

# Siegfried H. Horn Archaeological Museum

## NEWSLETTER

Volume I, Number 2

Fall 1979

### THE MUSEUM'S USE OF THE COMPUTER




#### A SOLUTION TO PALEO-WRITER'S CRAMP


All of us, at one time or another, have been faced with the task of hand-writing a long letter, paper or report. And among the varied complaints that we manage to come up with at these times, one seems unavoidable--the inevitable setting in of writer's cramp. However, if the truth be known, we don't know how good we have it.

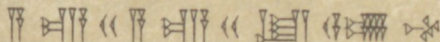
Though we may be unaware of it, by using the English alphabet the process of writing is greatly facilitated. The letters are few and simple, the principle of one sound being represented by one letter (more or less) makes words quick and easy to write, and the cursive, running style of handwriting makes the whole process as quick and painless as possible. So, if you are still inclined to complain about writing, consider the following.

Imagine using a script where each "letter" is quite complicated and stands, not for one sound, but for a whole syllable. For example, the symbol for "ba" would be different from that for "be", which would be different from that for "bu", "ab", "eb", "ub", etc., etc., etc.... In other words, the alphabet would contain hundreds, even thousands of symbols. And, to make things worse, each symbol is made up of a series of straight lines, making flowing handwriting impossible.

Sounds a bit ridiculous and impractical, doesn't it? Yet that would have been your only choice had you been born in ancient Sumeria, Assyria or Babylon. Here, for example,

the syllable "ba" would be written , "eb" would be , "ub"  and "shul"

. A simple greeting like "Hello, I trust you are well" would look something like



is English starting to look a bit nicer, now:

We might argue that had we been trained all through school to write like this, it might not be quite so bad as it first appears. The ancient scribes didn't seem to have too much trouble. But on the other hand, what about the poor modern seniors whose lives are dedicated to the reading, translating and preservation of ancient writings written in such a script? Surely to them, such writing will never come as easy as it did to the professional scribes of old. Are they forever destined to the ultimate case of writer's cramp?

Modern scholars generally get around this problem by what is known as transliteration. This is simply taking the words and syllables of the original ancient language and spelling them with the familiar and easily written English alphabet rather than the cumbersome

cuneiform (meaning "wedge-shaped") symbols of the original script. Thus, the greeting given above could be written "a-dan-nish a-dan-nish lu snui-mu" (the syllables within a word being separated by a hyphen, the words being separated by spaces). Much easier, isn't it?

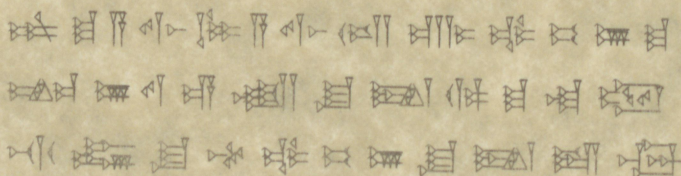
The problem with this system, however, is that while making reading and writing easier for the modern scholar, it doesn't do too much for the preservation of the original. Therefore, when scholars are concerned with preserving and transmitting the original cuneiform script, the only alternative is to laboriously copy it by hand--a boring, time-consuming job where one full page may take hours (believe me--I've tried it), and, because of the similarity between many of the symbols, and the large numbers of them, errors are inevitable and many. Wouldn't it be nice, we sign, if we had a typewriter on which we could type the syllables in English letters, but which would print out the cuneiform symbols instead? Ah, well, if wishes were horses....

Yet this is precisely what the Horn Archaeological Museum has done. Using the computer at Andrews University and a terminal which looks and acts like a slightly over-sized typewriter, a system has been developed where one has simply to type in the words and syllables in conventional English letter transliteration, and what comes out is clear, fast and error-free cuneiform script.

For example, the first law from the famous Code of Hammurabi would be typed as follows:

\$um-ma a-wi-lum a-wi-lam u2-ub-bi-ir-ma ne-ir-tam e-li-\$u id-di-ma ia uk-ti-in-\$u  
mu-ub-bi-ir-\$u id-da-ak

(the \$ represents the Akkadian "sh" sound), and what would be printed is



(For those who are interested, the translation of this would read something like, "If a man should accuse another man of a capital offense, but cannot prove his guilt, the accuser shall be put to death." That would sure make one think twice about taking his neighbor to court!)

