

FOUNDATION FOR RESEARCH ON ANCIENT AMERICA

NEWSLETTER NO. 2

November 20, 1968

Dear Friends,

Thank you for the interest shown in our first newsletter, and for your continued interest in research on Ancient America. If you have friends to whom you would like copies of our newsletters sent, please send us their names and addresses, including zip code numbers.

Please note that the annual meeting of the Foundation will be held January 19, 1969 in Room 201, Education Bldg., Stone Church, Independence, Mo., at 2:30 p.m. If you are interested, you are invited to attend.

May we ask you to help us publicize the contest which is being offered to high school students? The particulars of this contest appeared in the Saints Herald, February 15, 1968. Briefly, the contest is to stimulate the students' best effort in study and writing on subjects related to the Book of Mormon, to be submitted to the chairman or secretary of the Foundation by October, 1969. Two prizes, \$25.00 and \$15.00 in the form of gift certificates drawn on Herald House, are being offered. Please encourage your youth to enter into this project.

--T.D.S.

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CARBON - 14 DATING

By Chris B. Hartshorn

The technique of radiocarbon dating was discovered in 1947 at the University of Chicago by Dr. W. F. Libby and two associates. Since that time its field of application has been expanded and the technique has been refined.

The following is abstracted from World Book Encyclopedia:

Radiocarbon, or Carbon-14, is a radioactive isotope of Carbon. It was discovered in 1947 by Dr. Willard F. Libby and his associates at the University of Chicago. It has been found to be a useful tool for dating organic material found in caves and ruins of ancient civilizations.

Radiocarbon is formed by cosmic rays which come from the Sun. When these rays hit several different kinds of atoms in the earth's atmosphere, various particles are broken off forming neutrons, protons, mesons, and other particles. When a neutron hits an atom of nitrogen, the commonest gas in the atmosphere, the nucleus of the nitrogen atom disintegrates and forms a proton. The resulting atom which remains has an atomic weight of about 14 and is called radiocarbon, or carbon-14, to distinguish it from the normal atom of carbon which has an atomic weight of 12. These radiocarbon atoms begin to decay immediately giving off particles at a uniform rate. Radiocarbon is half gone in about 5,750 years; scientists say that it has a half-life of that length of time. After about 11,500 years, only one-fourth of the original radiocarbon atom is left. After another 5,750 years only one-eighth remains. There is one atom of radiocarbon for every trillion atoms of ordinary carbon in the air we breathe. Human beings, animals, and plants constantly absorb radiocarbon from the atmosphere which in turn is continually disintegrating, but it is continually renewed from the air as long as we live. A living man gives off 918 disintegration rays per hour per gram of radiocarbon in his body.

When a living thing dies, it stops taking in radiocarbon. But this radiocarbon continues its decaying process and after 5,750 years 459 rays per hour per gram are given off. After 11,500 years, 229 rays per hour per gram; after 46,000 years, about 3 rays per hour per gram of radiocarbon.

In dating an object by its radiocarbon content, the chemist first heats and burns a sample of it to convert it to carbon dioxide. This in turn is purified and

reduced to pure carbon by hot magnesium metal. After this reduction, the amount of radioactivity can be measured by a Geiger counter.

If you are still following me, may I quote from the learned Dr. Libby's thesis of 1955: "Measuring for 48 years, it is possible to determine an age of 5000 years with an accuracy of plus or minus 300 to 400 years." It has been pointed out that the increased nuclear explosions by certain nations since 1952 "have tended to give false readings. The limits of these calculations are 1000 to 30,000 years."

The Book of Mormon describes the first civilization in its record, known as Jaredite, as coming from the dispersion following the Tower of Babel incident. This has been commonly dated as occurring 2200 B.C., using Bishop Ussher's reckoning. More recent calculations by many scholars place it 600 to 800 years earlier. The second or Lehite colony dating is historically established as beginning 600 B.C. But in no place do their records claim that they are the only human beings who were then living, or ever had lived on the American continents. Therefore, whatever the final conclusions which science fixes based on carbon-14 dating, the validity of the Book of Mormon history should not be brought in question.

REFERENCES CITED

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1955 Radiocarbon Dating, University of Chicago Press, Chicago.

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THE BOOK OF MORMON AND NOAH'S FLOOD

By Roy E. Weldon

The Book of Mormon's authenticity as a serious record of peoples living in Central America and Mexico between 2500 B.C. and 400 A.D. with no mention of encountering Aboriginal peoples already living here has given rise to a serious question. Archaeology has now established that Central America has been populated back as early as 7000 B.C., the earlier people being cave-dwelling hunters. It appears that the Book of Mormon's answer to the question is now being underwritten by the latest research in Mexico.

