

**International Association for Obsidian Studies
Bulletin**

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Assembled and edited by B. Hamusek

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NEWS AND INFORMATION

IAOS Annual Meeting

Once again the Annual Meeting of the IAOS will be held in conjunction with the 1998 Society for American Archaeology Annual Meeting. The meeting is scheduled for Thursday, March 26th between 5:30 to 7:30 pm. The meeting is scheduled to run after an all day Obsidian Workshop (see below for information on workshop). All members are encouraged to attend.

Obsidian Workshop at SAA Meetings in Seattle, Washington

The IAOS will host a symposium workshop devoted to obsidian studies on Thursday, March 26th at the 1998 SAA Meeting in Seattle, Washington, between 1 and 5 pm. While preparations remain on-going, the title of this workshop is **Obsidian as a Natural Analog to Nuclear Waste Form Glasses**. The workshop is being chaired by Drs. Jonathon Ericson and Robert Doremus, and includes papers from the

following participants: Dr. Wallace Ambrose, Dr. Christopher Stevenson, Dr. Charles Nelson, Dr. Robert Doremus, Dr. J. Bates, Dr. J. Ewing, and Dr. Barry Schultz.

The following abstracts describes this session: A 1996 National Research Council Report suggests that natural glass analog studies can be an important component of long-term performance assessment. Obsidian samples in their archaeological contexts provide samples and environments for such assessment. The Workshop will address environmental and material parameters affecting the stability of glass under natural conditions, which may ultimately lead to a refinement in obsidian hydration dating and improvement of knowledge on the stability of waste form glasses immobilizing radionuclides. In the context of applied archaeology this workshop will promote future collaborations between archaeologists and scientists.

Fluted Point Discovery in Northeast California

*by
Richard Jenkins
California Department of Forestry*

While inspecting a timber harvesting plan near the community of Bartle, in Siskiyou County, California, a fluted point base fashioned from obsidian was recently discovered. The point was found within a large lithic scatter discovered by consulting foresters during plan preparation and is situated on a low terrace along the McCloud River. After reviewing a paper by Dillon (1994) regarding the geographic distribution of fluted points in California this appears to be the first documented discovery of such an artifact in Siskiyou County.

The subject fluted point base is morphologically identical to those referred to in the literature as Clovis. It has a broad concave base, straight parallel margins that exhibit edge-grinding, and pronounced flutes that thinned both its dorsal and ventral surfaces. Metric attributes include a maximum length (ML) of 2.636cm (from a margin of the base to the break), a axial length (AL) of 1.918cm (from the center of the concave base to the break), a maximum width (MW) of 3.284cm, a maximum thickness (MTH) of 0.712cm, and basal width (BW) of 3.096cm. Both point margins exhibit edge grinding and the basal notch, after fluting, was retouched with fine pressure flaking. A bending break suggests that the point was broken in the haft during use.

Obsidian source characterization and hydration dating studies of the artifact were performed by the Northwest Research Obsidian Studies Laboratory (Skinner, Thatcher, and Davis 1997). The glass was sourced to Modoc County's Buck Mountain located some 85 miles distant in the northeast corner of the state. Hydration rim values were somewhat smaller than anticipated and measure some 5.7 microns.

Important is a photomicrograph image of the point base that shows a consistent hydration rim depth across both the fluted surface and the artifact break. This single signature suggests artifact breakage shortly after manufacture and/or use rather than by later cultures which sometimes scavenged and recycled early artifacts. It is speculated that the point was broken during use then returned to camp where it was removed from the haft and discarded.

A limited review of the literature has resulted in the determination that similar artifacts have been found at the Dietz site (Fagan 1988) in south-central Oregon some 160 miles to the northeast. Six Clovis basal fragments similar to the subject specimen were recovered from the site.

Later analytical work performed on the artifacts (Fagan 1996) resulted in the determination that the bulk of the Clovis specimens submitted for trace element analysis were attributed to the same Buck Mountain source. Hydration rim values for the 30 studied artifacts ranged from 5.8 to 9.0 microns.

Research regarding this discovery is ongoing. Input from IAOS members is welcome and can be sent to the editor for forwarding or to the author at rich_jenkins@fire.ca.gov. Additional information will be presented at the State of Jefferson meetings held February 26-27, 1998 in Mt. Shasta, California. A final report will be contained in a *Festschrift* dedicated to Clement Meighan that is being organized by Brian Dillon and Keith Johnson due to be published in late 1998 or early 1999.