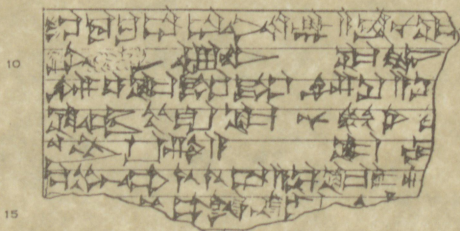
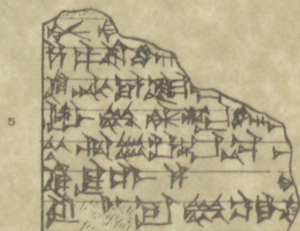
No special typing element is needed. English characters like V, -, !, <, >, 1, etc. are automatically placed close to each other in the right positions to form the required cuneiform symbol. One line takes only 20 seconds to print, and one page somewhat less than 6 minutes. What's more, if you can type faster than the printer can print, you can simply type in your text with no printing of the cuneiform symbols, and save it for future use, printing the cuneiform transliteration whenever and however many times you like without ever having to type in the English-letter transliteration again.

Farewell, then, to tedium, inaccuracy, and writer's cramp!

**JAMES K. BROWER**

OBVERSE.

REVERSE.



Example of hand copy



## A MESSAGE FROM THE CURATOR

As we come to the conclusion of our first year in which we have encouraged supporters of the Horn Archaeological Museum to join us as members, we are happy to report that well over 100 individuals have done so. We want to thank you for your gratifying support which is enabling us to accomplish far more than we ever have before.

We are now entering a year in which we will be celebrating the tenth anniversary of the founding of the museum by Dr. Siegfried H. Horn and members of the Andrews University Administration. We are in the process of laying plans for special events during the coming winter and spring and, of course, you will be the first to know when these plans are finalized.

The school year is off to a good start with our fall lecture and film series. We have had visiting speakers from the Middle East as well as various universities here in the United States.

In addition to the regular operations that characterize our museum, much of our energy has been focused on the completion of our series of final excavation reports for the university dig at Heshbon in Jordan. More than 40 scholars are involved in this effort and beginning this next year there will be tangible published results of their efforts. In order to make the most of these activities, we have decided to postpone our new project at Tell Jalul for at least a year. Our excavation at the Wymer site on campus continues toward a conclusion as well.

In addition to my own efforts, we still have only two full-time employees at the museum--both of whom accomplish wonders, given the variety of tasks they are assigned. We also appreciate the many volunteers who assist us from time to time.

We urge you to take advantage of your membership in the museum by participating in our programs. If there is anything we can do to be of service, don't hesitate to write or call.

**LAWRENCE T. GERATY**

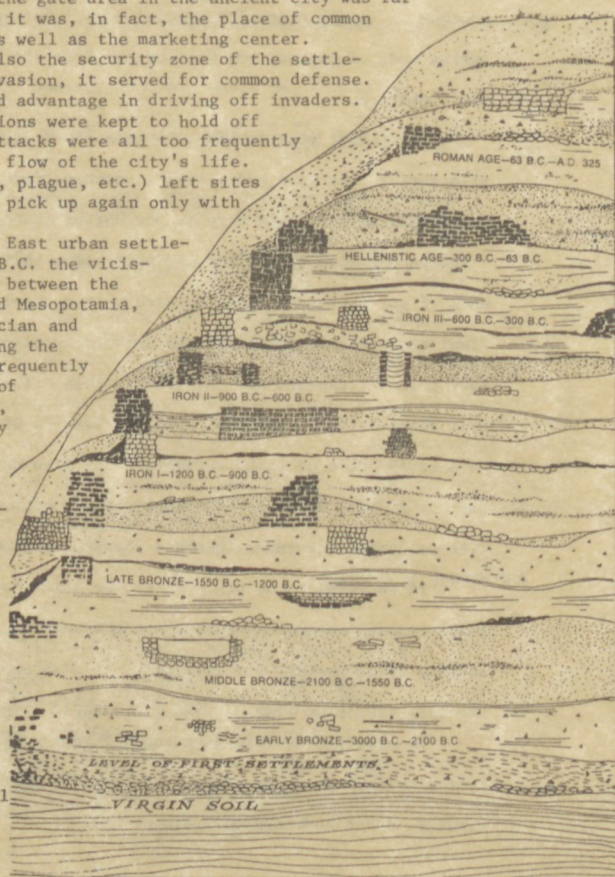
# WHAT IS A TELL?

The landscape of the Near East is dotted with mounds and ruins of ancient days. These mounds, or tells, represent a phenomenon peculiar to the Middle Eastern and Mediterranean world. The word "tell" is a technical phrase in both the Hebrew and Arabic languages referring to artificial hills created by centuries of human occupation at a given site. Tell building was conditioned by two main factors: (1) The nature of an ancient city and the temporal character of its life, and (2) the character of the architecture and of the materials used to build the settlements.