The reason there were no other people here other than the Jaredites and the Nephites is given in Ether 6:2. "After the waters of Noah had receded from off the face of this land America, it became a choice land above all other lands." If the flood covered the New World as also the Old World, there would have been no people here when the Jaredites arrived not many centuries after the flood.

Frederick Peterson, in his Ancient Mexico (also see Sons of the Shaking Earth, by Wolf), and other archaeologists, are finding a gap between the high cultures and the Preclassic, or Formative, period. They are puzzled that there is no evidence of a formative period between the primitive hunting peoples (before the flood) and the high cultures of Ancient America, which apparently burst into full bloom as if transplanted from another world (Peterson, p. 30). The beginning of culture is dated from 2500 B.C. to 2000 B.C. (Jaredite period), (Peterson, pp. 26, 30). Illustrative of the gap in archaeological research is the following statement by Peterson: "The state which fits in between the Chalco culture and the Preclassic or Formative period has still not been found. Several thousand years are still to be accounted for before the links in our chain of history are complete" (Peterson, p. 26).

The Book of Mormon is a marvelous book. It made fabulous and difficult to believe

claims as of 1830, but these are being followed by discoveries decades later that point toward the authenticity of its claims.

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200 Madison, New York, N. Y. 10016

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5750 Ellis Ave., Chicago, Ill. 60637
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"PLACE OF SERPENTS"

By Edwin Robert Fishburn, Seventy

There has been much speculation and will continue to be among students of the Book of Mormon concerning the geographical area in which these ancient peoples lived. A key point of reference that is mentioned in this book is the "narrow neck of land." There are several "narrow necks of land" in Mexico and Central America, the narrowest today being in Panama. Following are some references that help to further identify where this "narrow neck of land" is located.

Ether 4:68-69 tells that they built a great city at this place and that they preserved the land southward for a wilderness to get game. This is in the Jaredite period.

Ether 4:35-38 tells that there was a great drouth in the land northward where the Jaredites lived, that poisonous serpents came forth and poisoned many people, that the flocks of the Jaredites and some of their people fled into the land southward (which was called by the Nephites, years later, by the name of Zarahemla) that the poisonous serpents hedged up the way so that the Jaredites could not pass.

Ether 4:66 tells that in the days of Lib the poisonous serpents were destroyed and the people were able to pass into the land southward where there was abundant animal life. These people of Lib built the great city referred to above. From the narrative between Ether 4:38 and Ether 4:66, there is an indeterminate number of years which elapsed but it was at least several generations. In further verses we know that the Jaredites lived in the land northward, they were extremely prosperous because of their righteousness, they built many buildings, they worked in mining and extracted gold, silver, iron, and made brass; they were engaged in textile making with silks and fine twined linen; they were engaged in agriculture and used beasts to help them in their work; and Ether 4:78 records: "And never could be a people more blessed than were they, and more prospered by the hand of the Lord."

Alma 13:74-75 gives the Nephite names for the land northward as Desolation and the land southward as Bountiful.

Alma 13:76 tells ^{that} the width of this narrow neck of land could be covered by the Nephite runners in a day and a half, from the east to the west sea.

Alma 13:74 tells that the people of Zarahemla made their first landing in this area and found the bones of a people who had been destroyed in the land northward.

Omni 35-39 tells that the last descendant of the Jaredites, one Coriantumr, lived nine moons with the people of Zarahemla. Omni tells that this group at Zarahemla had come to America when Zedekiah, king of Judah, was carried captive into Babylon. It is believed that this event occurred about 589-588 B.C., some twelve years after the Nephites had left Jerusalem. The people of Zarahemla were discovered by the Nephites about 130 B.C., having remained in this area of the narrow neck of land since their arrival more than four hundred years before. They had no records and their language had become corrupted.

Mosiah 11:78 sheds further light on these people of Zarahemla: they were descendants of Mulok, who is identified in Helaman 2:129 as the son of King Zedekiah, who was brought by the Lord in this third colony known to come to America from Jerusalem and the Near East (the definite location of the Tower of Babel is not known). This young son of Zedekiah was preserved when his brothers were slain by the soldiers of Nebuchadnezzar (see Bible, II Kings 25:7), and is referred to as a "tender one" or "twig" in Ezekiel 17. Helaman 3:56-57 mentions the seed of Zedekiah, the king in Jerusalem when the Nephites left, as being among them.

Alma 22:35 and 24:10 refer to the Nephites building fortifications in this narrow neck of land to keep the Lamanites in the south.

