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Fig. 1. Potter turning a dish on a simple wheel. This figure, found in an Egyptian tomb which is dated c. 2500 B.C., was one of a large group of servants who were supposed to minister to the soul of the person with whom they were buried. (Oriental Institute, University of Chicago) The Biblical Archaeologist is published quarterly (February, May, September, December) by the American Schools of Oriental Research. Its purpose is to meet the need for a readable, non-technical, yet thoroughly reliable account of archaeological discoveries as they are related to the Bible.

Editor: G. Ernest Wright, McCormick Theological Seminary, 2330 N. Halsted St., Chicago 14, III. (Only editorial correspondence should be sent to this address.)

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PALESTINIAN POTTERY IN BIBLE TIMES

J. L. KELSO Pittsburgh-Xenia Theological Seminary

and

J. PALIN THORLEY East Liverpool, Ohio

We live in a day of synthetics—synthetic rubber, synthetic gasoline, synthetic perfumes, and countless others. The first synthetic to be discovered by mankind was pottery, an artificial stone produced by firing clay shapes to a temperature sufficiently high to change the physical and chemical properties of the original clay into a new substance with many of the characteristics of stone. Some of the earliest known pottery in the world comes from Palestine, where it was known and used as early as 5000 B.C. A study of this pottery proves that the early Palestinian potters made striking progress in mastering the numerous technical problems involved in the various types of clays, in fashioning techniques, in decorative styles and in firing methods.

It is the stone-like property of pottery which makes it so invaluable to the archaeologist for, even if a jar is broken into pieces, the fragments are imperishable. The fires which destroyed so many ancient cities did not affect them; the rains of the centuries and the chemicals in the soil did not change them. Glue the broken pieces together and you have the very vessel itself which the ancients used! This imperishable nature of pottery makes it the most common find in any excavation, and it usually outranks in quantity all other finds put together.

The ancient world was style-conscious about its pottery, and thus new shapes were constantly replacing old ones just as they do today in modern table ware. It is by a patient painstaking study of these ancient pottery styles that the archaeologist has learned at what date a new style arrived and at what date it went off the market. Some styles were rather persistent in long life cycles, but others changed more rapidly. It is these latter which furnish the archaeologist his most important calendar for ancient Palestine.

Historical dates carved in stone or written with ink on papyrus are, of course, the ideal calendar data, but they are seldom preserved for the archaeologist in Palestine. The fires of the conquerors which destroyed the cities not only burned up the papyrus records, but also quickly calcined any limestone inscriptions. Even if they escaped the fires, the rains of the centuries have almost always destroyed both. Thus the archaeologist is forced to do most of his dating in Palestine from pottery. The accuracy of this method, however, is assured, for southwest of Palestine lies Egypt, from which objects were imported and in which pottery from Palestine is found. In Egypt these objects are dated by a wealth of inscriptional data. In fact, it was Sir Wm. Flinders Petrie, the Egyptologist, who first discovered the importance of dating by means of pottery when he worked in Palestine in 1890. It was not until about fifteen years ago, however, that the complete calendar for Palestinian ceramics was worked out.

PALESTINE'S ARCHAEOLOGICAL PERIODS

The major periods of Palestinian history in terms of pottery chronology are as follows:



Fig. 2. A cellar or pantry filled with jars of grain, found in the ruins of Bethshemesh and dated about the time of David. The house in which the jars were stored was destroyed and the crumpled walls preserved the contents of the pantry. (From Grant and Wright, Ain Shems Excavations. Pt. IV, PI, XII: 2)

Neolithic Age—c. 6000-4500 B.C. It was toward the close of this period that pottery first appears, c. 5000 B.C.

Chalcolithic Age—c. 4500-3000 B.C. This was the great period of irrigation culture in Palestine and the time that copper was introduced into use there.

Early Bronze Age—c. 3000-2000 B.C. These years saw Egyptian Dynastic history begin and Egypt exert a strong cultural influence on Palestine.

- Middle Bronze Age—c. 2000-1500 B.C. Palestine was under Egyptian political domination when this period opened and remained so through the days of Abraham ± 1900 B.C. The Hyksos, however, captured Palestine and Egypt in the days of Joseph and controlled both lands until Egypt sprang back as a world power about the end of this period.
- Late Bronze Age—c. 1500-1200 B.C. This marked the close of Israel's sojourn in Egypt, the Exodus, and Joshua's conquest of Palestine.
- Iron Age I—c. 1200-1000 B.C. The period of the Judges to the time of David, during which iron came into common use.
- Iron Age II—c. 1000-587 B.C. From David to the destruction of Jerusalem.
- Iron Age III—587-333 B.C. Exilic and Post-exilic period; predominantly Persian period.
- Hellenistic Period—333-63 B.C. Alexander, the Great, to Roman conquest of Palestine.
- Roman Period-63 B.C.-A.D. 325. New Testament and early church.

Each of these major periods is, of course, broken up into various minor ones depending upon numerous details in the changes in style and in types of ware within a major period. Using pottery alone for calendar purposes the date of any city of Bible times can be worked out to within about fifty years of its life date. Sometimes the sudden appearance of a foreign pottery gives an exact date, as when the Philistines invaded Palestine and brought along a brand new type of pottery. The perfect example of date is illustrated by an inscription on a bowl found in Lachish which may enable us to date the conquest of that city by Joshua about 1230 B.C. The most striking piece of historical research using the pottery calendar has been done by Dr. Nelson Glueck, Director of the American School in Jerusalem. He has visited virtually every ancient site in Transjordan south of the Yarmuk River, and by a careful study of the pottery found on each site, he has been able to work out in broad outlines the history of Transjordan from pre-historic times.

Until Abraham's time most Palestinian pottery was hand-made. This type of pottery can be recognized quickly for it lacks the perfect symmetry of ware thrown on the potter's wheel. Some hand-made pottery is of eggshell thinness, but in general it is heavier than thrown ware. In one common type of hand-made ware the vessel was built up of coils of wet clay. Then with the fingers of one hand pressing against the inside of the jar and the fingers of the other hand working against the outside, the clay was modeled into the desired shape. Another type was made by moulding the clay over some desired shape such as a basket or a broken jar. Other techniques also were used, and with all of them there might be a final truingup process while the jar was turned round and round upon a mat. If the **vessel was a large one**, it was built up on the installment plan, allowing the lower sections to dry somewhat before new ones were added, lest the weight of too much wet clay cause the walls to collapse. American Indian pottery is a good example of hand-made ware. The true potter's wheel was never discovered by the early American Indians.

