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(PART III)

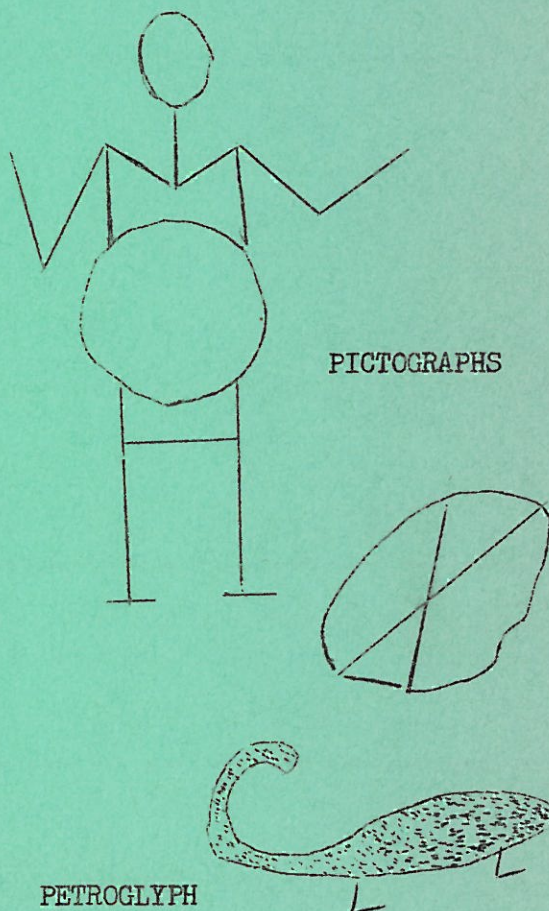
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The WYOMING ARCHAEOLOGIST (formerly the Smoke Signal) is the monthly publication of the Wyo. Archaeological Society, a member of the Society for American Archaeology. Membership dues are payable to the secretary of any chapter and are \$2.50 annually. Secretary of the Sheridan chapter: Dr. Ray Bentzen, Box 795, Sheridan, Wyoming. Secretary of the Casper chapter: Mrs. Robert E. Carpenter, 1858 Wilshire, Casper, Wyo. The Wyoming Archaeological Society has as its purpose the preservation and scientific development of archaeological data in Wyoming.

One of our newer young members, Eugene Galloway, last summer dug a cave in the Rock Creek area north of Buffalo. Unfortunately, at the time of the dig Eugene had not had much experience with archaeological field work, and he did not preserve any stratigraphic information that may have been present. During this winter, he has had a chance to learn a few things from Dr. Mulloy at the University, and has been making an attempt to rectify some of his previous errors and to recover and preserve all the information that he can about the site. Considering a rather awkward start, Eugene has been doing a good job, and may do some more work on the cave as soon as time permits.

The UM cave, named after the ranch near which it lies, is about twelve feet wide, twenty feet deep and has standing room over most of its floor area. It is somewhat larger than Kaufmann Cave. Eugene tells us that there is a campground within sight of the cave at which he has found points of a McKean type.

During the digging, Eugene recovered some charcoal which he feels will be datable, and also some wood fragments which may be datable by tree ring methods. Some 15 or so fire pits were excavated. About 127 artifacts, mostly crude bifaces, were recovered. Among the more interesting pieces were a typical McKean point, and what appears to be a Scottsbluff type. Eugene feels that these were probably intrusive at a period much later than their origin because he found them in close context with recent side-notched types. Of course, there is always the element of doubt because the positions were not recorded exactly in connection with available soil structure.

All-in-all, while the work was not of the best, the investigation, particularly since Eugene became aware of the importance of methods, has been

a worthwhile one, and may yet produce important results. We predict that Eugene will be a member for the Society to be proud of. We hope to be able to publish a final report on the site next fall.