SHORT REPORTS & REVIEWS

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Short Reports & Reviews provides an archaeological context in which to report obsidian research and related information. Reviews of recent studies, research in progress, older findings, regional, site, and artifact specific summaries, as well as other reports, announcements, etc. of pertinent interest are encouraged.

Commentary: A Parthian Shot

As editor of this column I have learned a great deal, none of which I set out to learn, but did so nonetheless. The column evolved. It first focused too much on obsidian studies in California, but quickly expanded to include the rest of the world. Then the column expanded beyond just reporting, to also reviewing obsidian studies. Eventually, commentaries by the editor

were also included. In this last column, a final first, the review of an Internet web site.

Another kind of evolution took place during my tenure as editor of this column. It seemed clear to me that there were sampling problems for many obsidian studies because they did not consider the range of flaking techniques that produced the archaeological obsidian. So, at first, I sought to develop some focus on flaking technology and work up to how it influenced the nature of what was being studied. That focus quickly faded before the presence of a diversity of interesting topics. The focus became more general in an attempt to add archaeological interest to the short reports in terms of giving the obsidian studies more of a prehistoric and environmental context. Still, the diversity of topics overran that focus as well.

In a way, the evolution has come full circle. The depth and breath of obsidian studies as they relate to the understanding of the past is truly impressive. It seems, however, that we have only scratched the surface of potentials that await. Further, our biggest problem remains sampling. Sampling? Again? Rather than try to flog a dead horse I will attempt to ride it off into the sunset.

At a most simplistic level, the issue is numbers. Two, five, or ten specimens simply cannot characterize the range of obsidian types present or the temporal range of obsidian use at most archaeological sites. Changes in the obsidian types used through time, changes in the intensity of obsidian use through time, or the myriad other prehistoric behaviors that influenced the nature of the obsidian record that can be elucidated through careful sampling and study require evermore intense sampling considerations. It is asserted that this newsletter had been rife with indications of the complexity of the obsidian record. To deal with that complexity in a manner that will allow the most simple obsidian issues listed above to be adequately addressed requires significantly larger sample sizes. Giddyup Paint.

Finally, this column would not have been possible without the contributions from many others. My thanks go out to the editors of the newsletter, both past and present, to all of those who provided information and ideas that appeared herein, and especially to all of those who submitted to interviews so that there would be something worth saying. Again, thanks to all. It's been more fun than I thought possible.

Michael Rondeau

Review: Obsidian Web Site

Bieling & Psota Archaeological Consultants in Sonoma County, California provide a set of web pages on obsidian studies at <http://users.ap.net/~bpacs>. Those pages clearly illustrate one of the significant data sharing potentials of the Internet.

They include a series of archaeological summaries on obsidian studies. Those summaries provide background information on the sites, their temporal placement, artifact types, lithic technology, and obsidian hydration and source analysis data. Interpretations and references are provided. Those studies include a set of sites in Alameda County investigated under the auspices of Holman and Associates of San Francisco. In addition, there are the sites CA-SOL-356 and CA-ALA-42 studied by Bieling & Psota. Several artifact figures are provided. A map of California and western Nevada obsidian sources is also available. There are charts depicting the obsidian hydration profiles for those sites in the Pleasanton area of Alameda County.

A discussion on Franz Valley obsidian, based on the M.A. thesis by Psota, is also found among those pages. The need for the identification of that glass type in the southern region of the North Coast Ranges and for further research is stressed. A paper presented by Psota at the 1990 Society for California Archaeology meetings is also included here. It examines the potential to

visually source western Great Basin glass types. The paper reports on a series of visual sourcing experiments using data generated by the study of five sites near Bridgeport, California. The initial work was conducted by Sonoma State University for the California Department of Transportation. Visual sourcing did not prove to be highly reliable in that region. References for both discussions are present.

In addition, information resulting from the analysis of the flaked stone assemblage from the Skyrocket site in the central Sierra Nevada foothills of California is also presented. The discussion focuses on the earlier components, the flaked stone tools, material types, and temporal assignments. Comparisons are made to other sites in the region. Again, references are provided. A series of biface and projectile point photographs and an illustration of the fluted point are included.