A few of the most characteristic features of Palestinian pottery before Abraham's time are: flat bottoms, wide mouths, inverted rims, and spouts. Handles were of the small pierced lug type for hanging ware, the heavy ledge type for lifting large vessels and the graceful high looped handle for table ware. The most common decoration was burnishing (see below), which to the inexperienced looks like a polish and is often incorrectly called so. In painted ware the most common decoration was a drip or net design.

The invention of the true fast-spinning potter's wheel revolutionized the whole pottery industry, not only speeding up production phenomenally



Fig. 3. Sorting potsherds (fragments of pottery, after a day's excavation at Bethel in 1934. Each basket is labelled so that it is known just where each sherd was found. The fragments are important for dating purposes. Left to right: The Rev. Lester E. Williams, Drs. G. Ernest Wright, Joshua Starr, I. Ben-Dor, Ovid R. Sellers (only his hat is visible), and an Arab boy who spent his time washing the pottery.

but also improving structural design and aesthetic qualities. The older flatbottomed jars were replaced by round-bottomed ones which did not break so easily. Narrow mouths were now made as easily as wide ones. Spouts largely disappeared because a thrown jar has a symmetrical edge that pours well. (Spouts were always breaking off anyway.) The wheel made accurately spaced burnishing possible—a better finish than hand work could produce.

The true potter's wheel introduced a new principle into ancient ceramics, namely centrifugal force. "A ball of good plastic clay is placed at the center of the wheel, which is then turned rapidly either by an apprentice or by the potter himself. The action of the centrifugal force upon the ball of clay as it is modified by the fashioning hand of the potter, produces the shape. This gives to thrown pottery a liveliness and spontaneity of form that no other method can approach."¹ At first there was a single wheel turned by hand. Later came the double wheel, where a foot-power wheel turned the small thrower's wheel. This seems to have been a Greek improvement. The ancient potter's wheel, like the present day one, normally ran counter-clockwise. After the introduction of the potter's wheel into Palestine hand-made ware was seldom produced until recent Arab times.

The potter's wheel also produced another technique which is called turning. When a thrown clay vessel becomes leather-hard, it can be replaced upon the wheel and then with a cutting tool some of its clay can be shaved away just as wood or steel is turned on a lathe. Thus more delicate and refined shapes could be made.

By Joseph's time Hyksos control over Palestine produced a cultural golden age. Artizans used the potter's wheel so brilliantly that they became the most skillful potters that Palestine ever produced. Indeed their pottery forms occasionally challenge the best Greek work. The Hyksos were conquered by the Egyptians c. 1550 B.C. and Egypt took over the rule of Palestine until the time of Joshua's conquest c. 1230 B.C. During these years between Genesis and Exodus Palestine declined in prosperity and the native pottery is witness to a cultural slump. A fine new foreign pottery arrived about the middle of this period. It was the famous Mycenaean pottery, known best in the Aegean area although the particular ware that is found in Palestine was more likely manufactured in Cyprus and Phoenicia.

After Joshua's conquest, the Israelites continued the traditional shapes of Palestinian pottery. They did little painting, although the preceding Canaanite phase had seen the greatest use of painting as a decorative motif in the entire history of Palestinian ceramics. Perhaps one of Israel's most interesting contributions was a lamp with seven wicks—a striking ceramic adaptation of the theme of the seven-branched candlestick in the Shilon tabernacle. In the days of the Judges the land was invaded by the sea peoples of whom the most important were the Philistines. Their pottery presented fine forms and striking painted designs such as the swan pluming itself, the Maltese cross and the Ionic spirals. The Israelite potters ignored these new painting designs but did improve the forms of their wares under Philistine incentive. By David's day Israelite pottery was on the upswing, particularly in burnished ware which exhibited a wide variety of beautiful designs.

Israelite pottery is seen at its best in the days of the divided kingdom. The following were some of the wares displayed in the pottery bazaars of the days of Jeremiah. The most expensive, because of the difficulty of manufacture, were the great four-handled banquet bowls, about the size of modern punch bowls. The lines of these bowls have a subtle loveliness, and on the interior their beauty is intensified by narrow spiral burnishings alternating with similarly spaced unburnished spirals. Bowls then descended in various shapes and sizes until they became as small as modern sauce dishes. Some of these are as delicate as the best modern table ware. Plates were the rarest of all Israelite dishes.

¹All quoted material in this article is from the authors' work on Pottery Technique in Annual of American Schools of Oriental Research, Chap. 4, Vols. XXI-XXII.

Another strikingly artistic piece was the ring-burnished water decanter (Fig. 4). It is the "potter's earthen bottle" referred to by Jeremiah in his object lesson sermon (ch. 19). Pitchers, averaging around 9" in height, came in three grades: superior ware, skillfully thrown and showing a vitality and spontaneity of line often missing in the more mathematically precise Greek pottery; standard ware; and cheap ware, i.e. "five and ten cent store" goods. Cups ran with or without handles and those without handles were form-fitted to the hand.

Olive oil was used in various types of cruets and elongated pearshaped juglets. Another common use of a juglet was to hold perfume. Some juglets have perforated bottoms and were used for sprinkling aromatic seeds upon cakes before baking. The various sized cooking pots were the commonest pottery articles in the household. They were either



Fig. 4. Judean water jars, probably dating from the time of Jeremiah, which were found at **Tell Beit Mirsim** (Debir). Note the graduated sizes.

wide mouthed shallow vessels or small-mouthed ware with an almost spherical body. Both types were made with an especially heavy temper of tiny crushed stone fragments so as partly to compensate for the expansion and contraction of alternate heating and cooling while in use. Much pottery served for the storage of wine and oil. These jars might hold as much as a bath (23.25 qts.) The handles of the latter often bear inscriptions showing that they belonged to the royal Israelite treasury. A few actually bear the name of King Jehoiachin. Wide-mouthed jars were also used for the storage of grain and other dry materials. It was kitchen-sized jars of this type that Gideon used to carry his torches in the Midianite campaign (Judg. 7).

The destruction of Judah's cities by Nebuchadnezzar in 588-7 B.C. was so ruthless that many of her cities completely disappeared from history and others made only a belated resurrection. Thus the exilic and post-exilic periods mark another era of depression. Native Israelite pottery shows this slump although it was offset by a good incoming Greek influence. Even before Alexander the Great, Greek pottery was invading the Pales-tinian market in quantity. In the Hellenistic period its influence improved the native wares. Although the Romans took over the government of Palestine in 63 B.C., their cultural influence was much slower in exerting its effect. It is represented chiefly by imported Roman pottery, especially that of the press-mould type such as Arretine ware with its intricate blending of floral and human patterns. Native ware is often characterized by a

fine ribbed or corrugated effect. Present-day tourists find more of this kind than of any other ware of Bible times.