Unlike the sprawling cities and villages of our own day, the ancient city was geographically much more restricted. The space within the walls rarely equaled more than two or three of our modern city blocks. Such a walled settlement would at most house a population of a few hundred, including the ruler or governor and his family, court officials and servants, the "army" or band of mercenary troupes, priests or religious functionaries, and a modest contingent of tradesmen and artisans. The main population of the city was in fact spread throughout the adjacent countryside. Residing in caves, tents, and hovels, these more common folk lived off the land, tending flocks and crops. For them the walled city served as a "downtown" area, a place for marketing, and the center for handling legal and religious affairs. Thus the gate area in the ancient city was far more than merely a way in and out; it was, in fact, the place of common assembly and the seat of justice as well as the marketing center.

Finally, the walled city was also the security zone of the settlement. During times of attack or invasion, it served for common defense. Its walls were built high to afford advantage in driving off invaders. Within, stores of water and provisions were kept to hold off against siege. Nonetheless, such attacks were all too frequently successful, disrupting the ebb and flow of the city's life. These and other calamities (famine, plague, etc.) left sites destroyed or abandoned. Life would pick up again only with new or returning settlers.

During the long period of Near East urban settlement from before 3200 B.C. to 100 B.C. the vicissitudes of life were harsh. Caught between the shifting power centers of Egypt and Mesopotamia, Canaanite cities (and later Phoenician and Israelite centers) in the area along the Eastern Mediterranean coast were frequently harassed. The resulting sequence of building, destruction, abandonment, and rebuilding contributed directly to the tell building processes. Larger tells in the Middle East stand more than sixty to seventy feet high. To understand the build-up of these layer-cake cities one has to put aside modern building concepts. For the most part, ancient architects used only materials that were readily available, namely field stones and mud for sun-dried bricks. Unattended, construction from these materials suffered rapid decay, especially during the heavy winter rains. Thus, within a very few seasons, buildings at an abandoned site would "melt down," covering over occupation debris and architectural





remains, creating a new tell layer.

Resettlement efforts rarely involved more than a process of leveling off the remaining debris in preparation for new buildings. Extensive excavation or preparation for deep foundations was not the rule. New stone foundation walls were merely laid on the surface or at best in shallow trenches. So the new layer was consolidated and sealed and the build-up continued. The predominant architectural feature of most sites was, of course, the city walls. While structurally more pretentious, these too were built of mudbrick on stone, and when unattended likewise suffered rapid destruction and decay. The particular shape of the normal tell, flat-topped with sloping sides, is conditioned by the effect of the more substantial walls girding the site. In time, later city architects came to see the defensive advantage of building walls atop these sloping sides, and of even supplementing the slopes with consolidated ramps of earth and stones, thus adding yet another stage to the tell's growth cycle.

We wish to thank Mrs. Carl E. Jensen of Dana Point, California for her question and encourage our other readers to also send in any they may have. Our next issue will continue with "DIGGING A TELL."

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## RECENT ACQUISITIONS

The Horn Archaeological Museum would like to thank Harold W. and Crethel M. Moll for their very generous gift of archaeological publications valued at \$2300. and matched by a cash donation from the Dow Chemical Company. The publications are concerned primarily with archaeological work in the state of Michigan. The importance of such donations cannot be overestimated, since they will be used long into the future by hundreds of scholars.

Another gift is that of a large model made by Dr. Robert Ibach, illustrating the topography of Tell Jalul. Dr. Ibach was the leader of the Survey team for the Heshbon Expedition in 1974 and 1976, as well as serving on the 1971 and 1973 excavations. It was his team which did extensive recording at Jalul leading to its choice as the site of Andrews University's next archaeological expedition.

From the Hartford Theological Seminary Foundation of Connecticut comes a relief map of Palestine (measuring 4½ x 8 feet) which was made for the Palestine Exploration Fund in 1893 by George Armstrong and a round table model of Jerusalem (measuring almost 7 feet in diameter) which was also made in the late 1800's. While the relief map is in excellent condition and will receive only a new coat of paint on its frame, the Jerusalem model will need considerable repair before it is placed on display sometime in January.

Donations, whether of money, publications, antiquities, etc. keep the museum alive and help it grow. We belong to you! Please take care of us!

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## EN GEDI EXPEDITION

The En Gedi Expedition scheduled for September, as reported in the last issue of the Newsletter, was met by most discouraging results. The previous tests made by special seismic and resistivity equipment had not been complete enough before the expedition staff were sent to investigate the site of a possible cave. There was indeed a void in the rock, caused by the springs farther up the mountain, but it did not open out at the cliff face providing a cave which could have contained human occupation.

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MOVING? PLEASE SEND US YOUR CHANGE OF ADDRESS!

## VISITING SCHOLARS

The Museum has indeed been fortunate that its visiting scholars have kindly doubled their talents for the ongoing lecture series. Along with their studies, predominately on Heshbon materials, our visitors have given fascinating lectures on their particular areas of specialization.