Alma 30:5 tells that 5400 men with their wives and children went from this area into the northland, the land Desolation, to colonize it. In the next verse, we are informed that Hagoth built a ship in this narrow neck of land and launched forth into the west sea and sailed northward. Another ship was built, the first ship returned and many more people left this area and set out for the land northward on this western sea but they were never heard of again. Still another ship (verse 12) sailed forth and they did not know what happened to it. Seventy F. Edward Butterworth, who served many years in the South Sea Islands, reports that there is an authentic tradition among the natives of Polynesia which concerns a traveling messenger called "Fatongo" or "Hagota," depending upon the dialect used, who arrived in Polynesia from abroad. This "Hagota" could possibly be Hagoth who built the large ship mentioned in Alma 30:6. These events occurred approximately 57 B.C.

Mormon 1:61 and 69 tells of fortifications built in this area by the Nephites.

Now, let me offer some ideas which might give more specific information as to this narrow neck of land and its location. Archaeologists have reported fortifications in the Isthmus of Tehuantepec. Geologists report that this Isthmus has not always been as wide as it is today, approximately 140 miles, which would be considerable for any man to cover on foot in one and one-half days! There has been a general continental shift causing the Isthmus to become wider with each century. There was an upheaval at the time of Christ's death and this could have changed the landscape considerably.

Another interesting point is that the city of Coatzacoalcos on the Gulf of Mexico in the Isthmus of Tehuantepec bears the Nahuatl Indian name which translated into our terms means "place of serpents." Could this city built in this narrow pass be the same or the namesake of another city of this area which was built by the Jaredites, later inhabited by the Nephites, and now bearing a name recalling an historic event of perhaps three or four thousand years ago when poisonous serpents were placed in a narrow neck of land to prevent men from moving from the land northward into the land southward?

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THE VALUE OF SCHOLARLY DOCUMENTATION

By Bruce Moore

Purpose

The correct documentation of sources and intrapaper notations is an important part of scholarly research and reporting. The demand by scholars for adequate attention to these details does not stem from academic snobbery but from the necessity to separate the author's own thoughts from those of others and to make it possible for the reader to check references which the author used.

Lay articles, especially those directed toward the scientific community, as well as scientific writings, should be documented. Those that lack the documentation are often disregarded by professionals, and tend to reflect on the scholarly quality of the organization that publishes them. This negative aspect has been particularly evident in many RLDS and LDS publications dealing with the archaeology of the Book of Mormon. Certain speculative and largely inductive theories advanced by church members have been a major stumbling block to a wider acceptance of the Book of Mormon. However, the quality of the documentation has been another major problem and obstacle in the church's attempt to put the Book of Mormon in its best archaeological context.

The purpose here is to briefly present a referencing and bibliographic form which is widely accepted by the anthropological profession. This particular form is taken from the journal, American Anthropologist. This, or a similar form, should be used by the church writers or the various committees which are involved in Book of Mormon research. This might seem overly strict, but it is necessary if the church wishes to publish scholarly articles.

References and Notes

The format most commonly used is as follows: The references to the source of a particularly stressed point does not appear as a footnote at the bottom of the page, but as a parenthesized note at the end of the quote or discussion. For example, at the end of a discussion of George Foster's concept of folk culture might be
. summary of the views of George M. Foster (Foster 1953).

At the end of a quote by Foster the reference might read:
related to a folk culture (Foster 1953:159-60).

If the quote is less than five lines and therefore not single spaced, the form would include quotation marks:
". . . related to a folk culture" (Foster 1953:159-60).

The note gives the author, the date of publication and the pages referred to in the discussion. To find the name of the publication and the publisher, one must look in the bibliography for George Foster and the date of publication.

It is obvious that all direct quotes must be credited, but not enough care is usually taken to credit other less obvious borrowings. As a general rule, it is best to credit any important thought that is not one's own, even though it may not be a direct quote.

Interjections or brief explanations by the author are also not put at the bottom of the page; they are numbered and put at the end of the article (before the bibliography) under a section entitled NOTES.¹

The bibliography is always the final section of the paper and it is usually entitled REFERENCES CITED. Under this heading one can include not only the references cited but also secondary references which were not used, but which might be of interest to the reader. The sources are listed alphabetically by the author and then by date under each author. A number of titles in the same year are differentiated by adding letters to the year (Redfield 1956a and b).

The names of all books and periodicals are underlined, and the names of articles are enclosed in quotation marks.

NOTES

1. Notes are numbered and presented at the end of the article before the bibliography.
2. A quotation from a copyright source of more than 5 lines should carry the notation, "Used by permission." The written permission should accompany the article for the publisher's protection. When material has been under a copyright for 17 years, it may be used.

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Redfield, Robert
 1950 A Village That Chose Progress: Chan Kom Revisited.
 Chicago, University of Chicago Press.

