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Agate Basin?



Allen?

See page 5.

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State Secretary: Bob Brown, 336 Sinclair Place, Casper Wyoming.

Dr. Cynthia Irwin, and Dr. George Agogino have recently investigated the Hollow Spring Site south of Rawlins, and report the presence of mammoth bones, as well as those of smaller animals, in association with points of the Clovis fluted type. The materials occur in a wet muck near the spring, and are remarkably well preserved. The site was discovered by an oil crew searching for water. Power equipment removed several rib bones of mammoth before they were recognized and reported to the University of Wyoming.

The site has been flooded to prevent looting, and will be worked next season.

INDIAN CERAMICS

It is possible to make quite useful items of low-fired pottery made from local materials in the same manner that the Indians produced their wares. The following procedure, learned by experiment, seems to work well.

Collect some clay, the "gumbo" variety works well, and some clean sand. The sand should be just small enough to pass through common window screening. Good clays occur in parts of the Fort Union formation in a number of places in this area. The dark color needn't be a matter of concern since this usually changes in firing.

Pulverize the clay and sift it to remove foreign particles and lumps then add water and mix well. Let stand until thoroughly soaked, occasionally working with the hands to assure penetration. Let stand overnight with sufficient water to prevent drying out on the surface.

When the clay is ready to work, add the sand tempering about one part sand to three of clay. The clay should be soft, but not sticky. When the clay can easily be worked into shape without cracking, and without sticking to the fingers, the moisture is about right.

There are several ways to form finished wares. One is by mass modelling, in which a large mass of clay is pressed and squeezed into the shape desired. Another method is by coiling.

In coiling, the Indians usually used round rolls of clay, about the size of a pencil, formed by rolling balls of clay between the hands or on a flat surface. These coils are then laid on one another to build up the walls of the vessel.

Each coil is pressed onto the preceding coil, and the seams are smoothed with added soft clay until the surface is smooth and the wall is homogeneous.

The critical parts of the coiling technique are two:- the production of uniform coils, and the effective joining of each coil to the preceding one in the ware. The production of uniform coils is facilitated by rolling out the clay into flat sheets like pie crust, and then cutting this into strips. These strips are easily made uniform, and, since they are rectangular in shape, they lay up nicely and join smoothly.

When the final form is achieved, and we suggest a simple one to start with, a most critical operation begins. This is the drying stage. The ware must be dried thoroughly before firing. In order to prevent cracking during drying, this operation must be conducted slowly over a period of days. Generally, the thicker the piece, the longer and more difficult the drying operation. Place the ware in a cool, and slightly moist area to dry. When the drying is almost complete, a drier environ can be sought. During early phases, it may be advisable to wrap the ware in a slightly damp cloth.

After the object is completely dry, it is ready for firing. Firing renders the ware harder and more durable, and, most important, it makes it waterproof so that further soaking would have no softening effect on it. Firing, Indian style is easily accomplished. Hardwood is preferable to prevent smoking, but in any case, a quantity of wood must be burned down to produce a large amount of coals. The ware is placed on this base of coals and charcoal is heaped around the ware and strongly fired. A location where there is a good draft is essential. It is desirable to get the ware as hot as possible. A dull red color is a minimum.

During the firing the clay will usually change color. Refined clays do not do this, but impurities in natural clay usually will cause changes. If your clay contains iron, a reddish cast may appear. The dark gray of a gumbo clay will usually lighten. Deliberate impurities to produce many color effects may be experimented with.

After you have practiced the basic techniques outlined above, you will wish to experiment with decorating schemes. You may cut or mould patterns into the damp clay, or you may paint the surface. To appreciate the Indian products, you should experiment with natural pigments and substances to see what effects you can achieve. It is a wonderful hobby and very informative.

PETROGLYPH CREW

Mr. and Mrs. Harold Gilbert, Mrs. Wailes Wolfe, Rowanne Longwith, and Margaret Powers did some very good work in making copies of the petroglyphs at Trapper Creek. They have made a number of plaster casts in duplicate, and, for a nominal fee, will dispose of these to members wishing to use them as wall placques.

In obtaining plaster casts of the petroglyphs on vertical surfaces, it was necessary to first make plasticine moulds. Positive plaster casts were then made from these.

Mrs. Gilbert hopes to develop a group and the special techniques to make a petroglyph crew which can tackle the vast job of preserving the great numbers of petroglyphs in our area. It's an important job, and we hope her enthusiasm will carry the job through.

Glenn Sweem is working on an adjustable frame with foam rubber padding which he hopes will make possible direct plaster moulding of petroglyphs on vertical surfaces.

A recent Smithsonian publication says that Indians of historic times often visited pictograph sites to make "medicine."