Submitted Report: Obsidian Reduction Technology Among the Early Navajo, New Mexico

by

*John A. Torres, Lithic Analyst
Navajo Nation Archaeology Department
Farmington, New Mexico*

The following presents preliminary findings of a study on early Navajo (AD 1500-1750) obsidian use. This research is being conducted as part of the Navajo Nation's Morris Site 1 Early Navajo Land Use Study (Dykeman and Wharton 1995). This investigation is examining 137 early Navajo sites from the traditional homeland of the Navajo, in northern New Mexico. Obsidian acquisition and reduction technology are important new lines of evidence for establishing early Navajo land use patterns. Most important has been the identification of a reduction technology that appears to be unique to early Navajo in the region. This preliminary investigation has also shown that this reduction technology might be a uniquely Athabaskan trait and might be used for migration modeling.

An important part of the MENLUS study was to first identify technological attributes to help assign sites to cultures or phases. Separating Ute and early Navajo sites has been particularly important. It was while investigating this problem, that differences in obsidian reduction technologies were observed. Well-dated, early Navajo sites of the A.D. 1700s revealed an obsidian reduction technology that was very consistent from site to site. Flakes of Jemez obsidian, mostly from the Cerro del Medio chemical source (Hughes 1996), possessed abraded platforms. The reduction technique of platform preparation in the form of abrasion is effective in flake production when a hard hammer is used. It was first hypothesized that this pattern developed from the use of brass trade axes as flintknapping hammers, however sites dating prior to Spanish arrival have now shown this same pattern (Torres 1996). Platform abrasion must have been an adaptation of hard hammer use on obsidian for the early Navajo. Thus far, obsidian use among the Ute has shown a reduction technology that does not produce abraded platforms. In fact, obsidian flakes from Ute sites often have single or multifaceted platforms and diffused bulbs of force. Those are characteristics of antler and other soft hammer reduction techniques.

As part of this study, a brief literature search on obsidian flakes with abraded platforms revealed a pattern that might suggest an Athabaskan migration route. Avonlea sites, thought to represent early Athabaskan elsewhere (Wilcox 1988), have also contained obsidian flakes with abraded platforms.

This research into early Navajo lithic technology is ongoing and the results presented here are preliminary. Obsidian studies still have the potential to add significantly to archaeological investigation in the southwest, especially early Navajo lithic technologies.

Dykeman, Douglas D. and Jeffrey Wharton
1994 The Morris Site 1 Early Navajo Land Use Study: An Alternative Data Recovery Plan

for Sites LA 11196, LA 83529, and LA 88766 in Williams Field Services Unit 29-7 Gas Gathering System, Rio Arriba County, New Mexico. NNAD Report 93-308, Window Rock, Arizona.

Hughes, Richard
1997 Geochemical Research Laboratory Letter Report 97-26. MS on file Navajo Nation Archaeology Department.

Torres, John A.
1996 A Replicative Systems Analysis of Navajo Lithic Technology. Paper presented at the Fourth Annual Fruitland Conference, Farmington, NM.

Wilcox, David
1988 Avonlea and Southern Athabaskan Migration. In *Avonlea Yesterday and Today*, edited by Les Davis 273-80. Saskatoon: Saskatchewan Archaeological Society.

ABSTRACTS AND ANNOTATIONS OF REPORTS AND PUBLICATIONS

The volume of so-called "gray literature" in archaeology is staggering, making it difficult for researchers who are not "plugged-in" to contract or research archaeology of a certain region or to hear of and gain access to reports. In addition, the proliferation and number of journals, and the interdisciplinary nature of obsidian and glass studies make it difficult to keep abreast of all relevant current literature. The IAOS Bulletin will alert readers to some of this information by reproducing abstracts and summarizing literature that may be of particular interest to IAOS members.

Andrews, B.
1997 Distinguishing between Full-Time Labor Intensity in Obsidian Workshops: A Lithic Technology Approach. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

Archaeologists have used the presence of full-versus part-time craft specialization as an index for the level of economic complexity of ancient societies. However, problems inherent in the measurement of labor input limit the reliability of conclusions about production using traditional methodologies. This paper attempts to differentiate between part- and full-time specialization using lithic technology to measure labor input by examining skill-level and frequency of production errors. Information from Xochicalco is compared to Teotihuacan, where specialization is assumed to have been full-time, to create a production matrix based on labor input and manufacturing skill.

