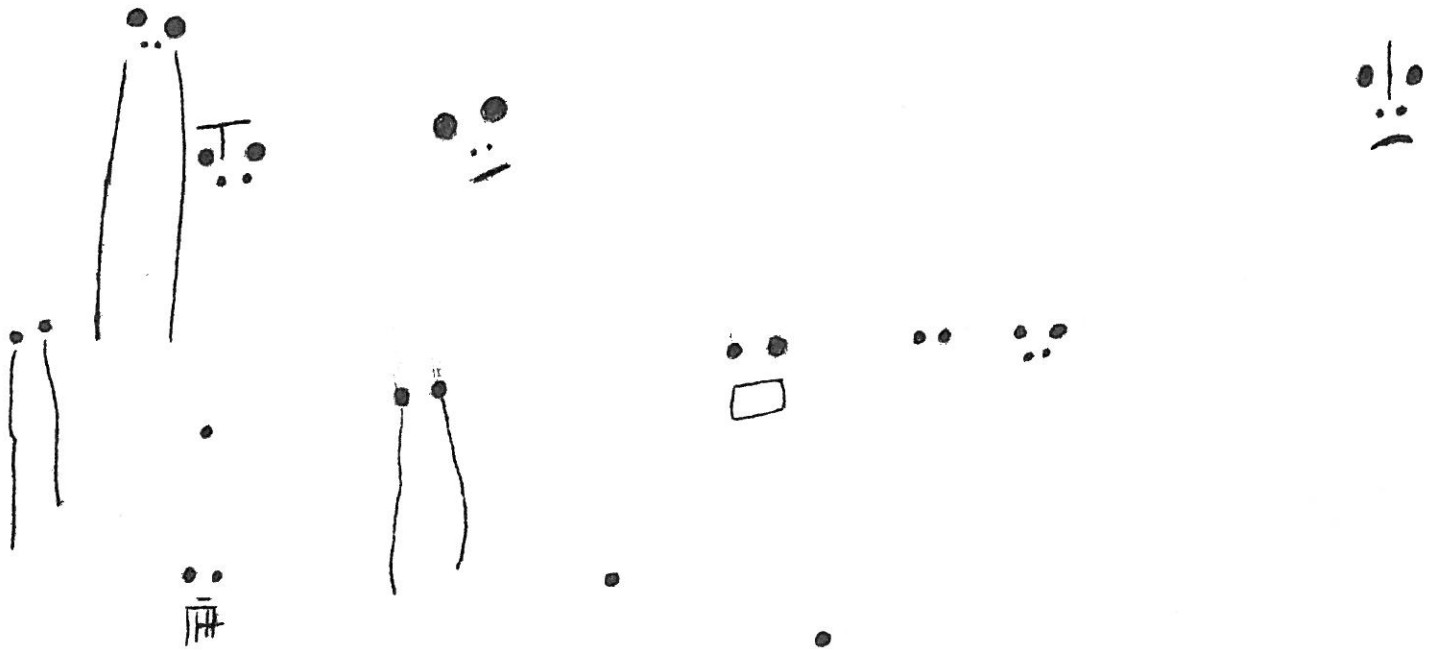


# THE WYOMING ARCHAEOLOGIST



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The Wyoming Archaeologist is the official quarterly journal of the Wyoming Archaeological Society. Subscription is by membership in the Society. Inquiries should be directed to the Editor, Grant Willson, % Wyoming Highway Department, P.O. Box 931, Cheyenne, Wyoming.

Dear Fellow Members:

With regret we accept the resignation of Jim Goodwin, our Editor for the past two years. More advanced responsibilities placed on Jim's shoulders by his employers are responsible for his decision. We are glad for Jim to receive well-earned recognition in his occupation, but shall look forward to the time when he may again devote a lot of his talent to the Society.

Jim Goodwin took over the reins as editor of the Wyoming Archaeologist from Don Gray who had set a very high standard during the several years of his editorship. Jim discharged his responsibilities in a manner which demonstrated his excellence as an amateur archaeologist and reflected credit upon the Society. Thank you, Jim, for a job well done.

Also our thanks to the Bob Wills family and Florence Castle who have given us fine quality mimeographing of our publication with excellent reproduction of both text and illustrations.

We are happy that Grant Willson, President of our Cheyenne Chapter has accepted the editorship of the Wyoming Archaeologist. Our best wishes to Grant. Let's help him with lots of material!

Further lootings of valuable sites re-emphasizes the necessity for our recently instituted campaign of archaeological education for the general public. Fortunately, we can report progress in preparing material for both phases of this effort. Tom Knapp has accumulated a good set of slides and has prepared an excellent accompanying commentary for our audio-visual program.

Our HANDBOOK FOR THE WYOMING AMATEUR ARCHAEOLOGIST is about forty percent complete, and the remainder is in preparation by members who have agreed to be responsible for various topics. Response has been excellent from those who have been asked to assist. Wally Alford led the volunteers by being the first to finish his article. Our good friend, Dr. William Mulloy, has offered to prepare two important chapters and also has agreed to advise, consult, and make suggestions during the preparatory stages of this project. Preliminary drafts of the partially completed booklet will be distributed to each chapter in the near future. Please send me any suggestions you may have. Let's try to have all material in before May 1st !

X X

X The Society sends its sympathy to our past State Secretary, Florence X  
X Castle, who lost her husband, Chester, in a tragic automobile X  
X accident in December, and to Margaret Powers, President of the X  
X Sheridan Chapter, whose husband, Vic, passed away last fall after X  
X an illness of several months. X  
X X

Dave Baskett  
State President

## A FLUTED POINT FROM CASPER MOUNTAIN

T. J. Weber

A late September outing on Casper Mountain proved especially rewarding for the William F. Oline family of Casper, Wyoming. While surface hunting in the historic Eadsville area (see Pence and Homsher 1956:214), Mrs. Oline found a fragmentary artifact with very definite Paleo-Indian characteristics. A cursory examination indicates that the specimen is apparently the lower one-third to one-half of a well made projectile point whose most distinguishing characteristic is a longitudinal flute running down the center of one side of the artifact. This groove or channel runs the full length of the artifact and gives the appearance of probably having extended over the whole face when intact (Fig. 1 a and c). The artifact was found on the vehicular trail which proceeds through Eadsville in an area of gentle slopes with west and south exposure, at an approximate altitude of 8,000 feet, and in close proximity to the continuously flowing stream which makes this portion of the otherwise dry Casper Mountain somewhat unique hydrographically. The specimen is made of a tannish, light-brown quartzite and shows a few light red spots on all surfaces, not exceeding 3 to 4 mm. in diameter, which Bill Oline (an exploration geologist) ascribes to weathered iron inclusions.