Throughout antiquity the land of Palestine was a pottery unit, although the southern section naturally showed more Egyptian influence than did Galilee and northern Transjordan, whereas the latter showed more Syrian influence than did the south. Up to the time of Abraham or thereabouts Transjordanian pottery was almost identical with that west of the Jordan. About that time, however, a variety of influences caused the inhabitants of the country south of the Jabbok River to return to a nomadic life in which they remained until shortly before Joshua's invasion. After 1200 B.C. southern Transjordanian pottery took on some special features, particularly in decoration. From then on, its ware was more closely related to that of Syria and Arabia than to that of western Palestine.

The Nabataeans, an Arabian tribe, who became so important in Transjordan after the days of Ezra and Nehemiah and remained so through much of New Testament times, introduced a special type of pottery inspired by Greek models. It represents one of the high-water marks of Palestinian pottery. Their finest ware is unbelievably thin and of exquisite line. Its painted ware offers something new to Palestine as it includes "stylized floral or leaf patterns" with heavy emphasis upon the grape design. The Nabataeans also used rouletted and sigillata ware, whose designs were imprinted in the clay by various methods.

Vessels of gold, silver and copper were more precious than Palestine's ceramic wares; thus her pottery must be studied primarily as commercial ware rather than as artistic masterpieces like the best Greek ware. On the other hand, it must be pointed out that the aesthetic rating of much of this ware averages higher than modern commercial ware and at times it is true art worthy of a place in a museum. Most of their pottery was red-clay ware, i.e. the finished ware had a rich red color when properly fired. Some Israelite wares were made in a glossy black finish which was produced by various techniques. White ware was usually imported.

Pottery represented one of the major manufacturing industries of the ancient world and the Israelite potters belonged to what we call today "up and coming business men". They had already mastered many of the economic short cuts used in present-day potteries. They created special fashioning processes so that cheaper grades of clay could be utilized. They knew the various temperatures at which to fire their ware, depending upon the impurities in the clay and the purposes for which the ware was intended. They could quickly multiply the output by combining throwing and turning techniques rather than by using the more expensive throwing only; yet at the same time the turner was so skillful one can seldom see where his work joins that of the throwers. They used assembly-line methods where different men performed different processes in the course of manufacture. They had standard styles which ran in staggered sizes, just as we do today. Pride of manufacture is shown in the use of trade marks, particularly on cooking pots, which, after all, had the greatest market.

The pottery industry was organized in families and guilds (I Chron. 4:23). The most difficult art for the apprentice to master was the firing of the kiln and this skill was probably passed on from father to son. "An estimate of the skill required in firing a kiln is perhaps best shown by the fact that the ancient Greeks besought the aid of the gods at this point in their work and the mediaeval potters offered prayers before firing their kilns."

POTTERY AS ARTISTIC ACHIEVEMENT

From the aesthetic viewpoint the best pottery forms ever produced in Palestine were in the Hyksos period about the time of Joseph. Indeed, the potters of this time attained an expressive quality, a sensitivity and vitality of form often aesthetically more appealing than the frozen perfection of the Greeks. The Greeks attained great heights of mechanical or mathematical precision or accuracy, but the result was often cold and im-



Fig. 5. Bowls, dating from the 17th or 16th century of the Middle Bronze Age, which were found by Elihu Grant 'at Beth-shemesh.

personal. Their perfection missed certain qualities of great aesthetic importance: namely, sensitivity and vitality, two qualities inherent in and essential to any work of art. These qualities the Palestinian potter realized in his best work, and this spontaneous quality makes his work more akin to the Chinese than to the Greek.

The skillful craftsmanship of the Palestinian potter was such that one may surmise that in a Greek environment, such a craftsman would have successfully contended with the Greek potter in skillful workmanship. These potters were always skillful craftsmen and at best were artists with sufficient plastic appreciation to avoid the error or temptation to exalt craftsmanship above expressive sensibility.

While the Palestinian potter was not attempting to achieve an object of luxury and was concerned only with making a useful pot, nevertheless he also made a beautiful pot. The artistic qualities he attained were the direct outcome of his rapid method of production which gave a spontaneity and vitality to his forms and contours. He refrained from overdoing perfection or attempts to "gild the lily". He was content to let "well enough alone", perhaps because he was not making a luxury item, but a pot to serve the needs of his patrons. In this objective he was admirably successful.

DECORATION OF POTTERY VESSELS

Both the Canaanite and the Israelite potters, however, had one major shortcoming! They did not employ glaze. This indictment against the Palestinian potter is the more serious, for even before Abraham's time they had used a slip which was very close to a true glaze. Although they did not follow up this lead and produce a true glaze, it is the only major ceramic process which they did not master.

In the field of ceramic decoration their major methods were the use of slip, burnishing and painting. The use of slip in ceramics is related to the use of plating in metallurgy. Just as we put a thin coating of silver over a cheap metal base and thus get a finish which looks like solid silver, so the potter can put a thin coating of a superior clay upon a cheaper ceramic body and then the fired ware will look as if the piece were made of superior clay throughout. In practice, however, slip was usually employed only on that part of the ware which was easily seen. Slip also permitted color variations and this was important since most Palestinian clays were ordinary red clay. The cheapest form of "ceramic veneer" is called wash. This is applied to the ware after it comes out of the kiln and thus, like calcimine on a wall, it will wash off when water is applied.

Burnish leaves something of a glaze-like finish although it is in no way related to a glaze. It is sometimes miscalled polish by careless writers. "Burnishing is done by sealing the surface pores of the leather-hard clay by pressing them in with a pebble, or a tool of metal or bone. This effect is secured either by holding the bowl in the hand, or by pressing the burnishing tool against the vessel as it spins upon the wheel. In polishing, the surface clay is removed from the ware, but in burnishing the surface clay is pressed gently into the ware."

The painting of pottery began as early as neolithic times, but was seldom used as widely as burnishing. The late Bronze Age was the most prolific in its use, and after that period Transjordan was more favorable toward it than western Palestine. White, black and red are the most common colors; blue, purple, yellow and orange are rare. The majority of their colors were probably native earths such as the umbers and ochres. Ceramic painting presents some special problems. The clay surface is absorbent and therefore no corrections can be made upon it. The painting "must be spontaneous, swift and complete, otherwise the clay absorbs unequal amounts of paint at different points and the accuracy of the line is ruined. A line cannot be retouched, for the point of correction will show a blot. Thus the painter must have every detail of his composition definitely fixed in mind before he puts his brush to the clay. Also since much pottery has a circular surface, the design must be so well conceived and executed that the point of juncture is not noticeable." If the ware is to be fired after painting, then the colors will be changed in the kiln and the artist must work out his composition with his finished colors in mind rather than with the actual colors he places on the clay surface.

