

# Siegfried H. Horn Archaeological Museum

## NEWSLETTER

Volume I, Number 4

Spring 1980

### CUNEIFORM TABLETS IN THE MUSEUM

The Horn Archaeological Museum houses approximately 3000 cuneiform tablets. The first tablets arrived in 1951 as a gift from Norwegian Seminary, but the bulk of the collection was acquired by a purchase from the Hartford Theological Seminary Foundation in Connecticut, which was originally negotiated in 1973 by Dr. Siegfried H. Horn. The Seminary had a well-established reputation for Near Eastern Studies (Hebrew and Arabic), and had acquired a large collection of cuneiform tablets, as well as a number of Egyptian objects, at the turn of the century. When the Seminary closed its doors, its holdings were dispersed, and the cuneiform collection came to Andrews University.

The tablets span about 2000 years; the oldest (AUAM 73.3220) may be dated to about 2300 B.C., while the latest are Neo-Babylonian or Achaemenid, about 600 B.C. The bulk of the collection - approximately 2000 tablets - is from the Ur III period (2100-2000 B.C.). The tablets may be classified broadly as follows: (1) Archival, (2) Monumental, and (3) Canonical.

(1) Archival texts reserve economic and administrative data which were considered important enough to be recorded. Most of the archival texts of the Ur III period come from the cattle center of Drehem; they deal with the receipt of cattle from various cities of the Sumerian amphictyony, and with the shipment of cattle to the religious center of Nippur. A much smaller group of tablets from Umma is mostly concerned with gurus-serfs who do agricultural work or dig canals.

Many of these tablets are sealed. After the text was written, the official in charge would impress or roll his seal over the signs, rendering any subsequent modification of the tablet impossible.

From the latter part of the Old Babylonian period (2000-1600 B.C.) there are a number of field-rental contracts, as well as several letters. These tablets, in contrast to those of the Ur III period, are generally in a poor state of preservation. The Neo-Babylonian tablets, which I have not studied in detail, are also economic texts.

These archival tablets often convey only small bits of information which can, nevertheless, prove a valuable source for the social and economic history of any given period. It is of the utmost interest to examine these ancient texts - separated from us by 4000 years - in order to discern the structure of an ancient society and the way it was affected by economic and political pressures.

(2) There are only a few monumental inscriptions in the collection. On display in the exhibition hall are a slab containing two royal inscriptions and bricks bearing the royal seal of Nebuchadnezzar. There are also some clay pegs which mention the construction of a temple. These pegs were fixed in the walls of the temple and covered with plaster. They were not intended to be read by the ordinary worshippers, but anyone rebuilding the temple would discover the pegs and learn from them the details of its initial construction. One might also classify as monumental inscriptions seals such as those discussed above.



(3) Canonical texts are those which were used in the curricula of the scribal schools. During the course of time, these texts evolved into a literary canon in a manner comparable to the formation of the biblical canon. The major cuneiform canons covered all branches of ancient thought, but there are only a few examples in the Andrews University collection: two birth incantations; some bilingual (Sumerian and Akkadian) lexical texts; and some mathematical texts (sexagesimal multiplication tablets).

Until now most of this material - a few tablets published by E. Sollberger and Goetze excepted - has been inaccessible to the scholarly world. Since the transfer of the collection to Andrews University, the author has spent three successive summers copying tablets from the Ur III and Old Babylonian periods. These handcopies will be published in four volumes by Undena Press (Malibu, California) in collaboration with Andrews University Press, under the title Andrews University Cuneiform Texts (AUCT). The second volume in the series will include, in addition to hand-copies, drawings of the seals. Those tablets with identical seals have been grouped together, so that the artist might attempt to reconstruct the original seal in each case.

Mr. V. Crawford of the Metropolitan Museum of Art in New York City copied approximately fifty of the tablets during his graduate studies at Yale University. These hitherto unpublished texts, which should comprise the fifth volume of AUCT, are now being studied jointly by the author and Professor Aaron Schaffer of Hebrew University. Dr. C. Kuhne of Marburg is scheduled to publish twenty Old Babylonian tablets, and Dr. D. Weisberg of Hebrew Union College, Cincinnati, and Dr. J. Brinkman of the Oriental Institute of Chicago are responsible for the publication of the Neo-Babylonian material. It is our hope that the definitive publication of the entire Andrews University collection can be completed in a relatively short time.