The specimen may be a fragmentary Folsom. As defined in Wermington (1957:263) a Folsom Point "... (a specialized type) of excellent workmanship, thought to be derived from the Clovis type. There is some overlap in size between Clovis and Folsom points, but the latter are lighter and usually smaller. They range in length from three-quarters of an inch to three inches with an average of about two inches. They are lanceolate in outline and have concave bases usually marked by ear-like projections. There is frequently a small central nipple in the basal concavity. The points were fluted through the removal of longitudinal flakes. The flutes usually extend over most of the length of the point. In most cases one major channel flake was removed from each face but sometimes only one face was fluted. Most specimens have a fine marginal retouch. The lower edges usually bear evidence of grinding..."

Examination and measurement of the specimen shows the following:

1. Overall excellent workmanship.
2. Assumed reconstruction (See Fig. 1 c) places it within the permissible range for overall length (the fragment is approximately 2.5 cm. long).
3. The whole artifact was probably lanceolate in outline.
4. Concave base with pronounced ear-like projections.
5. One side fluted by removal of a longitudinal flake.
6. The reverse side shows evidence of thinning (producing a "hollow-ground" cross-section), but no fluting from the base up appears to have been intended.

7. The fluting which is present covers the full length of the fragment and gives the appearance of having extended for at least half the length of the whole artifact.
8. Extremely fine retouching is apparent on all margins.
9. All edges (and base) have been extensively ground.
10. Maximum length of the fragment 2.5 cm.  
 Maximum width of the fragment 2.5 cm.  
 Maximum thickness of the fragment in cross-section 4 mm.  
 Apparent length of the reconstructed whole artifact 6 cm.  
 Apparent width of the reconstructed whole artifact 2.5 cm.

The reconstruction shown in Fig. 1 c is based on a line drawing of a specimen from the Lindenmeier Site (Bell 1958:Plate 13K). Although only one grooved face still permits the inclusion of the specimen in the Folsom category, Wormington indicates these are rare and only one specimen of this variety was found at the type station (1957:27). The specimen is somewhat larger than those found at the type station (Fig. 1 d), but the Lindenmeier Site produced two forms of true Folsoms, one of which was relatively long and slender, the other relatively short and broad (Wormington 34). Finally, while chert and chalcedony were used most extensively at Lindenmeier, a precedent for the use of quartzite is noted at the Johnson Site, LaPorte, Colorado (Wormington 40).

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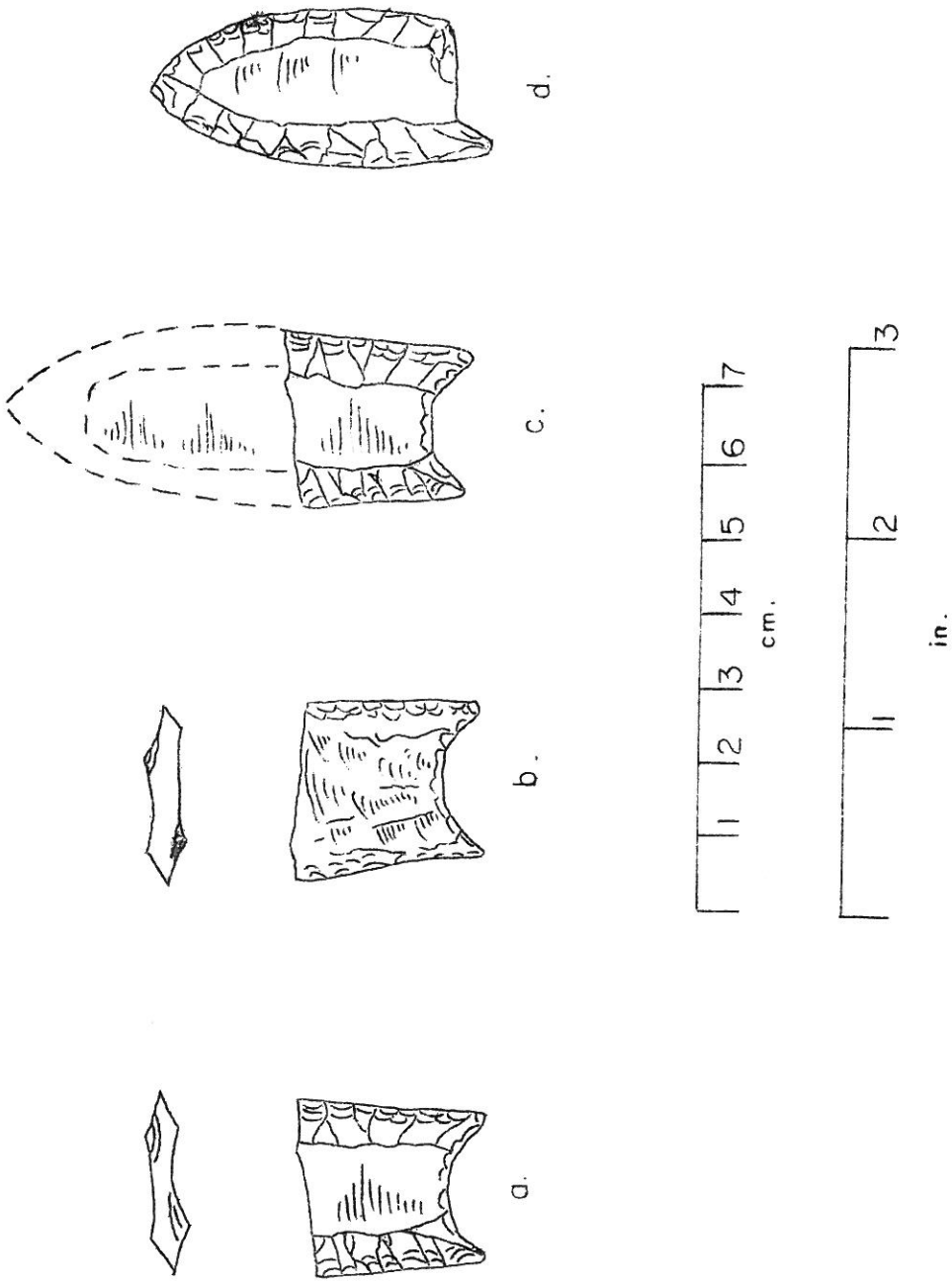