DR. JAMES SAUER, Director of the American Center for Oriental Research in Amman, Jordan, is the ceramics expert for the Heshbon Expedition and has been very helpful in working with students in this area. DR. BASTIAAN VAN ELDEREN, Professor of New Testament at Calvin Theological Seminary in Grand Rapids, Michigan has excavated numerous Early Christian sites in the Middle East. He is the excavator of the Christian Church on the acropolis at Heshbon. DR. MOAWIYAH IBRAHIM, Assistant to the Director of Antiquities of Jordan, a good friend to all those who have excavated in Jordan, is considered to be the finest archaeologist of that country. His lectures provided students not only with current archaeological work in Jordan, but also with an in depth look at its modern political situation. JOHN LAWLOR, Professor of Old Testament at Baptist Bible College of Pennsylvania, was the excavator of the Early Christian Church north of the acropolis at Heshbon. He complimented his lecture with extremely rare artifacts from his work, allowing all who attended a special treat. DR. LARRY HERR, while traveling the greatest distance, from Manila! is hard at work on Heshbon reports and devising new recording systems, with the help of JAMES BROWER (the Museum's computer expert), for future expeditions.

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### SLIDE SETS:

Ebla Slides - 40 transparencies with visual guide, \$20. from: Research Mediagraphics  
300 Stanley Road  
Winfield, Illinois 60190

Palestinian Pottery - 36 transparencies with descriptive text by Kenneth Mull with  
the supervision of William Dever, \$40.60 from: Archaeological Institute of America  
53 Park Place  
New York, New York 10007

HESHBON Expedition - limited quantities of sets on excavation, ethnographic studies,  
with text, \$10. from: Horn Archaeological Museum  
Andrews University  
Berrien Springs, Michigan 49104

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### BOOKLETS:

Dr. Siegfried H. Horn, Biblical Archaeology After 30 Years (1948-1978), 36 pages,  
\$1.00.

Dr. Siegfried H. Horn, Relics of the Past: The World's Most Important Biblical  
Artifacts, 16 pages with photos, \$1.00.

available from the Horn Archaeological Museum, Andrews University, Berrien Springs,  
Michigan 49104



## WANT TO GO ON AN ARCHAEOLOGICAL EXPEDITION?

If you are seriously thinking about going on an archaeological expedition and would like information about opportunities for the Summer of 1980, perhaps we can help you. We often receive news about excavations being carried on in this country, Europe, and the Middle East - let us know your interests and we will send you a list of expeditions, prices, opportunities for academic credit, etc.

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## CALENDAR OF EVENTS

### PERMANENT EXHIBITS:

BRITISH COLUMBIA PROVINCIAL MUSEUM, Victoria, B.C.: "The 12,000 Year Gap," juxtaposes the Ice Age prior to habitation in British Columbia with Indian material of the last 200 years, to illustrate the cultural development of the province. Featured are two monoliths; remains from excavations in pre-historic village sites representing more than 8,000 years of Indian occupation in British Columbia; and a reconstruction of an Interior Salish pit house.

### NOVEMBER:

HAAGS GEMEENTE MUSEUM, The Hague: "The Other Egypt: The Arts of Ancient Nubia and the Sudan" (Sept 15-Nov 11), displays approximately 250 artifacts in a variety of media including gold, silver, faience, and wood, dating from 3000 BC to the 12th century AD, illustrating the history of this little known but important ancient African civilization.

CUMMER GALLERY OF ART, Jacksonville, FL: "The First 4000 Years: Judean Antiquities from the Ratner Collection" (Oct 6-Nov 18), presents artifacts spanning 4000 years from the Neolithic to the Byzantine Empire, including Late Roman and Early Christian compound-nozzle lamps, a Neolithic vessel in the shape of an ostrich egg and a large Iron Age pilgrim flask.

MUSEUM OF ART AND ARCHAEOLOGY, University of Missouri, Columbia, MO: "The Art of Ancient Cyprus: Twenty-five Years of Missouri in Cyprus" (Oct 12-Dec 1), exhibits objects mainly from sites in Cyprus excavated by the University of Missouri. The artifacts range from ca. 2300 BC to the 2nd century AD. Included are new finds from Kourion as well as material from the earlier excavation there by the University of Pennsylvania. Pottery and bronzes from the Bronze Age site of Phaneromeni, excavated in 1955 by the Missouri-Cyprus Expedition, will also be displayed.

HORN ARCHAEOLOGICAL MUSEUM, Berrien Springs, MI. "Ebla and Its Importance In Syrian Archaeology" lecture by Kassem Toueir (Directorate General of Museums and Antiquities of Damascus, Syria) on December 3 at 8:00pm.

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The Siegfried H. Horn Archaeological Museum  
Andrews University  
Berrien Springs, Michigan 49104

(616) 471-3273

Tours arranged by appointment  
Regular hours:  
Monday-Thursday 9am-9pm  
Friday 9am-2pm  
Saturday closed  
Sunday 1pm-9pm