Anovitz, L. M., J. M. Elam., L. R. Riciputi, and T. A. Nolan
1997 Diffusion Revisited: The Myth of Obsidian Hydration Dating. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

When it was first developed in the early 1960s, obsidian hydration dating (OHD) promised archaeologists a new, inexpensive, and simple means of obtaining a large number of chronometric dates. Unfortunately, while OHD has proven cheap and simple, it has not proven accurate. Despite intensive efforts over the past few decades to refine the technique, little improvement in accuracy has been obtained. We will show that the fundamental problem is incorrect modeling of the hydration process as one of simple diffusion. Data supporting this conclusion are already scattered throughout the literature, beginning with the work of Haller (1963), but the import of these results has never been realized, nor has the extent of the problem

been documented. Our analyses of 21 obsidian and manmade glass artifacts from a number of environmental and archaeological contexts by secondary ion mass spectrometry (SIMS) reveal that the hydration mechanism is substantially more complex than implied by the standard equations used for OHD. The standard equations can be shown to be inappropriate for all of the obsidians analyzed, and, despite the similarities, significant differences can be observed in the apparent hydration process amongst different glass types and in different environments. The complex nature of the hydration process suggests that modeling time-dependence may be so difficult as require that OHD be locally calibrated to other dating techniques. Its independent use may still be possible, but would require complex calibrations and analyses of materials and localities. However, data suggesting variation in surface concentration with time imply that obsidian hydration may provide useful paleoenvironmental information.

Aoyama, K.

1997 Ancient Maya Political Economy: Obsidian Evidence from the Southeast Maya Lowlands. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

This paper provides quantitative data on the obsidian artifacts pertaining to the Early Preclassic through the Early Postclassic periods from the Copan Valley and the La Entrada region in Western Honduras. The control of procurement and intra regional exchange of important utilitarian commodities, such as Ixtepeque obsidian macro cores, played a significant role in the development of complex sociopolitical and economic organization. Long-distance exchange of small quantities of commodities, such as finished green obsidian artifacts, were of social and symbolic rather than economic importance. Intra regional exchange was more crucial for survival and state development than long-distance exchange was.

Barrett, T.

1997 Tuxtlas Obsidian: Regional Economy in Retrospect. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

This paper present an examination of the obsidian artifacts collected during the 1991 - 1992 field seasons of the Tuxtlas Region Archaeological Survey. Over 8,000 artifacts were recovered from an area of 400 square kilometers surrounding the site of Maticapan. The analysis of these artifacts focuses on the calculation and comparison of tool and debitage distributions. These data confirm that tool forms and source material used in the region change differentially over the span of pre-Hispanic occupation. An argument is made for a model based on the production-consumption cycle to provide the general framework for interregional comparison of the Mesoamerican obsidian economy.

Beck, C., and G. T. Jones

1997 Obsidian Hydration Dating, Past and Present: Its Impacts on North American Prehistory. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

First presented in 1960, obsidian hydration dating has become widely used in areas such as the American West where obsidian is plentiful in the archaeological record. A number of issues have since been debated, including the effects of temperature, chemical composition, and humidity on the rate of hydration, and the validity of the method as a numerical-age approach. Obsidian hydration dating was one of the first approaches that dates the archaeological "target" event, eliminating the necessity for associational arguments. Further it allows dating of surface assemblages, without which we have a much poorer understanding of prehistory.

Bondar, G.

1997 Supply Side Economics: Obsidian Sources and the Means of Procurement for Xochicalco's Production Specialists. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

Characterization of geologic sources of raw material and analysis of lithic technology allows archaeologists to make inferences about trade and political pressures in lithic-based societies. Approximately 300 obsidian artifacts from the Epiclassic Mesoamerican site of Xochicalco were analyzed using neutron activation analysis at the Pennsylvania State University's Breazeale Reactor. These artifacts were matched to geologic outcrops that provided raw material during Epiclassic times. By revealing changes in procurement sources through time, these data facilitate reconstruction of prehistoric trade networks and how these networks were organized throughout Central Mexico during this turbulent period.

Cannon, K. P., and R. E. Hughes

1997 The Continuing Obsidian Studies in the Greater Yellowstone Area. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

This paper traces the development of obsidian sourcing studies conducted in the Greater Yellowstone area over the past 30 years and discusses the impact of this work on current understandings of obsidian use and distribution. We present the results of geochemical analysis of samples recently collected from obsidian-bearing locations in the area, with emphasis on their implications for ongoing studies of obsidian procurement and conveyance in the Intermountain West.

