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Frank Bleitz, and Edith Bleitz (pp. 28-39); and (5) *Channel Islands Pictographs*, by Richard Quist (pp. 40-45).

Rock Art of East Mexico and Central America: An Annotated Bibliography. Matthias Strecker. Los Angeles: University of California Institute of Archaeology, Monograph X, 81 pp., 1979. Occasionally it is worthwhile for students of California and Great Basin rock art to consider art perhaps remotely related but in the same continuum in the New World. This bibliography provides titles pertaining to rock art produced by a variety of peoples at various points of technological achievement. Some titles and notes may offer ideas, on interpretation of astronomical phenomena for example, that may be useful for those working with the California or Great Basin data.



Analysis of Prehistoric Coprolites from Utah.

Gary F. Fry. University of Utah, *Anthropological Papers* No. 97, 1976, xii + 45 pp., illus., \$8.00 (paper).

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Prior to the 1960's, a person could almost count on one hand the total number of published articles pertaining to prehistoric human coprolite (preserved feces) analysis. Since the 1960's that number has increased, and many new innovative methods of coprolite analysis have been developed and reported. Even today, however, the field of coprolite analysis is still a limited field within archaeology with few specialists who regularly pursue this type of research. Today, as before, the main limiting factor is not a scarcity of samples, but a scar-

city of researchers who have the background and patience needed for completing this type of study.

Gary Fry is one of these researchers who during his graduate studies at the University of Utah undertook the study of prehistoric human coprolites. His dissertation centered on the analysis of coprolites from Danger and Hogup caves, and resulted in this monograph which is an abridged version of that dissertation.

Fry's report on the analysis of prehistoric coprolites from Utah is an important document that should be kept readily available to those archaeologists who might someday find coprolites during their excavations. The report is not lengthy, is broken into easy-to-find sections, and discusses the basic philosophy and methods of coprolitic analyses. It is a valuable research resource for researchers interested both in the prehistoric record of Utah and the merits of coprolite analysis.

This monograph is divided into four major sections: (1) Introduction, (2) Methods and Procedures, (3) Analysis Results, and (4) Summary and Conclusions. The five-page introduction is short and to the point. It offers a brief history of coprolite analysis, a review of how coprolite analysis has changed during the past seventy years and a glimpse of the culture history and physical setting of the two caves (Danger and Hogup) which contained most of the prehistoric coprolites Fry examined. The three-page methods and procedures section is the most important for anyone interested in learning how and why coprolite studies are done. It contains a step-by-step examination of how to process coprolites and how to avoid the problems of "overextending" the results derived from coprolite studies. In other words, it tells the researcher what to do and what pitfalls to avoid. In the third major section, Fry discusses what he found in the 146 coprolite samples he examined, how that information can be used to reconstruct patterns of pre-

historic diet and health, and finally how his coprolite data compare with the available ethnographic records for the Great Basin region. The final one-page section is an expanded abstract which quickly summarizes the main points developed and discussed in the previous sections.

Aside from its value as a document on how and why coprolite studies are important, this monograph also provides new insights into the lives and health of the prehistoric peoples who once lived in Utah. His coprolite study consisted of 46 specimens from Danger Cave that range in age from 9500 B.C. to A.D. 20, 60 specimens from Hogup Cave that range in age from 6800 B.C. to A.D. 1850, and 40 specimens from the Glen Canyon that date from A.D. 1 to A.D. 1300. The Danger and Hogup cave specimens indicate that the Archaic lifeway in Utah began before 9800 B.C. and persisted virtually unchanged for nearly 10,000 years until the influx of Fremont and Shoshoni people around A.D. 1. Even after the arrival of the Fremont and Shoshoni groups, the dietary patterns changed only slightly. Previous food staples, such as cactus and chenopod seeds, remained important, while the use of pickleweed seeds decreased. In addition, the coprolites from Fremont and later Anasazi deposits contained the remains of agricultural plants such as gourds, squash, and maize, foods missing from the dietary records of Danger and Hogup caves.