HOUSEHOLD IDOLS IN CLAY

There is still another important field of ceramics for Old Testament students and that is the heathen household gods. These little pottery idols are of two types. The earliest is a plaque, which was used by the Canaanites before Joshua's conquest. It is elliptical in shape and about three inches in length. It portrays in bas-relief the naked Canaanite mother-goddess of fertility. She usually holds in her hands the lotus blossoms which are one of her symbols. She generally wears an Egyptian headdress with long curls over the ears. She apparently borrowed this from her Egyptian relative, the goddess Hathor. The second type of idol is the "snow-man" type, which came into Israel by way of Phoenicia and continued until the destruction of Jerusalem. These are the household idols so vividly condemned by the prophets.

These idols represent a new technique in pottery manufacture. It is the press-mould type of work. The older plaque idol was made by im-



Fig. 6. Three vases ("bilbils") imported from Cyprus c. 1600 B.C. They were found by Elihu Grant in a tomb at Beth-shemesh. The ware has a hard, grayish-black texture and when struck gives off a metallic sound. Pottery of this sort was imported in large quantities between c. 1600 and 1250 B.C.

pressing a lean wet clay upon an intaglio mould of the goddess. When the clay had dried sufficiently to shrink away from the mould, the plaque was set aside to dry thoroughly, after which it was fired like any other piece of pottery. The snow-man type was a two-piece job; the head was made in a press-mould and the body was modeled free hand; the two were then joined while leather hard. Other pottery cult objects used in the worship of the Canaanite fertility goddess were bulls, doves and small stylized trees with a lamp in the branches. The snake is another member of her cultic family and often appears as decoration on the vessels used in her worship. Two-story pottery shrines have been found as well as a multiple-storied incense altar where lion stands upon lion.

OTHER USES OF POTTERY

Pottery objects were used from the cradle to the grave. At one extreme of life they furnished toys for the children, such as war horses for the boys and dolls and tiny cooking pots for the girls. Pottery even furnished the feeding bottle and the rattle for the baby's entertainment. At the other end of life pottery caskets were sometimes used for the dead.

Industry made use of pottery tools, such as the loom weights of the weaver. In Israelite times these were always doughnut-shaped but came in many sizes. If the siege of a city lasted too long and the army ran out of sling stones, they would bake clay balls of similar size and use them as



Fig. 7. A large storage jar, dating from about the time of Jeremiah, which was found in the ruins of Beth-shemesh. (From Grant, **Ain Shems Excavations,** Pt. I, Pl. 1)

substitutes. The soldier carried a pottery canteen which was so made that it kept the drinking water cool.

Both the business man and the diplomat in patriarchal times wrote with a stylus on clay tablets. If the documents were especially valuable they would be fired in a kiln and thus become imperishable pottery whose contents could never be tampered with. Even maps were drawn on clay long before Abraham's time.

Pottery was used as illustrative material by the prophets and preachers of Bible times. Some of the more important passages are: Ps. 2:9, Isaiah 45:9, 64:8, Jer. 18:1-5, 19:1-13, Zech. 11:13, Mt. 27: 7-10, Romans 9:20-24.

Cheap jewelry and gaming pieces were sometimes made of clay as were the buttons and spindle whorls of the poor. In the days of Jesus even theatre tickets were pottery pieces. It was the pottery lamp that gave light to the house at night and the pottery brazier that warmed it in the winter. The lamp often went to the cemetery and was buried with the dead.

Even broken dishes have their work to do. Larger fragments served as scoops or dippers. In them coals were carried from one kitchen fire to another (Isa. 30:14). They took the place of papyrus and in Samaria the Israelite government even used potsherds on which to write tax receipts. The precious Lachish letters which show us Hebrew writing from Jeremiah's day are military correspondence written upon potsherds. One of the nuisance jobs of a Palestinian archaeologist is the daily dusting of thousands upon thousands of potsherds to see if perchance any writing may be preserved upon them. So seldom does one find writing in Palestinian excavations that this is not a waste of labor.

The final utilitarian end of broken pottery was to be ground up and mixed with water-proof plaster to be used for lining cisterns. Potsherds, however, were so numerous in antiquity that they constituted a good percentage of the debris of all ancient cities. There they speak their own language to the professional archaeologist who digs them up today. They recount the history of the ancient cities where they lie. They date their historic vicissitudes, their economic prosperity, their cultural changes, the march of invading armies, the religious life of the people, the manufacturing skills of the times, the aesthetic standards of the average man. In fact, they present a cross section of the world of the Bible.

MOSES AND THE SINAI INSCRIPTIONS

HERBERT G. MAY Oberlin Graduate School of Theology

[EDITOR'S NOTE: A few months ago I received an inquiry from a subscriber in the state of Washington. This article by Professor May has been prepared as an answer to the question asked. As a background for this article I quote a portion of the subscriber's letter:

"In Dr. Harry Rimmer's Dead Men Tell Tales, pp. 174-5, is the following paragraph:

'In this connection, it is interesting to note how the queen Hatshepsut came into the record, and first interested the student of apologetics. The eminent archaeologist Flinders Petrie, found a tablet on the slope of Mt. Sinai which was written in an archaic script that baffled every attempt to decipher its mystery for nearly thirty years. But at long last Professor Hubert Grimme . . . made out two words. . . . With this key, the tablet was quickly deciphered, and was ascribed to Moses. The text as it appeared follows: "I am the son of Hatshepsut overseer of the mine workers of sin, chief of the temple of Mana Jahua of Sinai--thou, Oh Hatshepsut, wast kind to me and drew me out of the waters of the Nile, hast placed me in the temple (or palace)." On the reverse were directions for locating the place where the writer reported he had buried certain tablets of stone, which he had broken in his anger . . .'

You probably know of the work of Dr. D. L. Cooper of Los Angeles. . . I mentioned this reported find to him. He told me that he talked to Petrie himself about it and that Petrie said that there wasn't a word of truth in it. This conversation I sent on to Rimmer. I quote from part of his reply:

'I am at a loss to know what Dr. Cooper had in mind when he said Dr. Petric repudiated the find. I do not know which Petrie he talked with; but on my last visit to London I talked with Dr. (Sir) *Flinders* Petrie, and he said the account was true. I first read of it in a magazine article, and I believe it was in the London Times, altho I am not now certain. . . I stand by the statement in "Dead Men".