The Sheridan Chapter held its September meeting at the Trapper Creek site and devoted a day's work to a preliminary investigation of the site. The petroglyph crew spent the day casting petroglyphs, while a digging crew put down a five-by-five foot exploratory pit in the small rockshelter. Another crew investigated one of the partially exposed hearth layers in the old camping area.

The crew in the rockshelter found that there were petroglyphs extending to a depth of 29 inches beneath the soil surface. The stratigraphy was well-defined, and showed a record of flooding and drying cycles for a considerable time. At a depth of 39 inches, there was a well-defined cultural level which produced a number of artifacts.

The diagnostic artifacts were three fragments of triangular un-notched points, which are characteristic of the Late Period (see Mulloy--A Preliminary Historical Outline for the Northwest Plains). In the same level were some worn chert fragments which may well have been used in making some of the petroglyphs on the wall above. A wooden peg, about three inches long, was found, along with two scrapers and some slightly worked pieces of stone. The peg may have been used for stretching hides.

Adequate charcoal was obtained to date the level, and, by inference, some of the petroglyphs. Further dating information is afforded by pictures of a bow and arrow, and a horse and rider. Some of the human figures have shields and horned headgear which closely resemble those associated with the Fremont Culture to the south. A number of such figures in the area, combined with the evidence from Pictograph Cave, strongly indicates the presence of that culture in this area for an appreciable length of time.

There appears to be a sequence of three or perhaps four types of petroglyphs at this site. A preliminary guess would place the petroglyphs at this site within the last 700 years, with about three of the possible four series being rather recent. It is hoped that the excavations at the site may yield close dating information for some of these types. A multi-level cultural fill is present in parts of the area, and it may be possible to find some correlations with the petroglyph series. Because of the generally well-defined stratigraphy in the site, good seriation should be possible.

The Trapper Creek site is a rather important Late Period site, and deserves to be studied in great detail. The continuous effacement of the petroglyphs makes the problem rather urgent.

HISTORICAL ARCHAEOLOGY

At the recent state convention of the state Historical Society in Buffalo, the urgent problem of the investigation of such historical sites as Fort Phil Kearney was brought up. It may be that in the near future, cooperative work between the historical and archaeological groups will be applied to such sites to recover the natural record of events as recorded in the soil. Such records, coupled with the written record, should furnish a clearer picture than either alone.

Your editor's ears are very red due to a grievous oversight in the last issue. A very special vote of thanks must go to the Louis Allens for their work in surveying sites for the society. In listing people at the sites this summer, the Allens were inadvertently omitted. A heartfelt apology is hereby tendered, along with a generous helping of thanks for a good job, done with the usual Allen quiet efficiency.

MATERIALS CORRELATION PROJECT

Art Randall, Casper chapter president, is currently undertaking a study of the types of material used to manufacture stone artifacts. Comparisons of material types as a function of time and geographic location will be made. Eventually, perhaps, it will be possible to roughly date and locate a lithic complex by the amounts and types of materials used. In the long range study, the location of quarries, and the types of material present in them, will be important pieces of information. Members are urged to file site reports on, and collect representative samples from, all outcrops of stone suitable for artifact manufacture. Should facilities ever permit, spectroscopic studies of these materials might serve to pinpoint the source of any artifact found in this region. This, in turn, would give valuable information about migration and trading among prehistoric peoples. The full cooperation of all members will be appreciated.

MAGNETOMETRY AND ARCHAEOLOGY

A technological advance which may prove of great benefit to the archaeologist is the application of the proton free-precession magnetometer to site survey methods. This extremely sensitive process is capable of measuring very small local variations in the earth's magnetic field. The archaeological application comes from the fact that when earth which contains iron compounds is heated by a fire, some of the iron compounds are converted into magnetic form and become magnetized by the earth's magnetic field. When the materials cool, they retain this magnetism. The sensitive magnetometer picks up the local variation in the earth's field due to these small magnetized particles and locates the fireplace or hearth, even though it may be buried several inches below the surface. Large pots can be located in the same way. Not the least significant of the possibilities of the method is that it can yield accurate dates on hearths that have not been disturbed. When the magnetic particles in the soil are cooled in the earth's field, they not only become magnetized, but the direction of their magnetic axes coincides with that of the earth's field. The earth's field is always changing direction, and, by relating the direction of the ancient magnetization to the known variation of the earth's field, accurate dates for the fire can be established. The dates are often accurate within 25 years for times within the last 400 years. Your editor did his master's thesis in the field of nuclear magnetic resonance, and this new application of his old field brings an urge to have a go at the new construction. Trouble is, he's three projects behind right now. Anyone interested? It isn't as complicated as it might sound.

About two years ago, the Wyoming Archaeological Society investigated the Powers site, a group of low rock structures around the point of a hill which were called fortifications. No artifacts, bones, or other materials were found in the area during photography and mapping. Because the structures were in an almost indefensible position from the military point of view, it seemed unlikely that these could have actually been fortifications.