R. MARCEL SIGRIST  
JERUSALEM

## HOW WRITING BEGAN

Among the extraordinary achievements of the ancient Near East, few are as important as the invention of writing. The very definition of history and civilization is tied inextricably to this monumental discovery. An era is "pre-historic" before the invention of writing and any society - even one of the present day - is often labeled "primitive" if it lacks the written word.

The earliest writing system is found at Sumer. It began some time before 3000 B.C. as a pictographic system. Pictures were used to tell a story or show a simple action. Gradually, the pictures of objects were used to indicate concepts which were related to them. Thus, a foot might also represent "standing" or "carrying" while two wavy lines symbolizing "water" might also mean "flood." Though this system successfully conveyed messages concerning real objects, abstract concepts were beyond its capacity. Such sophisticated concepts only became comprehensible through the development of the "rebus" principle. By this system, a picture would be used to represent an abstract concept with

### THE DEVELOPMENT OF CUNEIFORM SYLLABIC SIGNS

I	II	III	IV	V	VI	VII	VIII
Oldest Known Pictograph	Development of the Form in Classical Sumerian	Old Babylonian	Old Assyrian	Standard Form (Neo-Assyrian)	Syllabic Value	Original Meaning	An Extended Meaning
					a	water	flood
					ut	sun	day



alp	bet

1. Proto-Sinaitic  
1500 B.C.
2. Proto-Canaanite  
13th century B.C.
3. Proto-Canaanite  
c. 1200 B.C.
4. Earliest Hebrew  
c. 1200 B.C.
5. Proto-Canaanite  
12th century B.C.
6. Phoenician  
11th century B.C.
7. Phoenician  
c. 1000 B.C.
8. Hebrew  
10th century B.C.
9. Earliest Aramaic  
c. 850 B.C.
10. Moabite  
c. 840 B.C.
11. Hebrew  
c. 740-735 B.C.
12. Early Greek  
c. 700 B.C.
13. Aramaic  
c. 600 B.C.
14. Hebrew  
c. 625 B.C.
15. Aramaic  
408 B.C.
16. Aramaic  
c. 200 B.C.
17. Aramaic of Dead  
Sea Scrolls, c. 50 A.D.
18. Greek  
1st century A.D.

the same sound. An English equivalent would be the use of a picture of an eye for the word "I" or that of a stone weight for the verb "wait." The rebus principle led to the transformation of the pictographs (more commonly called "logograms") into syllables. This transformation permitted the writing of grammatical elements and the spelling out of complex words in syllables.

Sumerian inscriptions were generally written on soft clay with the aid of a reed stylus. This instrument produced straight lines with wedge-shaped heads and led to the simplification and stylization of the original pictographs. Use of the stylus on clay also changed the direction of the script. Instead of being written from top to bottom as the early pictographs were, the wedge-shaped or cuneiform signs were turned 90° and written from left to right. This became its permanent direction.

The convenience and flexibility of the Sumerian system attracted Sumer's Semitic neighbors, the Akkadians, who adopted the cuneiform characters and adapted the syllabary to their own language. Later, during the time of Hammurabi, the Babylonians simplified this syllabary to the point that knowledge of less than two hundred signs rendered one basically literate. In subsequent periods, greater complexity would return, thereby restricting literacy to professional scribes.

Scholars generally hold that the ancient Egyptians adopted the pictographic principles of the Sumerian writing system just before the rise of the First Dynasty around 3000 B.C. Unlike Sumerian, these Egyptian "hieroglyphs" developed on stone and remained relatively consistent in form throughout their history. Moreover, they were consonantal rather than syllabic. In English equivalence, this would mean that a picture of a bull could stand for any word with the consonants bl such as "bill" or "bull." The exact meaning of the word would be clarified by phonetic complements, determinatives and context. Each hieroglyph could stand for between one and three consonants and thus, in Egyptian the possibility of

developing a true alphabet existed. However, this leap of progress never occurred within the Egyptian system. Instead, the first alphabets would be produced by the Semitic speakers of the Sinai, Canaan and Syria.