Cobean, R.

1997 Beyond Trace Element Analyses: Central Mexican Obsidian Source Systems and What We Wish We Knew About Them. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

This paper discusses problems in the investigation and definition of six Central Mexican obsidian sources areas: Sierra de Pachuca, Tulancingo, Otumba, Zacualtipan, Paredon, and Zinapequaro-Ucareo. Archaeological research and trace-element analyses have shown that different peoples exploited these sources for several thousand years. Research strategies are proposed for reconstructing pre-Hispanic obsidian tool production and distribution systems for these sources. Modifications are suggested for current models concerning the roles of obsidian quarrying and trade in the economic structures of Central Mexican states such as Teotihuacan and Tula. Recent results of the University of Missouri Research Reactor Center's Mesoamerican obsidian neutron activation analysis program are discussed.

Flenniken, J. J.

1997 Reconstructing Prehispanic Production Processes: An Examination of Xochicalco's Lithic Technology. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

Technological analysis of workshop remains has successfully identified the tools, techniques and processes of manufacturing obsidian artifacts at Xochicalco. Evidence from workshop locales show a variety of techniques ranging from percussion and pressure flaking, to pecking, grinding, pulverizing, and drilling to produce obsidian artifacts and the tools used to produce them. Xochicalco workshops were engaged in both flaked stone and lapidary production. This paper discusses their respective production

sequences, how technology reflects obsidian procurement at an urban center over 200 kilometers from its main sources of supply, and how the technological approach provides insight into Prehispanic economic organization.

Hirth, K.

1997 The Organization of Obsidian Craft Production in Central Mexico: A View from Xochicalco, Mexico. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

Research in Central Mexico has proposed that obsidian craft production in cities took place in a variety of production contexts ranging from small work areas in households to large-scale workshops in civic-ceremonial settings. Investigations at Xochicalco tested current models of production organization with information from intensive excavations in five workshops. Results demonstrate that most craft production at Xochicalco was a part-time activity, took place within domestic contexts, and was linked with periodic manufacture within a public market. Evidence from each of the five intensively excavated production locales are reviewed, which supports these conclusions.

Knight, C.

1997 Obsidian Distribution at Tres Zapotes: Arriving at an Understanding of Obsidian Production, Consumption, and Distribution. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

The obsidian assemblage from the 1995 and 1996 systematic surface collections at Tres Zapotes, Veracruz, Mexico, indicate that various chipped-stone technologies, reduction stages, and material sources were utilized. Quantitative analysis and topographic modeling of the surface material by reduction stage and color has delineated several obsidian activity areas. These areas are interpreted in the context of

monumental architecture and surface ceramic densities in order to better understand the system of obsidian production, consumption, and distribution at Tres Zapotes.

Lewenstein, S., and M. D. Glascock

1997 Obsidian Procurement at Comalcalco: Implications for Central Mexican-Lowland Maya Commercial Relationships during the Epiclassic. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

During 1993-1994, the INAH-sponsored Comalcalco Archaeological Project carried out extensive excavations in the monumental architecture of the site's center, as well as the investigation of a small residential mound in the outlying settlement area. Chronometric dates and NAA obsidian sourcing for both of these areas make possible a preliminary modeling of obsidian supply routes to Comalcalco during the Classic-Postclassic periods. Because of Comalcalco's prominence in the western Chontalpa, its exchange relations with the Central Mexican Highlands are important for understanding Putún Maya commercial expansions into the Gulf Coast and northern Yucatecan area during the Epiclassic.

Neff, H.

1997 Neutron Activation Analysis of Ceramics and Obsidian from Otumba. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

Neutron activation analysis has been carried out on obsidian and ceramics from Otumba and sites located along the trade route that connects Otumba with Tulancingo, Hidalgo, to the northeast. Obsidian comes mainly from sources within or near the northeast Basin of Mexico, including the local Otumba source, Pachuca and Tulancingo. Likewise, the bulk of analyzed pottery and figurines from Otumba are made of locally procured raw materials. Settlements

along the trade route obtained figurines and pottery from Otumba workshops, but other sources are also represented in the analyzed sample.

Netherly, P. J.