I told Dr. Cooper about Rimmer's letter; and Dr. Cooper replied as

follows: 'I personally talked with Sir Flinders in the city of Jerusalem in the spring of 1937. . . I asked as to the facts regarding that tablet that was supposed to have been found there and that had the name of Moses on it. He told me that at first some scholars had reached that conclusion but that, upon further investigation it was discovered that it did not mean what it had been thought to say. . . The man with whom I talked was the aged Sir Flinders Petrie, the great Egyptologist. He was in his study at the American School of Oriental Research in Jerusalem when I talked with him.'

Is it possible that Rimmer and Cooper are talking about two different finds? How was it possible for something to be so completely deciphered and then found to be all wrong? If that was a false translation, what is the right one?... Thank you for whatever help you can be in this matter."]

In the course of the development of Biblical archeology there have been incidents which now seem incredible, and despite which Biblical archaeology has made real progress. There have been famous forgeries, such as a roll purporting to be the original copy of Deuteronomy and from the hand of Moses. It was said to have been found in Moab, and was disclosed in 1883 by Shapira, a Jerusalem antiquities dealer, who was also responsible for other forgeries. Another strange incident, also involving the story of Moses, has to do not with forgeries but with mistranslations. It is further complicated in popular accounts by misrepresentation of the mistranslations! In a number of publications in which the authors have depended on secondary sources for their information, and have garbled those sources, it is affirmed that a certain alphabetic inscription from the Sinai Peninsula comes from the hand of Moses and describes how he was drawn out of the Nile by Queen Hatshepsut. One writer says the reverse side of the inscription had on it directions for locating the broken tablets of the Law.

The readers of this Journal may be interested in a brief description of the circumstances surrounding the discovery and decipherment of the alphabetic inscriptions from the Sinai Peninsula, and how it came to be believed that they were to be associated with Moses and the Exodus. The story is a warning against drawing conclusions on insufficient evidence, and shows how, to the disservice of liberals and conservatives, errors may be perpetuated long after they have been exposed. It also illustrates the necessity of careful discrimination when secondary sources are used.

It was in 1904-1905 that W. M. Flinders Petrie, later knighted for his archaeological researches, explored the mining areas of the Sinai Peninsula, where the Egyptians had exploited the copper and turquoise resources.¹ Among the sites examined was Serabit el-Khadem, a desolate plateau about fifty miles northwest of Jebel Musa, the traditional site of Mt. Sinai. Rocky ravines cut into the plateau, and turquoise-bearing sandstone beds lay a little lower than the plateau surface. Here also was the temple of Baalat, the goddess of the plateau, who was invoked by the Egyptians as "Hathor, Lady of Turquoise," and nearby were smaller shrines. Under numerous Egyptian pharaohs of different dynasties the turquoise had been mined and the temple precincts repaired and enlarged. Although the mines were worked as early as the First Dynasty, the most

intensive period of exploitation at Serabit was during the Twelfth Dynasty (ca. 2000-1780 B.C.). The Egyptian inscriptions here and at Wadi Mugharah to the south tell the story, revealing something of the extent of the mining activities, the complex organization necessary for the work, and the periods of operation.

Not all the inscriptions were in Egyptian. In the temple and in the vicinity of a mine about one and one-half miles distant Petrie found ten inscriptions in a different writing which he recognized as alphabetic, but which he did not attempt to translate. Another inscription in the same script has been found at Wadi Mugharah. Three expeditions directed by Prof. Lake of Harvard in 1927, 1930, and 1935 added twenty new inscriptions in this writing,² and one was recovered by a Finnish expedition in 1929. These inscriptions are mostly on sandstone slabs or stelae, and a few are on statuettes. On them there are some twenty-three different signs or letters.

Decipherment did not come quickly. In 1916 Alan Gardiner published a study to show that these inscriptions represented an early form of the Semitic alphabet, and showed some influence of the Egyptian hieroglyphic writing. There now seems no doubt that we have here the earliest known example of a purely alphabetic script. Although all scholars do not agree, in these inscriptions we can in all probability find the ancestry of the Phoenician-Canaanite-Hebrew alphabet, as well as the South Semitic alphabets. This means that we may also trace back to these Sinai inscriptions the ancestry of the Greek and Roman alphabets, and so find here the origin of the alphabet used in writing this article. Some of these inscriptions are illustrated in Figs. 8-10. Figs. 11-13 are three examples of the same script found in Palestine, and belonging to around 1700-1500 B.C.

To understand this parent of our ABC's, we must first know that the letters of the Semitic alphabet had names. Some of our readers know that the very word "alphabet" is made up of the names of the first two letters in the Greek alphabet, i.e., Alpha (=A) and Beta (=B). These names were taken over from the Phoenician alphabet, where they are Aleph. which means "ox," and Beth, which means "house." These and other names of the letters suggest that the letters were originally pictographs. To give a few examples: Daleth (=D) means "door," Waw (=W) means "hook," Yodh (=Y) means "hand," Kaph (=K) means "palm," Mem (=M) means "water," Samekh (=S) means "fish," Pe (=P) means "mouth," Resh (=R) means "head," Shin (=SH) means "tooth" ("mountain"?), and Taw (=T) means "sign" or "cross." The Ethiopian name of the letter N is Nahas, suggesting the word Nahash, meaning "snake." The Hebrew name of the letter, Nun, means "fish." This list is sufficient to suggest the original picture out of which the later linear forms may have developed, in part through simplification and conventionalization. It also suggests the principles according to which the alphabet was

¹W. M. F. Petrie, Researches in Sinai, 1906. ²Lake, Blake, and Butin, "The Serabit Inscriptions," Harvard Theological Review, XXI (1928), pp. 1 ff. Lake, Barrois, New, and Butin, "The Serabit Expedition of 1930," Harvard Theological Review, XXV (1932), pp. 95 ff. Starr and Butin, "Excavations and Protosinaitic Inscriptions at Serabit el Khadem,"Studies and Documents, VI, ed. by K. Lake and S. Lake, 1936.



formed. This is the principle of acrophony: the pictograph stood for the initial sound in the Semitic name of the object represented in the picture. Since all Semitic words begin with consonants, this would result in a purely consonantal alphabet. And so it did, for there are no vowels in the Semitic alphabets. Aleph might seem an exception to those not acquainted with a Semitic language, but Aleph is not a vowel, but a laryngeal consonant, usually transliterated', even as 'Ayin, meaning "eye," which is transliterated.'

The gentle reader may now perhaps himself make tentative identification of some of the signs in the inscriptions illustrated with this article.