W. A. S. CREW SURVEYS STRUCTURE SITE

Saturday, May second, four members of the Wyoming Archaeological Society surveyed an area east of Sheridan on which there fifteen rock structures of unknown function. Data were taken to make a contour map of the area, and the structures were photographed. No artifacts were found, although no search was made. Some excavation may be done at a later time, but it does not seem that this will prove informative. The structures range in size from about five feet across to eighteen feet across and are of various forms. Some are nearly circular walls of stone, others are semi-circular, and still others are merely short walls laid between two natural formations. Most of the walls were never more than about two feet high. The only tenable hypothesis brought forth at the present time is that they were blinds to hide hunters from animals approaching the rimrock on which they lie.

AMATEURS?

A recent article in the publication of the Montana Archaeological Society made the statement, "No one wants to be called an amateur, even if he is one." This statement points up a rather unfortunate connotation that has become associated with the word amateur. Literally, the word denotes a person who studies and practices an art or science for the love of the subject rather than for money or material gain. In this sense, to be called an amateur is a fine compliment. It is hoped that we all merit this use of the term.

In many cases, it has been true that amateurs in many fields have rushed into a subject ill-prepared and have thereby bungled the effort. This is probably the source of the derogatory connotation of the word in common usage today. It must be remembered, however, that in the past some of the greatest contributions to many fields, including the physical sciences, have been made by amateurs. In fact, almost every field had its beginning in the hands of amateurs, until it became developed to the point of making a professional pursuit possible.

Lest we become lost in the literal interpretation of words, we should in all honesty recognize the attitudes that exist, and try to see what can be done about them.

As usual in any controversy, there is some right on both sides. The professional archaeologist is concerned about the preservation of the information contained in sites. Once disturbed, a site loses its value as a record of the past. That record can never be reconstructed or restored. The "amateur" who bungles the recovery of information, or who simply digs a site in order to obtain artifacts for a collection, is doing irreparable harm. On the other hand, the amateur is responsible for many of the important site discoveries that are made. He feels that he has some small proprietary right in the site. He also feels that he should be entitled to a share of the artifacts recovered in the event that he is a collector as well as an amateur archaeologist. He feels cheated if professional workers dig the site, leave with the artifacts, and reward their informant with little more than a verbal thank-you.

The professional archaeologist works within a rather rigid framework of methods and procedures which are designed to assure accuracy of information, completeness of investigation, and usability of results. For

example, in all sciences it is usual to give credit for discovery to the first person to make a public report of his findings. Thus credit often goes to a professional who makes an investigation of something about which he has learned from an amateur, or disinterested party, by word of mouth. He would expect the same treatment himself, of course. The dabbler may not be aware of the ground rules, however, and may be hurt by the apparent failure to credit him. In many other ways as well, the archaeologist and the antiquarian move in entirely different circles, and may not understand one another. This often leads to bitter recrimination, where a little understanding might bring about a mutually beneficial relationship.

The archaeologist, particularly of the American school, is interested not in artifacts, but in what they can tell him of the people who lived here ages ago, and of the ways in which these people influenced one another. The anthropological studies which derive their support from the archaeologist are the important things. The antiquarian, on the other hand, finds an aesthetic satisfaction in simply possessing and examining a fine piece of stone work. He collects fine artifacts in the same way that another person collects paintings or Ming vases. Certainly a "Yuma" type point is a work of art in itself.

The many differences between artifact collectors and archaeologists need not be a source of friction. Indeed, those differences might become the basis of a very useful and workable relationship of benefit to both.

Consider what each would like from the other. The archaeologist appreciates and depends upon the information about sites which he gets from the collector. He certainly cannot find all the sites himself. He also greatly desires that a site not be destroyed before its information content can be gotten into a permanent form. The archaeologist is perennially short of operation funds and can always use competent and cooperative help in doing surface surveys, and sometimes in actual excavation.

The collector, on the other hand, is willing to inform the professional archaeologist provided that the information is not leaked to pot-hunters who will make off with the artifacts, and provided that he receives proper credit for his discoveries, and also receives some of the artifacts for his collection.