FIG. 1. a, Casper Mountain Point showing fluting; b, reverse side, unfluted; c, reconstruction of the Casper Mountain Point patterned after a Lindenmeier Folsom; d, Folsom Point from the type station, Folsom, New Mexico (drawn from a cast).

## THE SANDISON COLLECTION OF ARTIFACTS

### PART II

By Carl Belz

This is a continuation of the report on the collection of Mr. Tom L. Sandison, 210 E. 15th St., Casper, Wyoming, which was begun in the last issue of The Wyoming Archaeologist, Vol. VI, No. 3, Sept., 1963. Three of the points here described and illustrated are undoubtedly of the finest and most unusual workmanship to have been collected within the central Wyoming area. Points F, G and H were manufactured from beautiful thin flakes of varied colored agates. The unusual, not to say unique, aspect of these three specimens is their very flat and artistic construction. The interior medial areas have been flaked out so that the surfaces are concave, rather than convex, as in most points and blades. Besides the regular surface flaking, the edge surfaces have been carefully chipped to produce a very sharp blade edge, with excellent workmanship throughout.

These three specimens were all found the same day, during a surface hunt in the SW Pathfinder reservoir area, during March of 1939. All were found within a ten foot area, and Mr. Sandison feels they all had been in the same cultural level, and all exposed due to wind action on the ground cover. Mr. Sandison and his friends had collected in this location often and had made more than four dozen trips into and over the same area during his surface hunting forays, but had never been so fortunate as to make a find of this nature before. The particular area continues to be eroded by severe wind action. The valley is presently about one mile long, beginning with a sharp V at the mouth of a wash and gradually widening to a distance of  $\frac{1}{4}$  mile at the valley mouth, where it extends into Pathfinder reservoir. The area has produced many artifacts, mostly points, over a long period of time, but it appears that most of the evidence was in a thin habitation level. Mr. Sandison's opinion is that these artifacts may have been in the lowest level, as comparatively few specimens have been collected since his interesting find. The predominantly sandy area has been eroded to a depth of possibly five feet in the past three decades. Although it is not too remote, access cannot be gained by conventional vehicles. There is considerable evidence of tipi rings and fire pit rings, and although an occasional point of two may still be found, artifacts are no longer plentiful. It is the opinion of some persons that this area may have been on a migratory route and used by undetermined tribes for an undetermined period of time.

BLADE F, an agate of basic gray and red colors, spotted with light and dark gray bands, has a width of 1.45 inches, a length of 2.05 inches and a thickness of 0.175 inches.

BLADE G is a reddish tinted, tan veined agate, 1.35 inches wide, 1.8 inches long and 0.125 inches thick.

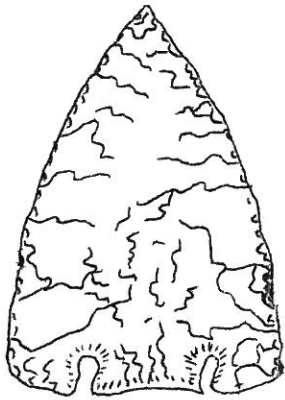
BLADE H is a black moss agate, 1.50 inches wide, 2.15 inches long and 0.175 inches thick.

BLADE J is a very beautiful corner tang knife made from red jasper with very fine workmanship. The large flake has an angular twist toward the tip, with the general shape of the specimen produced by large chipping of the surface. Minute edge chipping has produced a very sharp edge for  $\frac{3}{4}$  of the edge surface. This intriguing specimen is 3.2 inches long, 1.55 inches wide by 0.25 inches thick. It was found in a wind-eroded area some 60 to 70 feet below the general land surface during a surface hunt in 1937, and in the same general area where points F., G and H were found. This location has been inundated by reservoir water off and on since 1939 and silt has now covered the campsite areas, obliterating any evidence of ancient inhabitants.

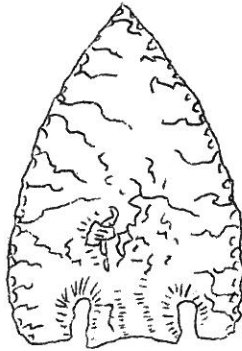
POINT K was made from a flake of clear white translucent agate which appears highly polished. This small point is 1.4 inches long, by 1.35 inches wide by 0.15 inches thick. This specimen was found at the same time and in the same campsite area as the Eden point A described in Part I. It is difficult to visualize this point as being attached to a shaft, although it may have been a dart-type point.

Mr. Sandison made several observations on collecting artifacts. There are differences in point conditions, some specimens being of a "fresh" nature, or one in which the surface pores are still "open" or noticeable, while other points may be "clean" with the pores filled in by mineral action, indicating some age consideration. A second observation of Mr. Sandison's is the effect of wind action on the movement of chips. He suggests searching to windward once chips have been located, as there is a good likelihood that the heavier objects will be in line with the wind movement and the heavier the artifact, the farther from the chips it will be. It is hard to realize the carrying power of Wyoming winds, but scattered chips may be carried a considerable distance from the place they were originally deposited.