For all their ingenuity, the pictographic and syllabic writing systems were cumbersome and limiting. The vast number of signs which were required memorization in order to reach the plateau of literacy generally made these systems inaccessible to all but the professional scribe. The need for a simpler writing form was eventually met by the development of alphabetic systems at the crossroads between Egypt and Mesopotamia. The earliest alphabetic forms known were found in the Sinai and date to about 1500 B.C. Although cuneiform signs were used to write the alphabet at the Canaanite city of Ugarit in the 14th century, the earliest and lasting alphabetic forms began with pictures. However, in the Proto-Sinaitic script of this first alphabet, instead of using the picture to represent the object shown, or a syllabic or consonantal pattern associated with it, each picture stood for only one sound, that of the first consonant of what was shown. To be more specific, let us take the two letters from which the word "alphabet" comes: the "alpha" and the "bet." The general Semitic word for "ox" is alp and the writers of Proto-Sinaitic drew the head of an ox to stand for the first consonantal sound of that word. Similarly, the Semitic word for "house" is bet and the letter was drawn as a square to represent the outline of a building. So the picture stands for the sound of "b."

By the 13th and 12th centuries B.C. these Proto-Sinaitic picture forms had become more stylized in a general Proto-Canaanite alphabet which was used along the coastlands of the eastern Mediterranean. Proto-Canaanite was written with no special commitment to the direction of the letters. Sometimes the letters would appear from right to left,



sometimes from left to right and sometimes they would alternate direction from line to line. The earliest Hebrew inscription dates from about 1200 B.C. and comes from Tel Aphek near modern Tel Aviv. At this time the script of Hebrew and that of related Canaanite dialects were indistinguishable. Slowly, separate Phoenician and Hebrew scripts began to emerge and by 850 B.C. Aramaic script had developed distinctive features. These three major Canaanite alphabets, the scripts of the Ammonites, Moabites and Edomites emerged. With the rise of the Persian Empire in 539 B.C. Aramaic became the lingua franca of the Near East and its script soon displaced the other national alphabets. Indeed, the modern Hebrew printed script is actually a form of Aramaic.

Semitic alphabets were not the only ones to develop from the early forms of Canaan and Sinai. Beginning about 1100 B.C., the Greeks seem to have borrowed the Phoenician alphabet and adapted it to their own language. They added a major innovation - the use of vowel letters. By around 800, active Greek inscriptions utilizing the Phoenician alphabet are extant. From the Greek alphabet, the Latin or Roman alphabet grew and it is of course from the Latin alphabet that the letters used to write this article eventually developed.

## GOOD READING IN ARCHAEOLOGY

Continued from the previous Newsletter.

### IV. ARCHAEOLOGY AND THE HOLY LAND

Albright, William F., The Archaeology of Palestine (Baltimore, 1961).

Archaeological Institute of America, Archaeological Discoveries in the Holy Land (New York, 1967).

Glueck, Nelson, The Other Side of the Jordan (Cambridge, Mass., 1970).

Harding, G. Lankester, The Antiquities of Jordan (New York, 1959).

Kenyon, Kathleen M., Archaeology in the Holy Land (New York, 1970).

Kenyon, Kathleen M., Jerusalem: Excavating 3000 Years of History (New York, 1967).

Kenyon, Kathleen M., Royal Cities of the Old Testament (New York, 1971).

Sanders, James A., Essays in Honor of Nelson Glueck: Near Eastern Archaeology in the Twentieth Century (New York, 1970).

Yadin, Yigael, Bar-Kokhba (New York, 1971).

Yadin, Yigael, Hazor (New York, 1975).

Yadin, Yigael, Masada (New York, 1966).

Yadin, Yigael (ed.), Jerusalem Revealed (New Haven, 1976).

### V. ARCHAEOLOGY AND EGYPT

Aldred, Cyril, Akhenaten (London, 1968).

Aldred, Cyril, The Egyptians (New York, 1966).

Montet, Pierre, Egypt and the Bible, trans. L.R. Keylock (Philadelphia, 1968).

## VI. ARCHAEOLOGY AND MESOPOTAMIA

Kramer, Samuel Noah, and the Editors of Time-Life Books, Cradle of Civilization (New York, 1967).

Kramer, Samuel Noah, History Begins At Sumer (New York, 1959).

Kramer, Samuel Noah, The Sumerians (Chicago, 1963).

Woolley, C. Leonard, Digging Up the Past (New York, 1931).

## VII. ILLUSTRATED WORKS

Avi-Yonah, Michael, et al., (eds.), Illustrated World of the Bible, 5 vols. (New York, 1961).

Edwards, I.E.S., Treasures of Tutankhamun (London, 1972).

Francis, Frank, Treasures of the British Museum (London, 1971).

National Geographic Society, Everyday Life in Ancient Times.

Pritchard, James B., Ancient Near Eastern Pictures Relating to the Old Testament (Princeton, 1969).