Alan Gardiner applied this principle to the decipherment of the Sinaitic inscriptions, and suggested the identification of fifteen signs. He was able to spot a recurring four-letter word, b'lt, meaning "Lady" (a feminine form of the word Baal), plausibly identified with the "Lady of Turquoise" of the Egyptian inscriptions (see Fig. 10). With wise caution, in view of the fragmentary and much weathered condition of the texts, he did not attempt a complete translation of the inscriptions. It became clear, however, that the inventor of this alphabet, who was a Semite and not an Egyptian. was yet much indebted to the Egyptians for this revolutionary invention. The characters seem to be imitations of some of the hieroglyphs found on the Egyptian reliefs at Serabit. He may also have been influenced by the fact that, although Egyptian hieroglyphic writing had several hundred signs (mostly biliteral and triliteral signs and ideograms [sense-signs]), it also included twenty-four alphabetic or uni-consonantal signs. Egyptian, however, never took the form of a purely alphabetic script. The hieroglyphic writing was also consonantal, with no vowels indicated, and it is likewise possible that the acrophonic principle was suggested to the inventor of the Sinai alphabet by certain signs in the Egyptian writing.

Yeoman attempts to interpret these inscriptions have been made by Cowley, Sethe, Butin, Sprengling, Leibovitch, Albright, and many others, who have added much to our understanding of them.³ The bibliography is so extensive that no attempt can be made to give it proper recognition, and many different viewpoints are represented. One outstanding scholar doubts that the language of the texts is Semitic, but thinks the authors were non-Semitic Maziou (Midianites). It should be cautioned that the condition and nature of the extant texts are such that the translations by even the most expert epigraphers must be regarded as largely tentative. The wide variety of interpretations made by reputable scholars is sufficient evidence of this. There is hope for a better understanding in the future, for yet undiscovered texts in the Sinai Peninsula and further examples of this writing from the excavations in Palestine may assist us in reading with more confidence the texts already extant. Readers interested in this early alphabet will profit from W. F. Albright's study, "The Early Evolution of the Hebrew Alphabet," in the Bulletin of the American Schools of Oriental Research, No. 63, 1936, pp. 8 ff.

³The reader may be referred especially to the study by W. F. Albricht, "Some Suggestions for the Decipherment of the Proto-Sinaitic Inscriptions," *Journal of Palestine Oriental Society*," XIV (1935), pp. 334 ff.

The popular misunderstanding that the writers of the Sinai inscriptions were Moses and the Hebrews shortly before the Exodus stems from the work of Hubert Grimme, Professor of Semitic Languages at the University of Münster in Westphalia. His study, the product of a too-fertile imagination and utter disregard of established philological principles, was first published in 1923. Although he later modified some of his first conclusions, and there are some worthwhile by-products in his work, his translations are quite utterly undependable.⁴ The following is his first translation of inscription #349, which, incidently, is sufficiently poorly preserved to deserve Sprengling's characterization of it as "a magnificent ruin." (see Fig. 9).

Very naturally this translation was seized upon as a startling substantiation of the Biblical text. It was written by Moses himself! It revealed that it was the Egyptian Queen Hatshepsut who had saved Moses from the Nile! An excited journalist reported that a part of the Decalogue had been found.

To get this reading, Grimme read abrasions and weather-marks on the eroded and broken surface as letters. In the first line Grimme read sixteen letters. Butin, Barrois, Leibovitch, Albright and others can see but five letters. Grimme saw strange letter-combinations, without parallel in the early alphabetic texts. This same text is read by Butin as follows, and he says it is merely an attempt to make the best of a bad case:

"This A-N-T [mine or sleeping shelter] is occupied by the head stone-setter, M-SH, an E.R-Y (te) from L-B-N (?), and by . . A-H [by . . . the brother of] the prince of his tribe, and by B-N [his son]"

Albright considers it a burial stela, and his translation of this same inscription is:

Thou, O this one, chief of the mine, hearken to the desire (?) of (my) heart \ldots

Sprengling finds it was written by the "foreman of the monument-makers, from Seir of the Sea," as he interprets the second and third lines, with some "foul odor" mentioned in line 4.

We should add that Grimme has several times changed his reading of the text, once rejecting the reference to Moses being drawn from the Nile, and later restoring it, albeit on the basis of a somewhat different text. He now finds in it no Yahu. In one text, #373, Grimme found in the margin, by the purest imagination, four notes which he read "This is Moses," "This is Moses," "To Moses," and "From Moses." The text proper he interpreted: "Hatsepshumose prayed standing, slept, and spent the night." He finds in another text a mention of Thutmose, and in other texts a number of Biblical Hebrew names which are characteristic only of the later period of Hebrew history. One of the more recently discovered Sinai texts is interpreted by Grimme to have been written by a certain Nathaniah of the tribe of Naphtali, who affirms that Yahu is God!

Apart from sound philological and epigraphic considerations, which make Grimme's readings a monstrosity, there are many historical reasons why his interpretation is incredible. Hatshepsut reigned as queen over Egypt from 1504-1482 B.C. The Sinaitic inscriptions are much earlier than this, probably at least three hundred years earlier. The most plausible date is, as most scholars agree, near the end of the twelfth dynasty (which came to an end in 1780 B.C.), perhaps during the reign of Amenemhet III. This date is made more probable by comparison with the earliest examples of this script found in Palestine. The archaeological data make any association of Moses and Hatshepsut impossible. The excavations at Bethel, Lachish, and Debir, the building of the city Raamses in Egypt, and Nelson Glueck's explorations in Moab and Edom, all point in the direction of the Exodus under Moses in the thirteenth century B.C. (see the discussion by the Editor, "The Epic of Conquest," in this Journal, Vol. III, 1940, pp. 25 ff.). Thus Moses lived around two hundred years after Hatshepsut, and Hatshepsut lived around three hundred years after the date of the Sinaitic inscriptions! Misguided enthusiasts intent on bolstering pre-conceived theories may sometimes reach strange results, however, as is illustrated in a recent book on archaeology and the Bible, written from an Anglo-Israelite viewpoint. In it the author accepts Grimme's findings, placing Moses contemporary with Hatshepsut, and yet holds that the exodus took place in the reign of Merneptah, who actually reigned around 1235-1227 B.C.

This brief article has not attempted to present a complete picture of the history of writing in the Near East, nor to tell the story of the development of the alphabet.⁵ Another important alphabet, the cuneiform alphabet of Ugarit, and the contents of the Ugaritic inscriptions have been interestingly discussed by Prof. Ginsberg in an important article in this Journal for May 1945. It may be noted in passing that attempts have been made to associate the origin of the Phoenician alphabet with Aegean linear writing, Egyptian hieratic, or even Akkadian cuneiform. Some scholars have seen in a linear syllabic script discovered at Byblos and belonging to the late third millennium B.C. the real source of this alphabet, rather than in the Sinaitic inscriptions. Even Butin comments that the question of the derivation of the Phoenician from the proto-Sinaitic alphabet is still open. It remains, however, still the best hypothesis. It is hoped that soon these pages will tell the story of the origin and development of the alphabet. Here we have limited our interest more narrowly to the Sinaitic inscriptions.