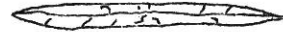
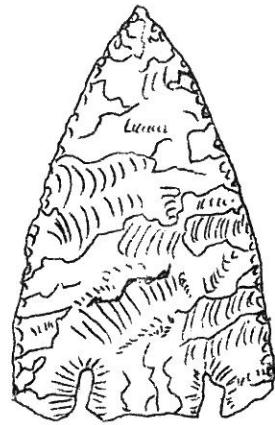




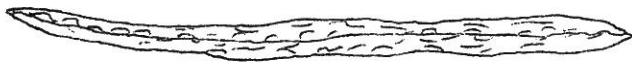
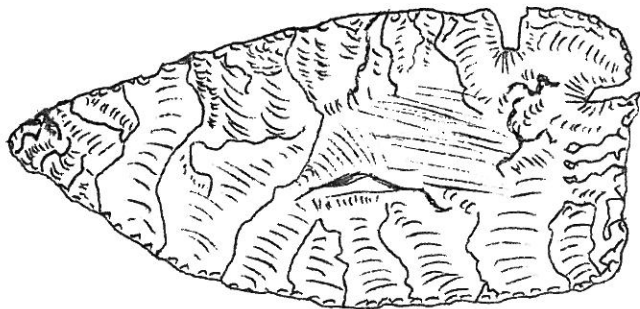
F.



G.



H.



J.



K.

Wyoming Artifacts from the collection of Tom L. Sandison

Full Size

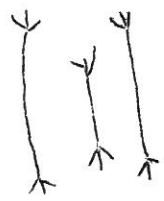
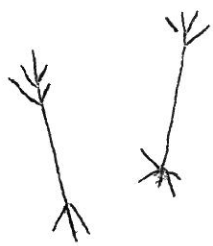
## LUCERNE VALLEY PICTOGRAPHS

Reported to the Editor by Russ Grimshaw & Clyde May

Lucerne Valley is the name given by the National Park Service to a recreation area now being constructed on Flaming Gorge Reservoir in Utah. The four-mile access road to the area leaves the Green River-Manila highway in Wyoming, about five miles from Manila, Utah, and follows along the base of a series of cream to red sandstone and quartzite cliffs. It is on these cliffs, usually in the softer sandstone, that the pictographs are found. The cliffs face south, looking over the Henry's Fork valley, and provide excellent protection from winter winds. Charcoal stains, fire-blackened rocks and chips and flakes occur almost continuously along the cliffs near the petroglyphs.

All of the drawings were made on sandstone except those in Panels 1 & 3, which were incised in the much harder quartzite and must have taken considerable time and effort to complete with so much detail. Also, while the other drawings are within easy reach, from 3 to 5 feet above the cliff base, these two panels are from 7 to 10 feet above the present ground level and can be reached only by clinging to crevices in the rock. Superposition occurs on panel 1, where the geometric designs were apparently added after the hunters.

All petroglyphic techniques except painting were employed in the drawings, with the incised lines being the most common. On panel 5 the outlines were incised and the surface was pecked and then ground or rubbed nearly smooth. Deeply incised marks make up the horns, head and legs of the sheep in panel 7, while the bodies are pecked within incised boundaries. Pecking also occurs on one of the buffalo in panel 8, and on the face of the figure in panel 6. The eyes of the buffalo in panel 8 and the eyes and nostrils of the faces in panels 4, 7, and 9 were made by drilling, apparently with a stick or similar blunt-ended tool. The holes are generally deeper than they are wide, and this helps to give the little faces very intense expressions. One is inclined to stand to one side to avoid their stern gaze.

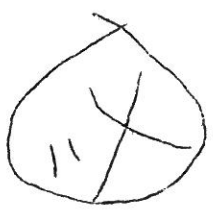
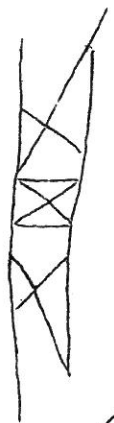
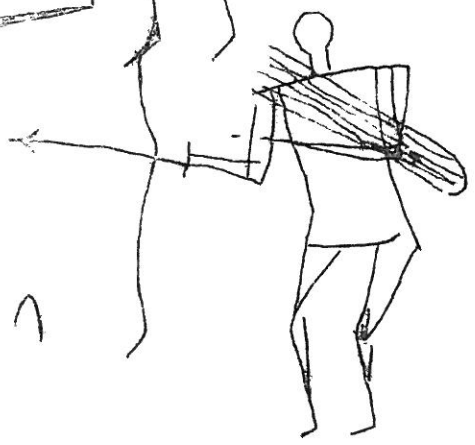
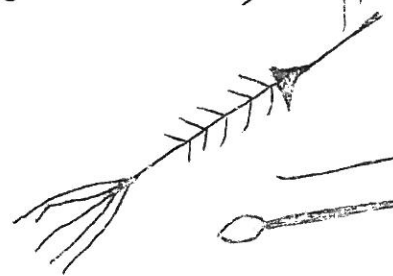
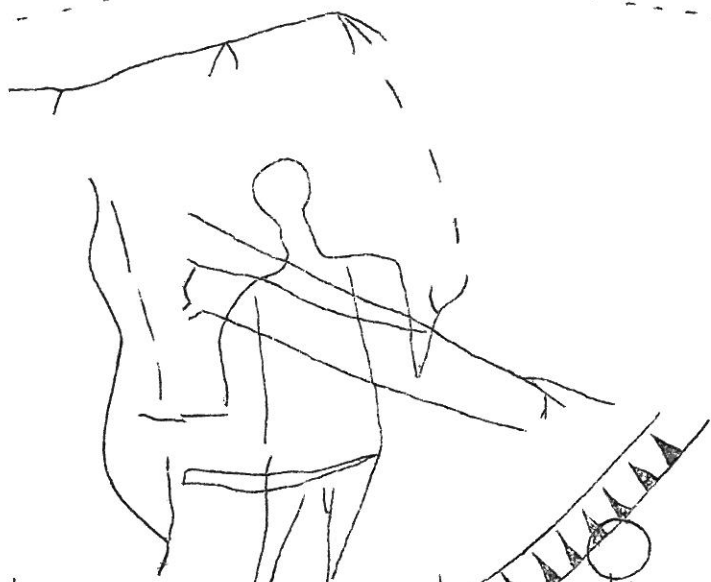
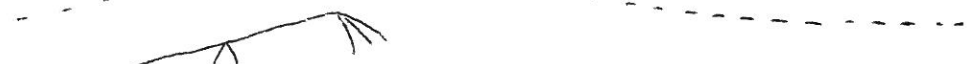