It seems that perhaps both these desires could be pretty well met with a little thought. The Archaeological Society feels that it can very effectively act as a go-between to meet the needs of both sides in the question. For example, the use of our site report form insures credit for discovery being given to the proper person. These site reports are kept confidential from all non-professional people and can not be used by pot-hunters as sources of information. Also, since the archaeologists interest in artifacts extends only to the very unusual types, and even then only until permanent reports have been filed as a rule, it seems quite possible that a simple arrangement could be made whereby the amateur could receive most or all of the artifacts from a site as soon as they had been photographed or sketched for the permanent records, and provided that he would agree to keep them properly labelled and available for professional re-examination in the event that questions should arise at a later date. In many cases, the professional archaeologist is bothered by lack of storage space for specimens recovered in the field. If these could be stored in a unified group with a collector in such a way that they could be available for re-examination when desired, it might be a workable way for both parties to be satisfied. In most cases, the amateur would be happy to see the archaeologist keep some of the representative specimens if he wished as a part payment for his labor in recovering them.

It is hoped that some suitable arrangement can be made whereby both the professional people and the collectors can be satisfied in their desires, and can work out mutually beneficial relations.

In the past, professionals have depended upon their students for help in the field. It is possible that organized groups of amateurs could gain some wonderful experience of an educational nature and at the same time help the professionals by offering a source of free labor for digs. Volunteer help in the past has been a mixed blessing to the archaeologist. The volunteer is not afraid of being fired, so he sometimes does not take orders well. Also, he sometimes may suddenly decide that he is bored and leave the job whenever he feels ready, possibly upsetting the planning of the archaeologist for the days ahead. If, on the other hand, the volunteer would agree to follow orders exactly, stay a specified time, and let the professional conduct the dig, then the amateur could learn a lot, and the archaeologist could accomplish much more of the work that needs so desperately to be done as soon as possible.

Let's see if we can't get together with each other and make a really workable relationship. It must be possible if we are willing to try.

KING CORN

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No other plant is as important in the economy of America as is corn. It grows in every state and on three fourths of all farms of the United States is the basis of the agricultural economy. This efficient plant converts the energy of the sun into food that finds its way to our tables as cereals, meat, milk, and other animal products.

Its origin is a mystery. A mystery whose fascination has led to considerable research to prove its origin. There is no evidence to support the theory that it may have originated in the Old World.

Seeds of wheat and other cereals have been found in sites of the Near East. Ancient art of the Babylonians and Egyptians pictured cereal plants but no corn. It has no mention in the Bible other than the term corn which is synonymous with grain or kernel. The greeks had no word for it, the ancient Chinese literature and that of India make no mention of it. There is no evidence of any kind to indicate that corn existed or was known in the Old World in pre-Columbian days.



The first historical reference made of corn was recorded November 5, 1492 when two Spaniards with Christopher Columbus returned from the interior of Cuba with reports of a grain called maiz which tasted well when baked, dried, and made into flour, Other explorers of the New World gave reports of corn being grown by the aborigines from Canada to Chile. This ubiquitous grain displayed types such as we know today--dent, pop, sweet and flint. The seminomadic Indians augmented their diets with corn from cultivated fields. The Mound Builders of the Mississippi Valley and the desert Cliff Dwellers were cultivators of corn. The Mayas, Aztec and Incas depended heavily upon corn for their

sustenance. The abundance of such an easily produced and bountiful food afforded the leisure time for the development of the great Central and South American Indian cultures, "Corn was the grain that built a hemisphere".

All evidence indicates quite overwhelmingly that corn originated in America so the burden is to find where and from what ancestor.

How old is corn in its history as a cultivated plant? With the advent of Dr. Libby's method of radioactive carbon dating we have a valuable assist. Carbon dating has borne out archaeological estimates that the oldest corn found in South America dates back to approximately 1000 B. C. and the oldest in North America to about 2000 B. C.

What type was this ancient corn? The oldest prehistoric ears in America are small and primitive and differ in many characteristics from modern corn but could still be recognized as corn. The history of our modern corn indicates that it was well on the road to becoming what it now is as far back as 4000 years ago.