This summer, Mr. Turk showed the Sheridan crew another site of roughly similar pattern with the exception that this site could, indeed, be defended against attack. Some 19 structures were found in various positions around a small hilltop. The rock walls were about of the same height and general pattern as those of the Powers site. Most would just about hide a man lying down.

In two of the structures were preserved pieces of logs contained among the rocks. Wood samples were taken from these and it is hoped that dendrochronological dates can be obtained for the wood which will assign a maximum age to the structures. In a third structure, some young trees had grown up, and samples taken from these show an age of forty years, so the structures are evidently older than this.

Many of the trees in the area show old blaze scars, but whether these are man's work is still not established. One of the old blazes bears the inscription "L. D. Seeley, July, 1895." The blaze scar will be dated dendrochronologically to see how it compares with the given date. Surface search during the mapping and photographing revealed no artifacts. Mr. Turk relates that he found a roll of soft lead in the general area several years ago.

POSSIBLE ANCIENT SITE

On August 13th, while doing surface reconnaissance work at a site he had discovered 13 years ago, Dr. Ray Bentzen picked up from gopher mounds basal fragments of three different types of projectile points, at least one of which is representative of cultures which date back more than 8,000 years. This one point was an Agate Basin point, and the others were possibly a Jimmy Allen and a Scottsbluff point. Just $\frac{1}{4}$ mile south of this site lies another site from the surface of which, ten years ago, Dr. Bentzen found a Tolson point.

On August 14th, Louis and Mildred Allen assisted Dr. Bentzen in excavating a test trench 18 inches wide, 6 feet long, and 3 feet deep, the material from which was screened. There were 24 inches of loam soil containing many chips, flakes, and some shovels etc. Below this was a yellow, gravelly soil several inches thick blanding into a sterile subsoil and limestone mixture. At the 24 inch level, a projectile point resembling a McKean variant was found, along with a well worn, snub-nosed end-scraper. This site, which is in the Burgess Ranger District, gives promise of yielding some valuable information when it is dug.

CONTRIBUTIONS

Helen Worden of Clearmont donated ten dollars from rock sales to the Society. Helen has been one of our most enthusiastic members, and we tender our warmest thanks. Mrs. Paul Coates has donated \$2.50 to the publication fund. Thanks again.

The September, 1960, issue of Scientific American magazine is entirely devoted to various aspects of man and his pre-history, and should be of interest to all archaeologists.

The latest issue of National Geographic magazine has a very interesting article about Dr. L. S. B. Leakey's latest discoveries in Africa. You may even recognize your Uncle George in the illustrations.

The Society is now trading its journal for the Plains Anthropologist, the Arkansas Society's Newsletter, Utah Archaeology, and Katunob. The las named is a bi-lingual publication dealing exclusively with meso-american archaeology and anthropology, and is a very excellent reference in this field.

Our noted member, Dr. H. M. Wormington, donated several books to our library recently. These include Ancient Man in North America, Pre-historic Indians of the Southwest, A Reappraisal of the Fremont Culture, and several works on paleontology.

Don Grey has recently acquired a number of reference materials, including Cornwall's two books--Bones for the Archaeologist, and Soils for the Archaeologist; Shepard's book entitled Ceramics for the Archaeologist; Orchard's Beads and Beadwork of the American Indian; a most useful work entitled A Postglacial Chronology for some Alluvial Valleys in Wyoming, and some other works on post-Pleistocene geology. Most of these must be kept handy for reference, but short term loans may be arranged on request. If the demand is sufficient, copies may be obtained for the Society library.

OVER THE CAMPFIRE

Dr. Agogino has sent a number of important references on state antiquities laws.

Dr. Kuchel, head of the University of Wyoming department of anthropology, has written a letter of thanks for the William Mulloy Scholarship Fund. Note the loss of the word "memorial." After several inquiries after the health of Dr. Mulloy, it was decided to drop the word. However, the fund still exists and donations are still welcome.

Mr. and Mrs. Kusel recently donated five dollars to the Mulloy fund.

Byron Olson, of Newcastle, has filed a number of site reports, as has Mrs. Paul Coates of Rawlins.

Mrs. Ann Lawrence has sent in some excellent pictures of Indian writings near Rock Springs.

Bob Stephenson of the River Basin Surveys has recently asked if any of our members are interested in personal subscriptions to the Plains Anthropologist. We can unhasitatingly recommend this publication to all interested in archaeology, and we urge its support. It needs money to continue functioning. Dr. James B. Shaeffer of the Oklahoma Archaeological Salvage project is the editor. \$2.50 to him at the University of Oklahoma, at Norman, Oklahoma, will bring a year's subscription. I believe that price is correct, although it's worth much more.

MEMBERS OUT

