor rock-surface irregularities. This painting, of a Pacific pond turtle, is typical. It is from Saucito Ranch, Carrizo Plain National Monument, California, and is painted in red, white, and blue-black.