Two main theories of its origin have been expostulated. One theory is that it originated among the Aztecs from a plant called teocintle (teosinte). Teosinte is a close relative of corn having ears and tassels borne separately. The ears contain only five or six seeds each enclosed in a hard, bony shell. It can be crossed with corn to produce hybrids that are generally fertile. Botanists working with corn and teosinte have found so much chromosome and gene variation between that the theory that corn developed from teosinte is becoming an untenable one.

The theory that corn originated from pod corn is becoming more and more acceptable. Lending credence to the theory is the fact that inbreeding of modern hybrids results in a plant that is quite different from ordinary cultivated corn. The ear disappears and the kernels are borne on branches of the tassel and are enclosed in glumes. Pure pod corn has

virtually all of the characteristics we would expect to find in an ancestral type. Actually it is corn, not merely a relative, but corn that differs from cultivated corn in a way a wild species differs from a cultivated one. The hereditary difference between pod corn and cultivated corn has been traced to one gene in one chromosome. Consequently a single mutation could make a change to the non-podded form. This has actually happened in cultures of pod corn.

Present day movie goers are not so modern in their consumption of pop-corn. Almost two hundred years ago the Spanish Commissioner to Paraguay reported small seed enclosed "envelopes" borne on a tassel that when heated in oil exploded. Recent experiments have duplicated the corn reported by hybridizing pod corn and pop corn and then inbreeding to produce an earless plant bearing small, hard seeds enclosed in glumes and borne on a tassel. When heated it behaved in a manner previously reported by the Spaniard. It is possible that primitive man discovered the utility of corn when it was accidentally exposed to heat. Then a flinty, glume covered kernel became a tender, tasty morsel and arrived at its destiny as a great food producing plant.

During the summer of 1948, Herbert Dick, a student of anthropology with the Peabody Museum of Harvard discovered cobs and other parts of corn buried in the rubble of Bat Cave in New Mexico. This shelter was occupied from about 2000 B. C. until 1000 A. D. Refuse had accumulated to a depth of six feet. Careful removal of debris revealed 766 cobs and 125 loose kernels along with fragments of husks, sheaths, and tassels. The evolutionary sequence was of interest as the cobs at the bottom of the refuse were the most primitive. The cobs and kernels from this level also proved to be the earliest and indicated that the earliest residents of

Bat Cave grew a corn that was both pod and pop corn. It was not as primitive as described from Paraguay but a type that was already modified by domestication.

Unanswered is the question as to where in the New World corn originated. Being by nature a moisture-loving plant it is doubtful if it originated in our present and then dry Southwest. But where and whence is still unknown.

¹The Mystery of Corn, Scientific American, July 1950

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The Pueblo Indians consider corn as the staff of life. It was cultivated among them long before the advent of the Spaniards. The Santa Clara Indians have the following tradition concerning corn cultivation:

"In old times, when the people lived on the hills, they had no ditches; the corn grew with water purely from the heavens. When it was very dry, the women watered it from their jars. Then the people began to plant in the arroyos where the water ran, and so, little by little, as best they could, they thought of irrigating."²

The Tewas have a myth accounting for the variously colored strains of corn: Long ago the people lived principally on meat. Forest fires destroyed the game, and the people were starving. They went up to Puye and danced for many weeks before the caciques could obtain a dream. At last the caciques dreamed. In accordance with their dreams they made a small hole, placed in it pebbles of six colors corresponding to the world-regions, and covered the opening with a stone. The people danced again for several weeks. Then the caciques looked into the hole and saw six corn plants sprouting in it. From this first planting came the six colored varieties of corn.