⁴H. Grimme, Althebraeische Inschriften von Sinai, 1923. Die altsinaitischen Buchstabeninschriften, 1929. Die Loesung des Sinaischriftproblems, Die Altthamudische Schrift, 1926. Altsinaitische Forschungen, Epigraphisches and Historisches, 1937, etc.

⁶For popular presentations see J. W. Flight, "The Present State of Studies in the History of Writing in the Near East." in *Haverford Symposium on Archaeology and the Bible*, ed. E. Grant, 1938. See also T. J. Meek, "The Beginnings of Writing," in *The University of Toronta-Quarterly*, 1941, pp. 15 ff.

MANUSCRIPTS OF THE OLD TESTAMENT IN HEBREW

HENRY S. GEHMAN Princeton Theological Seminary

It is an interesting fact that the oldest manuscripts of the Old Testament in Hebrew are no earlier than the ninth century A.D. A copy of the Pentateuch (Gen.-Deut.) in the British Museum, while undated, was probably written about A.D. 820-850. Another manuscript was copied and edited about A.D. 890-895 by Moses ben-Asher of Tiberias, a town on the shore of the Sea of Galilee. It contains only the Former Prophets (Josh.-Kings) and the Latter Prophets (Isa., Jer., Ezek., the Twelve); and is now in the possession of the Karaite community at Cairo. His son Aaron ben Asher (c. A.D. 900-940) continued his father's studies: a manuscript based on his work and including the entire Old Testament is in possession of the Jewish community at Aleppo in Syria. A copy of this was made in A.D. 1009, and is now in Leningrad. The oldest extant manuscript of which the date can be accepted with certainty (A.D. 916) contains the Major and Minor Prophets; it also is now in Leningrad. The Samaritan sect at Nablus claims a great antiquity for its manuscripts of the Pentateuch. One portion is dated A.D. 655-6; but as far as we know there are no other Samaritan manuscripts which are earlier than the tenth century.

There is one fragment, however, which is older than any of these. That is a small leaf called the Nash papyrus, which contains the Decalogue or Ten Commandments and the Shema (Deut. 6:4-5). It was found in Egypt and has been dated by Professor William F. Albright in the second half of the second century B.C. Since it was not a part of a roll of the Pentateuch but a separate leaf, it was probably used for teaching purposes or as a lectionary. In this connection we may mention two other fragments of Deuteronomy of about the same time, which are not in the original Hebrew but in Greek. One is papyrus No. 458 in the John Rylands Library. The other, which has just recently come to light, is Inventory No. 266 in the Fouad collection of papyri in Cairo (*Jour. of Theol. Studies*, 1945, pp. 159 f.). These fragments are the oldest bits of the Old Testament now extant.

There are various reasons for the small number of really old Hebrew manuscripts. Many must have been lost during persecutions with the consequent destruction of property as well as in the extensive wandering and dispersion of the Jews. It should also be noted that old manuscripts had no special value because of the meticulous care bestowed on copying new ones. Out of reverence for their sacred contents, however, old manuscripts were not deliberately destroyed. When they became shabby, they were often placed in a cupboard in the synagogue, and when the receptac'e became full, the discarded volumes were buried in the cemetery. The genizah, or lumber room of the synagogue, was also a storage place for old and wornout manuscripts. Many fragments of Old Testament manuscripts were found in the Genizah at Cairo; these have been dated from the seventh to the ninth century A.D. Since the consonantal text was practically fixed by the seventh century A.D., their chief value lies in giving us the Eastern pronunciation. The fact is that the oldest manuscripts of the Old Testament which we have are copies of the Greek translation, the Septuagint; these were preserved in Christian communities where conditions were far more stable than in Jewish centers.

Since our main Hebrew manuscripts are so late, questions arise regarding the transmission of the Hebrew text. How has it reached its present form and what variants have come into existence?

The original language of the Old Testament was, of course, Hebrew except for a few passages in Aramaic (Ezra 4:8-6:18; 7:12-26; Dan. 2:4b-7:28; Jer. 10:11; and two words in Gen. 31:47). Hebrew was written at first in the Phoenician alphabet, of which examples with slight variations are found in the Ahiram inscription from Byblos in Syria (c. 1100 B.C.), the Mesha or Moabite Stone (c. 850 B.C.), the Siloam inscription (c. 700 B.C.), and the Lachish Letters written during the last siege of Jerusalem by the Chaldeans. The books of the Old Testament were originally written in a form of this old alphabet, but between the sixth and fourth centuries B.C. the Jews adopted a further development of this, the Aramaic script, out of which grew the so-called square characters. Eventually the Old Testament was transcribed into this later alphabet. Some of the difficulties of the Hebrew text and variations in the Septuagint from the Hebrew may be explained as due to the transition from the one Hebrew script to the other. The extant Hebrew manuscripts of the Bible are all written in the square characters, which are still employed in the modern editions of the Hebrew Bible as well as in modern Jewish literature.

We do not have much information concerning the methods used by the authors in writing the Old Testament books, although we know that Jeremiah had a scribe, Baruch, to whom he dictated his prophecies. (We may refer to Professor Hyatt's article on this subject in B.A. VI. 4, Dec. 1943). Since scribes or clerks were a recognized profession in Israel. we may infer that it was the scribes who copied the Law and other parts of the Scripture. The most noted of the earlier scribes was the priest Ezra. who was "a ready scribe in the law of Moses" (Ezr. 7:6). Such men, to whom we owe the transmission of the text of the Old Testament, were more than mere copyists. In the course of time different recensions of the Old Testament arose in various parts of Palestine and Babylonia. The manuscripts did not agree in details, and it was the scribes who determined which ones were to be considered as standard or basic for copyists. The scribes were known as sopherim (counters), because it was said that they counted all the letters of the Hebrew Old Testament; they know the middle verse, the middle word, and the middle letter of the various books. Under the guidance of carefully established rules a high standard of accuracy was maintained.