Views of the Biblical World, 5 vols. (Jerusalem, 1961).

Yadin, Yigael, The Art of Warfare in Biblical Lands in the Light of Archaeological Study, 2 vols. (New York, 1963).

## VIII. ARCHAEOLOGICAL REFERENCE WORKS

Avi-Yonah, Michael (ed.), Encyclopedia of Archaeological Excavations in the Holy Land, 4 vols. (Jerusalem, 1978).

Horn, Siegfried H., Seventh-day Adventist Bible Dictionary (Washington, D.C., 1960).

May, Herbert G. (ed.), Oxford Bible Atlas (London, 1962).

Negev, Avraham (ed.), Archaeological Encyclopedia of the Holy Land (New York, 1972).

## STAFF CHANGE

After nearly nine years as Assistant Curator of the Horn Archaeological Museum, Dr. Eugenia Nitowski has left for a new position at the University of Utah. During the years when Dr. Nitowski was Assistant Curator the museum has seen considerable growth, especially in terms of the acquisition of new objects. There has also been expansion of the physical facilities of the museum with greatly enlarged display area and work/study space made available for students and visiting scholars. We wish her all success in her new responsibilities at the University of Utah.

Bjornar Storffjell who taught at Middle East College in Beirut, Lebanon before coming to Andrews University as a doctoral student in Archaeology and Ancient History will assume the responsibilities of the Assistant Curator.



# CALENDAR OF EVENTS

## SPECIAL EXHIBITS:

"Egypt and the Bible" (Featuring original paintings by John Hackwell)  
*Horn Archaeological Museum* March 18 - April 14, 1980

"Coins of the Bible Lands" (Sponsored by Michigan Council for Humanities)  
*Horn Archaeological Museum* April 20 - May 18, 1980

## SPRING LECTURE SERIES:

"Health and Medical Practice in Ancient Egypt" (illustrated)  
 Reuben Hubbard, Assistant Professor of Health Education, Loma Linda University  
*Horn Archaeological Museum* Monday, March 24, 1980, 8:00 p.m.

"The Lighting of the Lamps" (Participate in early Christian ritual)  
 Eugenia L. Nitowski, Research Assistant, University of Utah  
*Horn Archaeological Museum* Easter Sunday, April 6, 1980, 8:00 p.m.

"X-Raying the Pharaohs" (illustrated)  
 John Reeves, Assistant Professor of Religion, Loma Linda University  
*Seminary Hall Chapel* Monday, April 14, 1980, 10:30 a.m.

"Ancient China's Buried Army Uncovered" (illustrated)  
 John Reeves, Assistant Professor of Religion, Loma Linda University  
*Horn Archaeological Museum* Monday, April 14, 1980, 8:00 p.m.

"Coins of the Bible Lands" (illustrated)  
 Stan Hudson, Curator, Coins of the Bible Lands Exhibit  
*Horn Archaeological Museum* Sunday, April 20, 1980, 8:00 p.m.

"The Coins of Heshbon" (illustrated)  
 Abraham Terian, Assistant Professor of Intertestamental Studies, Andrews University  
*Horn Archaeological Museum* Sunday, April 27, 1980, 8:00 p.m.

"A Tour of the Frontiers of the Roman Empire" (illustrated)  
 John W. Eadie, Professor of Roman History, University of Michigan  
*Horn Archaeological Museum* Monday, April 28, 1980, 8:00 p.m.

"The Use of Coins in Archaeological Dating" (illustrated)  
 Bjornar Storfjell, Assistant Curator, Horn Archaeological Museum  
*Horn Archaeological Museum* Sunday, May 18, 1980, 8:00 p.m.

## PUBLIC BROADCASTING SERVICE TELEVISION SERIES:

*Seeking The First Americans, Sunday, April 6 at 8 pm*  
 Archaeologists from Texas to Alaska search for clues to the identity of the first people to tread the American continent — the early hunters who between 11,000 and 50,000 years ago crossed the Bering Strait in pursuit of game.

*N!ai, The Story of a !Kung Woman, Sunday, April 13 at 8 pm*  
 In 1950 N!ai was a child roaming the African bush with a small band of hunter-gatherers. Today she lives with 800 people on a government settlement. From film spanning 28 years with the !Kung bushmen, John Marshall has produced an intimate portrait of one woman and a vanishing way of life.