Tewas distinguish seven principal varieties of corn, named in the following order:

"Blue Corn, associated with the north, personified by Blue Corn Maiden;

Yellow Corn, associated with the west, personified by Yellow Corn Maiden;

Red Corn, associated with the south, personified by Red Corn Maiden;

White Corn, associated with the east, personified by White Corn Maiden;

Many-colored corn, associated with above, personified by Many-colored Maiden;

Black Corn, associated with below, personified by Black Corn Maiden;

Dwarf Corn, personified by Dwarf Corn Maiden."³

²The Pueblo Indian World, Edgar L. Hewett, University of New Mexico Press, 1945

³Ibid

SITE REPORTS

Mrs. Condit filed site reports on two natural animal traps and a fortification recently. These sound very interesting and are a welcome addition to the files. It will be necessary for the board to get together one of these days and assign site numbers to some of these places and notify the River Basin Surveys of the numbers assigned.

In connection with these numbers, it might be well to elaborate slightly on the way in which they are used. These numbers serve to designate the state and county in which the sites lie and the number of the site within the county. The first part of the number tells the state according to alphabetical listing. Wyoming is alphabetically last

(or was when the numbers were assigned) and is given number 48. Whether this will be changed with the addition of two new states is not known, but probably this will not change. If a state is added with the initial Z it would probably become number 51. The second part of the site designation is an abbreviation of the county. Sheridan county has the abbreviation SH. The last part of the number gives the site number within the county. Kaufmann Cave bears the number 48 SH 301.

The last numbers are assigned to organizations in blocks. The Wyoming Archaeological Society has numbers from 300 to 400 in several counties. The assignment of these numbers is a matter for the officers of the organization to decide. Part of our block of Natrona county numbers has been assigned to the Casper chapter. If we need numbers in other counties, we need only to apply for them.

No descriptions or locations for the sites are filed with the River Basin Surveys--only the numbers that we have used. If the Smithsonian Institution or other group wishes information about our sites they must write us. It is presumed, of course, that the entire matter would be discussed with the discoverer before any information is released to outside organizations. Persons who are afraid that their reports will be used without contacting them are needlessly concerned.

PROGRESS REPORT ON RADIOCARBON DATING

A tentative operational deadline for the C¹⁴ equipment is July first. Some work will undoubtedly have to be done after this before regular production of dates can begin, but barring unforeseen difficulties, we hope to make some trial runs on or before that date. The problem of housing the equipment is beginning to be considered, and a suitable lot is being sought in Sheridan, or near the city at least, for the purpose of constructing a laboratory.

PROGRESS IN CASPER

Casper now has 51 members, a full set of officers, including an anthropologist on the board, and is conducting a training program in field methods for the membership. That is called progress!

President:	Albert E. Singleton
Vice-pres.:	Arthur G. Randall
Sec-treas.:	Mrs. Robert Carpenter

Board members:	Robert E. Carpenter (anthropologist), Jack M. DeLong, Paul W. Netterstrom, Wallace H. Alford.
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BUSINESS NOTES

The title of our publication has been changed due to the fact that the Billings chamber of commerce publishes a bulletin under the name The Smoke Signal, and there is also a publication of that name in the east which serves as the official organ for an Indian organization. It is not without regret that we gave up the name, as evidenced by the close vote at the April meeting when the matter was finally decided. Actually the vote was not strictly legal, since the constitution states that the matter should be decided by the executive board, but the members were given a voice in the matter anyway. We still need a good cover design, folks. Let's have some ideas.

A tree borer or increment borer has been ordered to facilitate dendrochronology at the various sites this summer. The cost will be about thirty-five dollars. This is more than covered by the income from the class in archaeology at Sheridan College.

OVER THE CAMPFIRE

We were very sorry to hear that young Jon Masters has been in bed with rheumatic fever for the past six weeks. Jon, we hope you get well very soon.

Secretary Ray Bentzen made a business trip to Oregon recently, and of course took time to do a little looking for artifacts. He found a campsite which yielded several metates and a mano, and also found some points.

The season of itchy feet is upon us again, and the smell of new grass is in the air. It's time to put on the hiking shoes and look at that spot where you always thought you should find something. Maybe we'll see you there!

EMBERS OUT