1953 The Primitive World and Its Transformation. Ithaca, Cornell University
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1956a The Little Community. (Part of) The Little Community and Peasant
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MAP OF THE LAND OF THE FEATHERED SERPENT

By Edwin Robert Fishburn

Of interest to all Book of Mormon students is the recent publication by the National Geographic Society of a new Archaeological Map of Middle America, Land of the Feathered Serpent. The map begins in the north at the Gulf Coast city of Tampico,

Mexico, which is just about the most northern limit of the high cultures of Middle America. Its western limit is approximately 99 degrees West Longitude, which is approximately on a north-south line passing through Acapulco, Mexico, on the Pacific Coast and extending northward through San Juan del Río, which is on the Queretaro-Mexico City highway. This is the only regrettable feature in that it doesn't go any further west. Its westward limit cuts off the Tarascan culture and other western cultures of Mexico entirely. The eastern limit of the map extends just east of the Peninsula of Yucatán and cuts through Honduras at La Ceiba on the Caribbean Sea and ends at the south in the extreme western corner of Nicaragua, approximately 87 degrees West Longitude. Five additional map inserts on the main map show the area of the main map on a larger area map which extends from the southern United States as far south as Panama, and four detailed maps of the important archaeological cities of Teotihuacán, Monte Albán, Chichén Itzá, and Tikal. There is a wealth of information printed on the main map with notes in red for general treatment of areas or peoples, and in blue for specific sites. These notes chronicle the evolution, regional expression, and interrelationship of many cultural traits in the heartland of this vast area. Drawings of the typical ceramic artifacts of the various cultures are repeated on the reverse side in a time-area graph showing the three major time periods: Preclassic, Classic, and Postclassic extending from 2000 B.C. to 1500 A.D., and relating the cultural areas of Oaxaca, Central Mexico, Gulf Coast, and Maya to one another and to the historic events taking place in the Old World during this same period. Vertical bands of color--one for each of these major cultural areas--are keyed to a small map showing the geographical extension of each of these cultures. The cover drawing shows Quetzalcóatl, the Feathered Serpent, in the guise of the Aztec wind god Ehecatl which has been adapted from the Codex Borbonicus, an Aztec manuscript just predating the Spanish Conquest. Also on the reverse side is a summary of the most prevalent views of American and Mexican archaeologists pertaining to the evolution of culture, the power of the gods, the art of writing, major and minor arts, astronomy, arithmetic, and the march of time. They are careful to point out that "as anthropological research continues, knowledge of the Middle American past is constantly modified and refined." The reverse side also contains an excellent detailed map of the Valley of Mexico today, showing from the North the ancient city of Teotihuacán as far south as Cuernavaca and from the west the Desert of the Lions to the volcanos Popocatepetl and Ixtaccíhuatl on the east. An insert in the corner shows the same area in 1519 A.D. when it was largely covered with water with the capitol city of the Aztecs Tenochtitlán indicated.

The map was distributed to members of the National Geographic Society with the October 1968 issue of their magazine. It may be obtained by others by sending 60¢, which includes postage, and giving the complete name of the map as given above, from the following address:

National Geographic Society
 Department 60
 Washington, D.C. 20036

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RECOMMENDED PUBLICATIONS

American Antiquity, journal, published quarterly by the Society of American Archaeology. Request for membership directed to E. Mott Davis, Dept. of Anthropology, University of Texas, Austin, Tex. (Magazine goes with membership.) \$10.00 a year. Recommended by the Church's Archaeological Society as the best magazine for all around information and help.

Archaeology, quarterly magazine, published by Archaeological Institute of America, 100 Washington Square, E., New York, N. Y., 10003. \$6.00 per year.

Expedition, quarterly. University Museum, University of Pennsylvania,
33rd and Spruce St., Philadelphia, Pa. 19104. \$3.00 per year.

Membership in Society for Early Historic Archaeology, Brigham Young University,
Provo, Utah. \$3.00 per year. Publishes Newsletter and Proceedings.

Antropología E Historia de Guatemala, from Instituto de Antropología E Historia,
Edificio No. 5 de "La Aurora" Zona 13, Guatemala City, Guatemala, Central
America. Ministerio de Educación. Sent to other archaeological organizations
on an exchange basis.

Natural History, by American Museum of Natural History, 79th St. and Central
Park, West, New York, N. Y. 10025. \$5.00 per year.

Scientific American. Subscription correspondence, Jerome L. Feldman, Circulation
Manager, 415 Madison Ave., New York, N. Y., 10017. \$7.00 per year; 2 years
for \$13.00.

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Please address all correspondence to the FOUNDATION to the chairman,
Mrs. F. L. Stevens, 202 S. Pendleton Ave., Independence, Missouri 64050.