After examining this monograph, the reader discovers how much data can be derived from coprolite studies. In addition to providing the most exact possible records of actual prehistoric diet components, coprolites can also yield clues about the health of the individuals, imbalances in diet, and clues about seasonality of site occupation. In the coprolites Fry examined, he found that 7% of them contained eggs of the Thorny-headed Worm, 3% contained pinworm eggs, and 6% contained tapeworm eggs. Thus, what emerges

is a picture of widespread intestinal infestation from at least three parasite groups. This seems probable since even in modern populations one would find only small percentages of human feces containing parasite eggs even when the infection was present in almost 100% of the population. Even more important, Fry has documented the earliest known human records of pinworm infestation (*ca.* 10,000 B.P.) anywhere in the New World. Other non-dietary data recovered from the Utah coprolites include records of ectoparasite infestation from the body louse (*Pediculus humanus*), the sharpening of flint tools using one's teeth, and the excessive excretion of sodium, suggesting the eating of foods containing high amounts of salt. The coprolite specimens also contain data that indicate a late summer or early fall use of Danger and Hogup caves.

The quality of the report is excellent and the writing style is clear and easy to read. When scientific words or jargon are used, they are explained or defined for the reader. The photographs are sharp and add clarity to the data presented. And finally, the area map and many data tables aid the serious researcher who wants to use this report for comparison with other coprolite data. In fact, I found only two minor flaws with this report and neither is probably the author's fault. First, I do not think the report should have been a monograph since it is short enough to have been used as a journal article. By reducing the size (but not number) of the tables and photographs to less than full-page items, the total length of the monograph could have been reduced by more than one-half. Secondly, even though the cost of printing has increased, I believe a price of \$8.00 is too much to ask for a short forty-five page monograph.

In spite of the minor flaws, this report is important and should be added to the bookshelf of the serious scholar who wants to have an up-to-date view of how and why coprolite analyses are useful to the archaeologist.

The University of Utah must be thanked for the publication, although long delayed, of these data contributions to the anthropological record.



Lost Harbor: The Controversy Over Drake's California Anchorage. Warren L. Hanna. Berkeley: University of California Press, 1979, xvii + 459 pp., 63 illus., \$15.95.

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When Samuel Eliot Morison called the plate of brass found on the shore of San Francisco Bay in 1936 (and subsequently referred to as the *Drake's Plate*) "a complete and clumsy hoax," he was surely being excessive. Hanna rightly argues in the book under review that any practical joke or deception that is able to challenge the abilities of some of the world's greatest scientists as to its genuineness for nearly half a century may be 'complete', but certainly is not 'clumsy'. Although the plate is only one link in the chain of evidence that has been used to stir up the controversy over the exact location of Sir Francis Drake's 1579 landing place in California, it might well serve as the best symbol of the heated dispute. Other aspects of the case, mostly based upon accounts of Drake's chaplain, Francis Fletcher, published in 1589 and in 1628, have been interpreted by various scholars, serious and otherwise, as evidence pointing to some favorite location anywhere from San Luis Obispo in the south to the coast of Oregon in the north.

Hanna has eschewed the extremes, and has essentially chosen to discuss the merits of the arguments for Drake's Estero, San Quentin Cove in San Francisco Bay, and Bolinas Lagoon. At times the reader may feel that some of the arguments or counterarguments which he reviews are frivolous, but the whole point

of his presentation is to set forth all of the statements given by the main proponents and treating them in much the same manner that they would perhaps be handled in some enlightened court of law. Hanna's legal experience has served him well here, but there is more to it than that. He is obviously a painstaking, thorough investigator who has spent a great deal of time studying the voluminous literature on Drake's great voyage, especially that part pertaining directly or marginally to the California sojourn. As such, he does not casually neglect small bits of evidence, even if at first blush they seem of doubtful validity.

Unfortunately, much of the evidence, historical, ethnological, botanical, and zoological, bearing upon the location of Drake's California anchorage almost seems to have been deliberately planned to confound the unwary or even the fair-minded. The loss of Drake's log, misunderstandings and omissions in Chaplain Fletcher's accounts, and inexact sketches of the California coast by early cartographers, all contribute to often murky understanding, and allow numbers of alternate explanations.

Nevertheless, Hanna reviews the opinions and counteropinions on the landing spot, dating from 1790 and perhaps coming to a boil in a debate published on the subject by the California Historical Society in 1974. Characteristically, he comes to no positive conclusion on which of the contenders is correct, although a graded assessment at the end seems to favor the Drake's Estero argument over that of the other two leading candidates.

While this volume does not pretend to solve the mystery of the landing place, it should probably be considered the definitive work on the subject. Unless new and undoubted archaeological or archival evidence concerning Drake's California landing is forthcoming, it promises to remain the last word for a long time to come.