

## Johnson at Andrews

Cale Johnson, a Ph.D. candidate at UCLA, came to Andrews University to scan the Ur III tablets at the Horn Archaeological Museum for the *Cuneiform Digital Library Initiative (CDLI)*. Johnson used a standard 600 dpi computer scanner in a dark room to scan the tablets which were off-set by 10 degrees. This off-set created the shadow necessary to see the cuneiform signs imprinted on the tablets. While at Andrews, Johnson was able to scan nearly half of the 3rd millennium B.C. tablets or approximately 15 gigabytes of data.

In addition to scanning the Horn tablets, Johnson presented a lecture on October 21, 2002 for the Horn Archaeological Museum lectureship entitled, "The Invention of Writing in Mesopotamia."

Johnson suggested that the earliest forms of writing reflected the need by merchants to keep track of their commodities. Writing emerged as a bookkeeping enterprise. In ancient Sumer, symbols were used to verify how many sheep or goats were bought and sold. In addition, writing developed as a means of encoding natural language.

Though some scholars believe that writing developed simultaneously in different regions of the Ancient Near East, Johnson suggested that writing began in Mesopotamia and spread outward toward other urban centers.

Johnson believes that trade became the primary vehicle for the spread of writing. In the 4th-3rd millennium B.C., Babylon developed a proto-cuneiform and Elam developed a proto-Elamite. Gradually, the idea of writing moved up river to major urban centers through traders to Palestine and Egypt

Examples of the earliest forms of writing are found throughout Mesopotamia. Small, 1-2 cm fired clay objects called tokens were found in clay balls. Some clay balls with tokens inside

had the shape of the token impressed on the outside as well. P. Amiet proposed that these objects that date between 8000-3200 B.C. when found with clay balls, were actually used to calculate how many sheep, grain and other commodities were sent by a merchant. The tokens impressed on the outside indicated what tokens were on the inside. Eventually, the balls were flattened into written tablets surrounded by clay envelopes that had the same writing on the outside like the tablets in the Horn Museum. Essentially, these clay tablets were used as receipts.

D. Schmandt-Besserat claimed that these early tokens were the precursor to written symbols; simple signs with circles and wedges representing numbers and complex tokens with lines representing logograms or words. She claimed the complex lines stood for the commodities that they later represented.

Johnson believes that this theory is probably not true. Though Besserat identified over 50 complex token signs that were assigned to specific commodities, she failed to consider archaeological context in which the tokens were found. All early examples of clay balls only have simple numeric tokens not complex ones.

In addition, the complex and simple token signs impressed on the outside of balls and later tablets represent multiple systems for calculating commodities. Many commodities had their own accounting system and some accounting systems were more ambiguous.

Johnson suggests that the complex tokens signs on the tablets were used to distinguish between ambiguous numerical systems. They were not the first logographic writing. The complex tokens that were impressed on the outside of clay balls to identify various commodities developed after writing had already begun to encode a natural language not as a precursor to that language. The earliest form of writing helped to keep track of numbers and later specific items. (Robert D. Bates)



Dr. Bryant Wood

## Wood Lecture

On Sept. 23, Bryant Wood, of the Associates for Biblical Research, presented a lecture entitled "More New Evidence for Israel in Egypt," following up an earlier lecture on this subject a few years ago. Since there was a tendency for royal public inscriptions to be propagandistic, bolstering the image of the Pharaoh, one would not expect the admission of negative events such as escaping Hebrew slaves according to Dr. Wood. Even at biblical Raamses (Qantir/Tell el-Dab'a, excavated by Austrian archaeologist Manfred Bietak), not a single historical document has been found from the Middle Bronze - Iron Ages. Hence, evidence about the Israelites in Egypt must be circumstantial and indirect.

Some indirect evidence might include the fact that although there was only one Asiatic campaign during the Middle Kingdom (12 Dynasty, ca. 1991-1786 B.C.), nevertheless large numbers of slaves with Asiatic names appear in the records during the reign of Sesostris II (ca. 1897-1878 B.C.), at which time, according to the long chronology for the sojourn in Egypt, the Israelites were already living there. Dr. Wood suggests that these slaves might have been taken from the Israelite population. Prior to this time, the nomarchs (local governors) were a major political force, but under