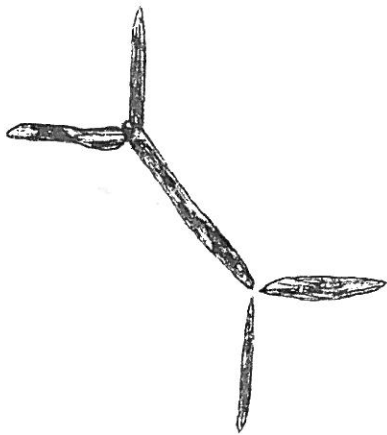
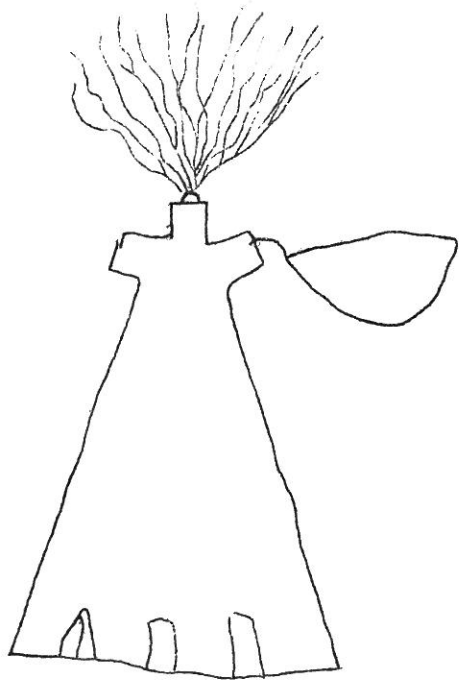
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LUCERNE VALLEY  
PICTOGRAPHS

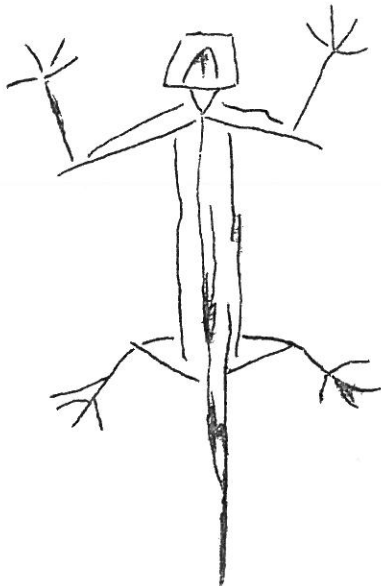
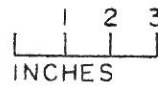
PANEL 1



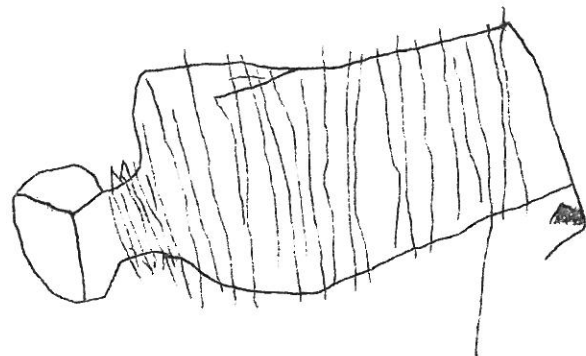


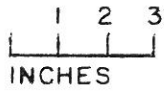
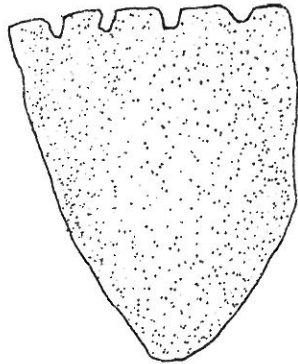
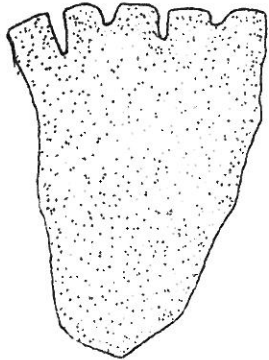
LUCERNE VALLEY  
PICTOGRAPHS

PANEL 3

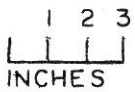
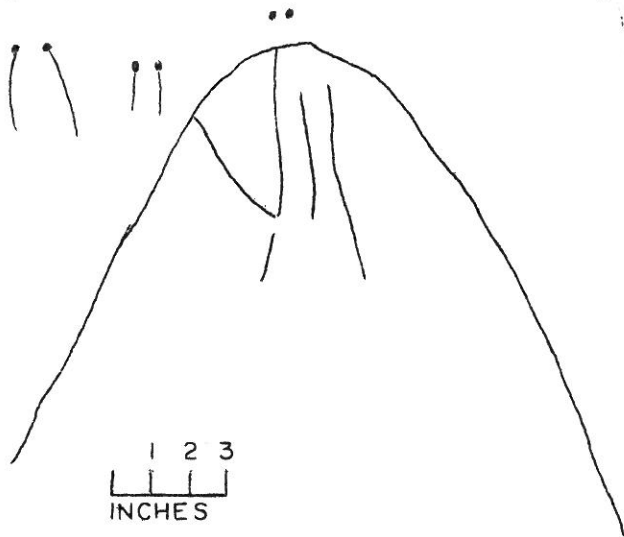