**Franz Boas (1858-1942), Sunday, April 20 at 8 pm**  
Studying the Indians on the northwest coast of America was an odd career for a young German physicist in the late 19th century. But by virtue of his fieldwork with the Kwakiutl, his involvement with museums, his teachings, and his theories on race, Franz Boas is singularly responsible for shaping the course of anthropology in America.

**Shipwreck: La Trinidad Valencera, Sunday, April 27 at 8 pm**  
The wreck of *La Trinidad Valencera*, the fourth largest ship in the Spanish Armada, was discovered by amateur divers in 30 feet of water off the coast of Ireland. Their finds, ranging from bronze cannons to leather shoes, tell a unique story of life on a 16th century warship.

**The Incas, Sunday, May 4 at 8 pm**  
In just 100 years the Incas created an empire that stretched more than 350,000 square miles across some of the world's highest mountains. Three archaeologists trace the extensive network of roads, towns, and agricultural regions responsible for the prosperity of these 16-century Peruvians.

**Ongka's Big Moka, Sunday, May 11 at 8 pm**  
In the New Guinea highlands a man's prestige and authority derive in large part from his ability to organize lavish ceremonial presentations of gifts, called *moka*. Ongka, a Kawelka "big man," organizes a huge *moka* of 600 pigs, rare birds, and even a truck in order to establish political alliances with other tribes and advance his own career.

**Other People's Garbage, Sunday, May 18 at 8 pm**  
Although written documents recount more than 350 years of events in America, they reveal little about what day-to-day life was like. Historical archaeologists at three sites across the United States are uncovering a clearer, and often very different, story of the recent past than we've ever known.

**Maasai Women, Sunday, May 25 at 8 pm**  
The program explores the role of women, young and old, among the Maasai of Kenya, a pastoral society in which cattle are the main sources of sustenance and wealth.

**The Chaco Legacy, Sunday, June 1 at 8 pm**  
Over 900 years ago the inhabitants of Chaco Canyon, New Mexico, undertook one of the most comprehensive building projects ever—an extensive water-control system, a network of roads connecting 70 pueblos, and several mammoth structures such as the 800-room Pueblo Bonito. How and why these people developed such a sophisticated technology is only now becoming clear after 50 years of study.

**Cree Hunters of Mistassini, Sunday, June 8 at 8 pm**  
Each winter the Cree Indians of Canada trek northward to hunt and trap game. Families join together to build log cabins and prepare for the cold months in much the same way that their forefathers did thousands of years ago.

**Key To The Land of Silence, Sunday, June 15 at 8 pm**  
Until a lieutenant in Napoleon's army discovered the Rosetta Stone in 1799, little was known about the mysterious markings on Egyptian monuments. Twenty-five years later, a young Frenchman, Jean-François Champollion, finally decoded the hieroglyphs, the key to understanding life in ancient Egypt.

**The Sakuddei, Sunday, June 22 at 8 pm**  
The Sakuddei lifestyle centers around a spiritual harmony with the souls of their ancestors and their jungle environment. The Indonesian government is developing programs to provide them with schools, clinics, and new houses, even though these efforts will disrupt the Sakuddei way of life.

Public Broadcasting Associates have developed a Guide to six of the above programs, *Seeking The First Americans; N'gai, The Story of a 'Kung Woman; Franz Boas (1858-1942); The Inca Empire; Other People's Garbage; The Chaco Legacy*. The Guide consists of four sections for each program. **The Film:** Each of the six programs is first briefly summarized. These descriptions will help you to assess how the programs would be best applied to your classes. **Before the Film:** Following the film summaries there is a section intended to stimulate thought and discussion before actually seeing the film. Here you will find background information and questions that will help prepare your students to be informed viewers. **What To Watch For and Think About:** This section is designed to help your students be alert to both specific events in the film—including unlocking the meaning of unfamiliar words from their context--and to more general ideas. You may wish to return to some of the ideas found in this section when you discuss the film. **Bibliography:** The bibliography gives you a readily accessible list of references that both students and teachers can turn to for further information.

This Guide is available free of charge to members of the Horn Archaeological Museum by sending your request to: Horn Archaeological Museum, Andrews University, Berrien Springs, MI 49104 or you may call (616) 471-3273.

Do you want to see a specific topic discussed in the Newsletter? Do you have any comments or suggestions to make? We would be glad to hear from you. Send your letter to:

Horn Archaeological Museum  
Andrews University  
Berrien Springs, MI 49104  
or call: (616) 471-3273

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