1997 *Traveling Glass: Social and Political Implications of Long-Distance Obsidian Exchange from the Highlands of Ecuador to Central Ecuadorian Amazonia and the Southeastern Gulf Coast*. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

Obsidian from known sources in the Ecuadorian highlands has been recovered archaeologically in Ecuadorian Amazonia from contexts that date before the 12 century A.D. Obsidian recovered from sites in El Oro Province dates to the Late Formative and Integration periods, with different sources consistently marking the chronological difference of at least a millennium. The social and political mechanisms involved appear to differ in each case and shed light on the modalities of integration in an area where large state economies were absent prior to the advent of the Inca.

Parry, W. J.

1997 *Production and Exchange of Obsidian Tools in Late Aztec City-States*. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

Obsidian was a vital commodity in the Aztec economies of Mexico. Using data from the Late Aztec city-state centers of Otumba and Tepeapulco, and their rural dependencies, I examine the importation of obsidian, its processing into tools, and the distribution of finished products both within and beyond the boundaries of the city-states. Obsidian blades were produced in (or close to) both city-state centers, while bifacial tools were manufactured

in some of the dependent rural communities on the margins of the city-states.

Pastrana, A.

1997 *La Explotacion Azteca de la Obsidiana de la Sierra de las Navajas, Hgo., Mexico*. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

Nuestro objetivo de estudio es el suministro de obsidiana de la Triple Alianza, a partir de la explotacion del yacimiento de obsidiana verde de la Sierra de las Navajas, Hgo. El proceso de explotacion comprende: Minería profunda y a cielo abierto. La talla de tres productos principales: nucleos prismáticos para navajas, preformas de raspadores y bifaciales, y de varios objetos rituales. La habitacion temporal de mineros y talladores, la construccion de campamentos, la preparacion y consume de alimentos. El transporte desde las poblaciones cercanas, de instrumentos para la minería y talla, y de alimentos. Y de los productos del yacimiento a los sitios de distribution. Propongo la intervencion del estado mexicana en la organizacion de la explotacion y distribution de la obsidiana.

Pleger, T. C.

1997 *Blue-Gray Chert, Black Glass, Red Metal, and the Red Ocher Mortuary Ceremonial Complex: New Radiocarbon Dates for Red Ocher Associations and Trade in the Great Lakes Region*. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

This paper evaluates the implications of ten new AMS radiocarbon dates from burial features excavated at the Riverside Cemetery Site (20-Me-01), a transitional Late Archaic/Early Woodland Stage Red Ocher Complex cemetery in the Upper Peninsula of Michigan. Excavations at the site during the 1950s and 1960s yielded over 65 Red Ocher burials.

Associated grave furniture included: blue-gray chert biface caches, copper ornaments and tools, marine shell, and obsidian. The author discusses the importance of exotics in the development of a far-reaching and complex exchange system that connected a series of regional cultures across the Great Lakes during the first millennium B.C.

Santley, R.

1997 The Classic Period Obsidian Production-Distribution System at Matacapan, Southern Veracruz, Mexico. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

Recent work at Matacapan, an urban center on the South Gulf coast of Mexico, has produced a large sample of obsidian from the Classic Period. The assemblage comes from a broad range of contexts: elite, commoner, craft-specialized, unspecialized, urban, and suburban. Prismatic blade materials dominate most of the assemblage, although simple flakes and blades were also produced. Cumulative frequency analysis indicates little variation in different contexts and through time. This finding suggests that obsidian working was a normal part of life at the site no matter what the setting.

Webb, R., and P. Van Rossum

1997 Obsidian Craft Production and the Domestic Mode of Production. Paper presented at the 62nd Annual Meeting for the Society for American Archaeology, Nashville, Tennessee.

Abstract

Archaeological explorations at Xochicalco have demonstrated that most flaked stone tools were produced in workshops located in domestic settings. The site's rapid abandonment at A.D. 900, combined with excellent and unusual conditions of preservation, made it possible to reconstruct the location, scale, and organization of obsidian tool production within household spaces. Excavation in three residential workshops reveal that production took place

both in specialized places where only obsidian tools were produced as well as in all-purpose areas where obsidian tools were manufactured alongside other everyday residential activities. The differences in these forms of production are examined and discussed.

TECHNOTES

This section of the newsletter is devoted to sharing new techniques, innovative ideas, source of equipment and supplies, and discussing new technologies. Obsidian analysts are invited to submit information relating to these topics.