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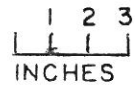
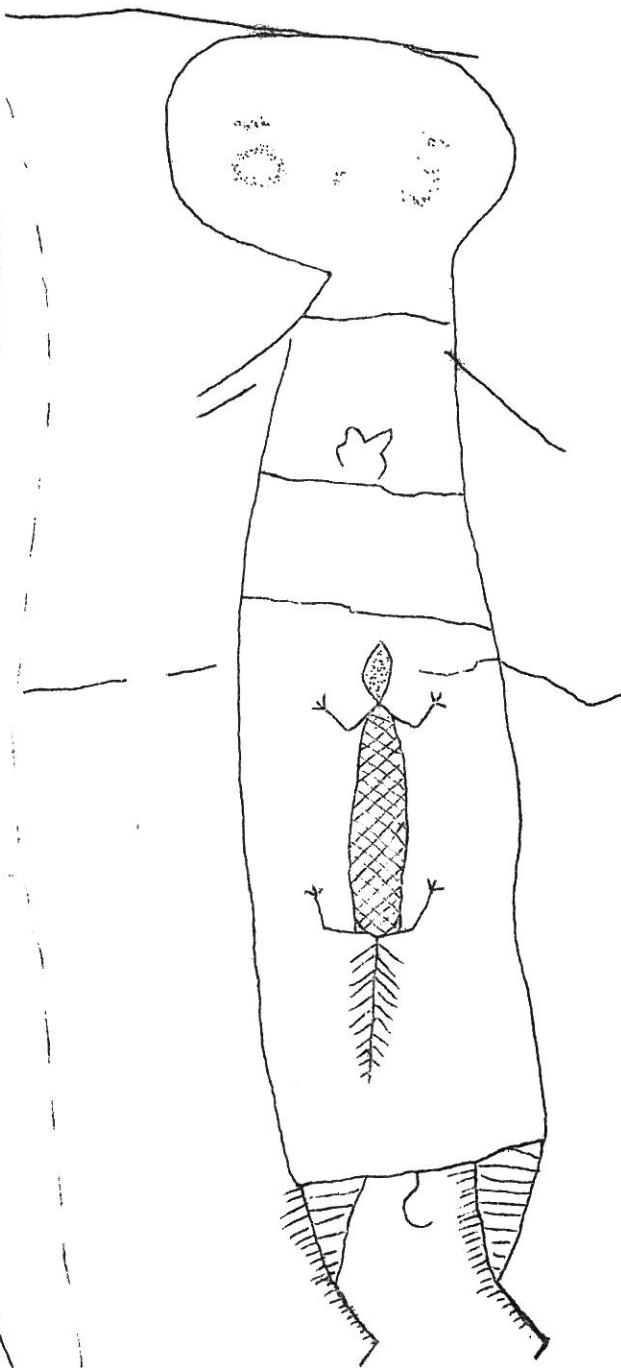




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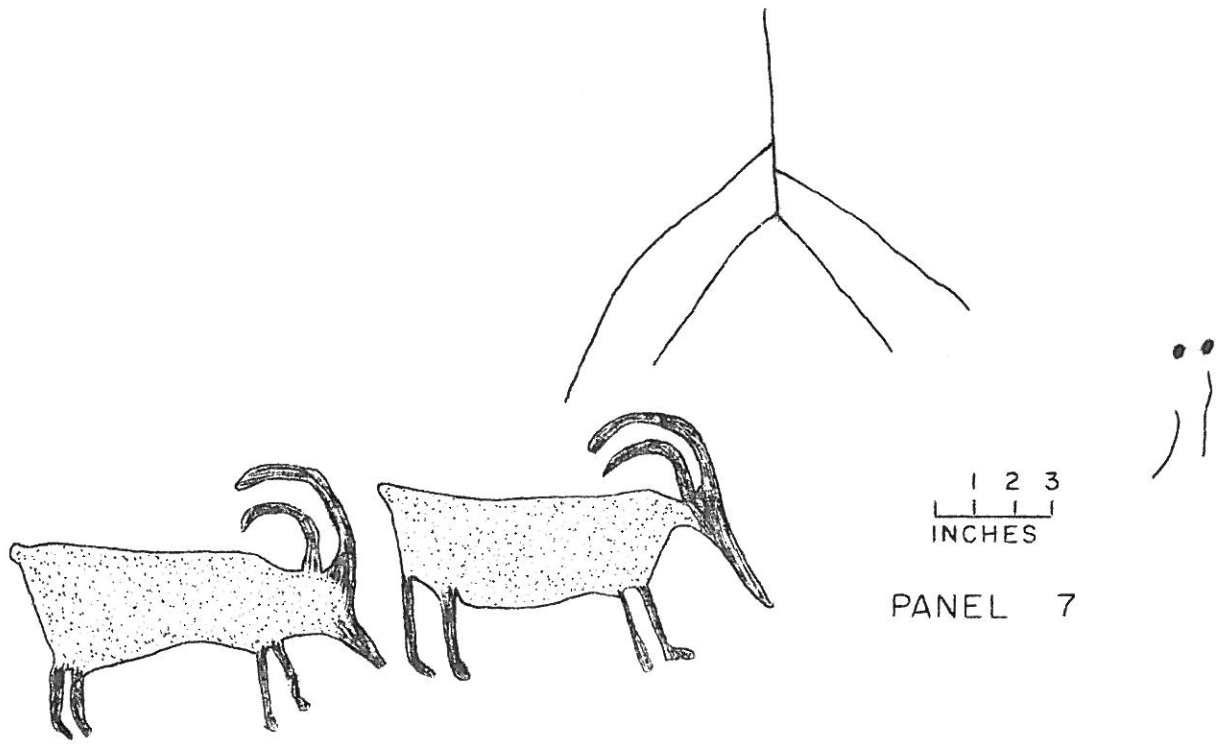