The *sopherim* were also the authorized revisers of the text, and in case of variants they decided which were to go into the text and which were to be put in the margin. Certain indelicacies in the record were toned down; impious expressions toward God were altered; and the pronunciation of the Divine name was properly safeguarded. It seems that out of reverence for the Divine name Yahweh and to avoid sacrilege, there had grown up by about 300 B.C. the custom of pronouncing the tetragramma-

ton (the four consonants of the Divine name, YHWH) as Adonay (Lord). If YHWH was preceded by Adonay, it was pronounced Elohim (God). Later when vowels were added to the Hebrew consonants, the tetragrammaton was provided with vowels of Adonay or Elohim, as the case required. It may seem strange that by the time of Jerome (c. 400 A.D.) there were Christians who thought that the Hebrews pronounced the Divine name as Pipi. The Fouad papyrus which was mentioned above clearly furnishes the evidence as to how this came about. On this early document the scribe carefully measured his spaces before inserting the tetragammaton in Aramaic characters. This proves that at first out of reverence for the Divine name the Septuagint did not translate or transliterate YHWH, but copied it everywhere in the Semitic alphabet. In the Fouad text the four Aramaic characters resemble Greek Pipi, and we can see how these Greek letters eventually became a convenient substitute for the tetragrammaton. Consequently ignorant readers of a later time, not knowing their origin, misread the Divine name as Pipi.

Hebrew words were originally written only with the consonants, the vowels being supplied by the reader. The *sopherim* were succeeded, however, by a group of Jewish scholars and grammarians known as the Masoretes, who supplied vowel points to indicate the traditional pronunciation. According to C. D. Ginsburg the introduction of these signs took place about A.D. 650-680, and the work of the Masoretes was completed by A.D. 700. These vowel signs gave fixity to the text and assured greater accuracy to its interpretation. There was also added a system of accents to indicate the proper accentuation of the words and their grouping into units of thought. The Masoretes are so called from the Hebrew word *masoreth*, *masorah* (tradition), and the text they have handed down to us is known as the Masoretic text.

The province of the Masoretes was to safeguard the text against revision; they had to protect it against alterations or the adoption of any variant readings which still survived in manuscripts or were exhibited in the ancient versions. Accordingly they marked in the margin every unique form, every peculiarity in orthography, and every variation in ordinary phraseology in addition to other grammatical information. Through the labors of the Masoretes there have been transmitted to us the readings of the Eastern or Babylonian schools and those of the Western or Palestinian; the most famous of the latter was that of Tiberias. The variations in the Masorah, however, were not confined to these two schools; there were also local differences within the larger groups. The two schools did not use the same method of writing the vowels, but ultimately the Western system prevailed.

The variations in the Hebrew text which are best known to students are the *kethib* (written) and the *kere* (read). The *kethib* is the word actually written or appearing in the text, for which according to the Masoretes the *kere* is to be substituted. The *kethib*, however, cannot always be rejected, since in some cases it represents an old tradition; it may furthermore have the support of ancient versions, and thus be the better reading.

It is generally assumed that the Masoretic text was fixed about the beginning of the second century A.D., and that all the extant manuscripts of the Hebrew Old Testament contain substantially a Masoretic text. The Hebrew text used in the early centuries of the Christian Era by Theodotion, Aquila, Symmachus, Origen, and Jerome is certainly very close to that of the Masoretes. Yet it is apparent that the Old Greek or Septuagint in many readings is based on a Hebrew text different from that prepared by the Masoretes. In the Pentateuch, for example, it often agrees with the Samaritan recension. Not all of the pre-Masoretic material, however, has been lost. Frequently we can discern how the Masoretes formed conflate readings from alternative traditions by combining a portion of each in the same verse. In 1776-80 Bishop Kennicott published the readings of no less than 634 Hebrew manuscripts; in 1784-88 and 1798 De Rossi issued collections of 825 more. A study of these readings in the Books of Kings. is now being made under the direction of the writer by his pupil John W. Wevers, and the results achieved show that for these books the extant manuscripts do not show only one Hebrew text tradition. Many readings have been preserved with which the Old Greek agrees against the Masoretic text, and there also appear readings which are the basis of Lucian's recension. Accordingly, the various text traditions have not been lost entirely, although it is well nigh impossible to classify the Kennicott-De Rossi manuscripts since the texts are mixed as a result of being copied under Masoretic influences.

Yet when all is said and done, it may not be amiss to say that from a study of the Old Greek and the several Greek recensions together with the Masoretic text, the Hebrew variants, and other ancient versions, we know as much of the original text of the Old Testament as we do of that of Shakespeare.

THE B. A. IN 1946

During the next year, our ninth, the following articles are planned: The February number is to contain an article by Professor Harry M. Orlinsky of the Jewish Institute of Religion on the Septuagint, the Greek translation of the Old Testament which for many centuries was the Bible, not only of the Early Church, but of Greek-speaking Jews as well. Dr. Nelson Glueck, Director of the American School of Oriental Research in Jerusalem, plans to prepare an article for the May number on some phase of his explorations. For the September number we plan to have an article on New Testament manuscripts. Professor I. Mendelsohn of Columbia University has promised an article for the December number dealing with the subject of slavery in the ancient Near East (or Middle East — which shall we call it?).

Shortage of labor at the printer's is the reason this number is delayed. The February number will also be late.

DR. GLUECK'S NEW BOOK

People who are interested in the Bible, in archaeology, in Palestine, and/or in beautiful book-making are in for a treat. Dr. Glueck's new book is to be published by the Westminster Press in Philadelphia about March, 1946. Its title is: THE RIVER JORDAN. Being an Illustrated Account of Earth's Most Storied River. The book contains 116 photographs, two maps, and is priced at only \$3.50. The text consists of a graphic, interesting, sometimes almost lyrical, account of the author's latest explorations. The pictures are unrivaled, few of them ever before published; they represent the finest collection of Palestinian photographs ever collected in one volume. The two maps, one of them in color, have been especially prepared from the relief used in the *Westminster Atlas*. The Publisher and Printer are the same as those who produced the *Atlas*, and they are sparing no pains to make it as beautiful a book as the resources and modern techniques will allow.

DO YOU POSSESS ANY ANCIENT SEALS?

The Iranian Institute in New York, the Oriental Institute of the University of Chicago, and the Yale Babylonian Collection have agreed to sponsor jointly a Corpus of Ancient Near Eastern Seals. The Corpus is meant to include all seals preserved in the United States and Canada. The project has been privately financed and a committee elected of which Professor Albrecht Goetze of Yale University is the chairman and Professor Henri Frankfort of the University of Chicago the vicechairman.

As a first step toward the realization of the project it is proposed to catalogue and to photograph all the unpublished seals that can be located. Ultimate publication of the accumulating file in the form of a book is contemplated.

The co-operation of all owners of seals, private collectors as well as museums, is invited. They are asked to communicate with the chairman of the committee, Professor Albrecht Goetze, Yale University, New Haven, Conn.