Cooked Obsidian

Submitted by

*Tom Origer, Janine Loyd and SueAnn Schroder
Obsidian Laboratory
Sonoma State University*

For thousands of years stones have been "cooked" as a result of deliberate action (e.g., heat treatment of chert), accident (e.g., wildfires), and as a byproduct of other activities (e.g., control burns). Among the stones accidentally and incidentally being cooked was obsidian. Recently, a great deal of interest has been focused on the affect that fire has on obsidian specimens in archaeological contexts. Specifically, a number of land managing agencies and archaeologists have been concerned with determining whether controlled burns have an affect on obsidian hydration bands. Among questions being asked are: Does fire adversely affect hydration bands? If so, at what temperatures do hydration bands become affected? Does the duration of a burn have any affect? How does obsidian behave with respect to hydration development, after it has been burned? These questions and others have been posed as a first step in developing a data bank so that a determination can be made regarding whether controlled burns are an activity that can have an adverse effect to cultural resources.

The Obsidian Laboratory at Sonoma State University, among others, has been involved in research designed to provide information useful in answering questions being asked about fire and obsidian. Initial studies have focused on the question of the effect fire has on obsidian. Our tests and others have shown that fire can effect hydration bands -- they seem to disappear. But after a fire has "removed" a hydration band, what next happens to the obsidian? Initial accelerated hydration experiments have provided some information.

Obsidian specimens that had hydration bands and then lost them due to fire, have been placed in a thermo-regulated pressure reactor ("pressure cooker"). Hydration bands redeveloped. However, does rehydrated obsidian behave in a manner consistent with non-burned hydrating obsidian? The answer appears to be a qualified "no."

Hydration bands on previously burned obsidian specimens reappear, but, they are larger than hydration bands that form on freshly made flakes over the same period of accelerated hydration time. Apparently, the natural hydration development has altered the obsidian or, perhaps, the obsidian hydration band is still present, although not detectable during standard analysis.

Results of our studies are extremely preliminary. Tests are ongoing and more are planned. It is anticipated that in early 1998, we will have replicated our initial experiments and will be in a position to report fully on the results of these analyses. Anyway you like it: baked, barbecued, or steamed, cooked obsidian provides food for thought.

CALENDER OF EVENTS

March 25-29, 1998

63rd Annual Meeting of the Society for American Archaeology, Seattle. For more information contact: Georges A. Pearson, Dept. of Anthropology, University of Kansas, 622 Franser Hall, Lawrence, KS 66046. Tel (913) 864-4103, email <ftgap@eagle.cc.ukans.edu>

April 8 - 11, 1998

Society for California Archaeology Meeting at Hyatt Islandia Hotel, San Diego, California.

ABOUT THE IAOS

The IAOS was established to:

1. develop standards for analytic procedures and ensure inter-laboratory comparability;
2. develop standards for recording and reporting obsidian hydration and characterization results;
3. provide technical support in the form of training and workshops for those wanting to develop their expertise in the field, and;
4. provide a central source of information regarding the advances in obsidian studies and the analytic capabilities of various laboratories and institutions.

Membership

The IAOS needs membership to ensure success of the organization. To be included as a member and receive all of the benefits thereof, you may apply for membership in one of the following categories:

- Regular member \$20.00/year
- Institutional member \$50.00
- Student member \$10.00/year or free with submission of paper to newsletter and copy of current student identification
- Life-Time Member \$200.00

Regular members are individuals or institutions who are interested in obsidian studies, and wish to support the goals of the IAOS. Regular members will receive any general mailings; announcements of meetings, conferences, and symposia; bulletins; and papers distributed by the IAOS during the year. Regular members are entitled to attend and vote in Annual Meetings.

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Submissions for articles, short reports, abstracts, or announcements for inclusion in the newsletter are accepted at any time. We accept electronic media on IBM compatible 3.5" or 5.25" diskettes in a variety of word processing formats, but Wordperfect (5.n) or Word for Windows 95 is preferred. A hard copy of the text and any figures should accompany diskettes.

Deadline for submission for the Spring Bulletin is May 15, 1998. Send submission to the Business office address listed above.

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INTERNATIONAL ASSOCIATION FOR OBSIDIAN STUDIES

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Yes, I'd like to renew my membership. A check or money order for the annual membership fee is enclosed (see below).

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I am a student (copy of ID enclosed) and I am enclosing an abstract for a published obsidian related article or submitting a paper to the IAOS for printing in the Bulletin. Please enter my free membership. Please send the bibliography on 5 1/4 360 KB or 3 1/2 1.44 MB diskette.

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