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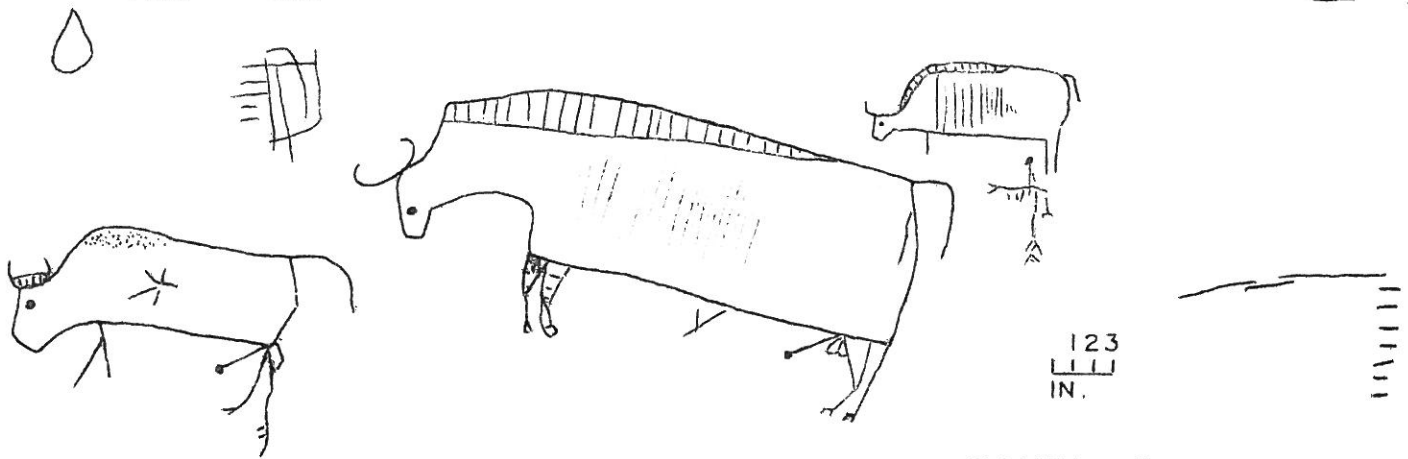


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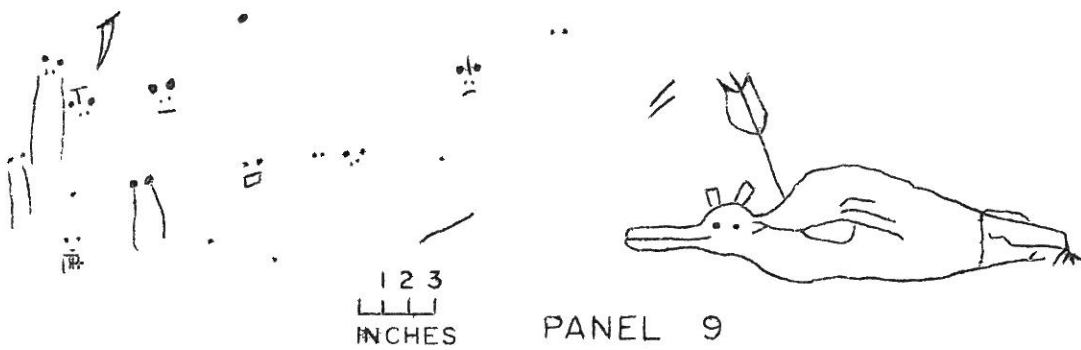
LUCERNE VALLEY PICTOGRAPHS



PANEL 7



PANEL 8



PANEL 9

LUCERNE VALLEY PICTOGRAPHS

## VIKING RUINS FOUND IN NEWFOUNDLAND

The ruins of a Viking settlement pre-dating Columbus' voyage to the new world by 500 years have been unearthed in Newfoundland. Dr. Helge Ingstad, a Norwegian explorer, announced the find this past November at a press conference at the National Geographic Society. Experts from the Smithsonian Institution and the American Museum of Natural History unequivocally supported Dr. Ingstad's report that the remains were Norse and pre-Columbian. The Norwegian expedition, sponsored this year by the Society, excavated traces of nine buildings and a primitive smithy near L'Anse aux Meadows, a Newfoundland fishing village. Digging began in 1960. The settlement at the island's northern tip contains the remains of a large house that Leif Ericson, the traditional Norse discoverer of North America, may have lived in. It dates to about A. D. 1000, the time established in Norse sagas that Leif Ericson and other Viking seafarers sailed to "Vinland". The Vikings flourished from the 9th through the 11th centuries, pushing to Greenland and farther west as sea warriors, explorers and colonizers.

The settlement was on a sandy terrace. The walls of the houses, built mainly of sandy turf, were gone. But Dr. Ingstad and his wife, Anne, the archaeological leader of the expedition, found layers of sod showing outlines of houses. The biggest structure measured 60 by 45 feet, with a great hall in the Viking manner and a hearth in the middle. Some of the houses contained stone fireplaces and "ember pits" - small, square stone holes where coals were kept alive at night. The ember pits are like those found at Norse settlements in Greenland. In the smithy on the site was a stone anvil. Here the Ingstad expedition also uncovered several hundred pieces of slag and small bits of iron. Extensive deposits of bog-iron, or iron nodules, lay under the turf nearby. An acid topsoil and porous subsoil combined to destroy most of the artifacts at L'Anse aux Meadows. But enough material was found to get a series of radiocarbon measurements. The readings all cluster around 1000, with the latest dating from 1080, plus or minus 70 years.

"Until now, no one has uncovered incontrovertible proof--ruins or burials - of Viking visits to North America before Columbus' voyage in 1492", the National Geographic Society said. "Only burials and ruins would present incontestable proof that the Vikings were here. Objects such as tools could have been brought to North America by people who lived after the Vikings". All previous finds indicating the Vikings were here have been judged inconclusive or suspect - some downright fakes. These include a curious old stone tower in Newport, R. I., Viking age iron objects turned up near Beardmore, Ont., labeled "clear-cut plant" by Dr. Junius Bird, and a stone with runic characters found in Kensington, Minn., "the product of an imaginative Scandinavian" immigrant, according to Dr. Bird. Dr. Bird, Curator of Archaeology at the American Museum of Natural History in New York, said that the site is "without question of pre-Columbian Norse origin. I am positive."

Dr. Henry B. Collins, a Smithsonian Institution anthropologist, was equally certain. He said that "all evidence that does exist" points to the conclusion that the settlement was Norse and pre-Columbian. "There is no evidence" to the contrary, he said. The anthropologist said findings prove that the site "could not have been Indian, Eskimo or later European." Eskimos and Indians, both prehistoric and modern, "Had no knowledge of extracting iron from the bog deposits." The Vikings did, but later Europeans never used the technique.

Dr. Ingstad said he had studied the ancient Norse prose narratives and an old Viking map. Then, by boat and plane, he explored the coast of Rhode Island, Nova Scotia, Quebec, Labrador and Newfoundland. The setting and location of L'Anse aux Meadows corresponded with startling precision to descriptions in the sagas of Leif Ericson's settlement, he said. Many scholars have long believed that Ericson landed on some part of the North American coast, but guesses ranged anywhere from Newfoundland to Virginia. The favorite nominees were New England and Nova Scotia, many scientists placing it in Rhode Island or Cape Cod where wild grapes grow because of the name Vinland or Wineland. Dr. Ingstad concluded that Vinland was farther north, probably in northern Newfoundland. His hunch was based on the old map, plus the linguistic research of a distinguished Swedish professor, who said that "wine" might refer to grass rather than wild grapes. A Newfoundland scholar, W. A. Munn, reached the same conclusion separately decades ago. In a booklet published in 1914 Mr. Munn said the Vikings had "probably come ashore at L'Anse aux Meadows."

Dr. Bird called it "a miracle" and a "Thousand-to-one chance" that the Norse remains had survived. They were only a few inches from the surface. "If any one had made a potato patch or planted anything on the site, it would have destroyed what was left of the ruins.

Dr. Ingstad, Dr. Bird and Dr. Collins were all present at the press conference announcing this great discovery, their remarks being reported by Nan Robertson to The New York Times in the November 5th, 1963, issue.



## ELECTRONIC DIVINING ROD FOR ARCHAEOLOGICAL TREASURE

Rapid progress in electronics during the past two decades has aided many industries. Archaeology is no exception.

Armed with an array of electronic gear, the modern archaeologist is now able to cover more ground, make much more exacting surveys and save a lot of useless digging. One of the most recent additions to the arsenal of the archaeologist has been the Michimho Earth Resistivity Measuring device (R-30), being marketed by Soiltest.

Originally designed as a means of determining the location, type of material and depths of sub-surface soil layers in connection with construction projects, the Michimho has proven to be a real asset for locating and tracing various buried deposits and structures of significance to the archaeologist. It comes close to being the "divining rod" many people have dreamed of through the centuries that could be used for locating buried treasures. Used recently during an expedition to the Veracruz region of Mexico to learn more of a ceremonial center there used by the Olmec Indians around 500 B.C., the Michimho uncovered many unexpected structures and artifacts.

This is how the Michimho works: All soils have the capability of conducting electrical current. How much current is conducted depends upon the type of soil, depth and other factors. The Michimho, through a series of detectors, measures the amount of current conducted by the soils. The Michimho is connected by four wires to four metal rods which are driven into the ground along a straight line at equal intervals. An alternating current is passed between the two outer rods inducing a voltage across the two inner rods. This potential gives a measure of the average electrical conductance of the soil between these two rods and to a depth equal to the space between them. The conductance of the soils at various depths can, therefore, be measured by moving the rods along the straight line since the distance between the two center rods also represents the depth to which the measurements are being made.

Different kinds of soil and rock exhibit different values of apparent electrical conductivity—the subsurface structure, therefore, may be classified. By taking a series of measurements at increasing electrode spacings, the conductivity of the subsurface soil, layer by layer, may be obtained and interpreted at selected stations in an area.

During the Veracruz expedition, the field of exploration was staked out. A tape was stretched between the two end stakes and the metal Michimho rods were then moved down the tape at spacings of one, two or three meters, depending upon how accurate and thorough a survey was to be made. When the length of the tape had been completed, a parallel line one or two meters away was then established and the Michimho readings made down its length.

Two outstanding discoveries were made using the Michimho on this particular expedition. One was connected with the examination of one of several mounds. It was discovered by noting certain regular variations between low and high conductance that what underlay the mound was a terrace-like structure. Excavation proved this to be true. The second discovery made

with the Michimho was a stone monument which was being sought by the expedition. They knew it was in the area because it had been uncovered twenty years before. However, in the intervening years it had been re-buried.

The Michimho, on the basis of its use on the Mexican expedition, holds great promise for archaeological discovery in the future as man continues his quest for knowledge of the past. The unit is being used widely in engineering applications for sub-surface investigation. Using the Barnes Layer Method of interpretation, contractors, engineers, geologists, pipe-line route surveyors and highway engineers are able to get accurate results up to 100 feet. One advantage in using the resistivity methods in the field is that a dense lens of rock or other overburden does not impede the instrument's ability to determine the type of material underlying it, even if it is much less dense.

This information on the potential archaeological value of the Michimho soil testing machine is contained in *The Testing World*, No. 12, by Soiltest, Inc.

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#### BOOK REVIEW

##### FAIR GODS AND STONE FACES

by Constance Frick Irwin, (New York, St. Martin's Press, 1963. \$7.50)

The subtitle of this interesting book is: "Ancient Seafarers and the New World's Most Intriguing Riddle". The riddle is this: "Did ancient seafarers from the Mediterranean reach the New World in pre-Columbian, or even pre-Christian times?"

Evidences presented include similarities found in areas of Phoenician and Carthaginian Cultures, and in various locations in Mexico. Likenesses in building construction, food stuffs, wearing apparel, customs, toys, facial features in figurines, bas-reliefs and murals all add new material for conjecture that visitations surely must have been made by the well traveled Phoenicians.

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##### EARLY MAN IN THE NEW WORLD

by Kenneth Macgowan and Joseph A. Hester, Jr., (The Natural History Library, N22, Anchor Books, Doubleday & Company, New York, 1962 paperback, \$1.45)

An authoratative book on the Stone Age American, extensively revised and updated new edition. The material examines and assesses the prevailing theories on the appearance of man in America during the late Ice Age, and his relationship to the present-day American Indian. It contains line drawings depicting the different stone-flaking techniques, illustrates various migration routes, and locates fossil sites.