

Making of Alphabet Traced to Sinai

Archæology

By EMILY C. DAVIS

The wilderness of Sinai, one of the most desolate corners of the earth, must have been the scene of two of the world's greatest discoveries—the use of metals and the alphabet.

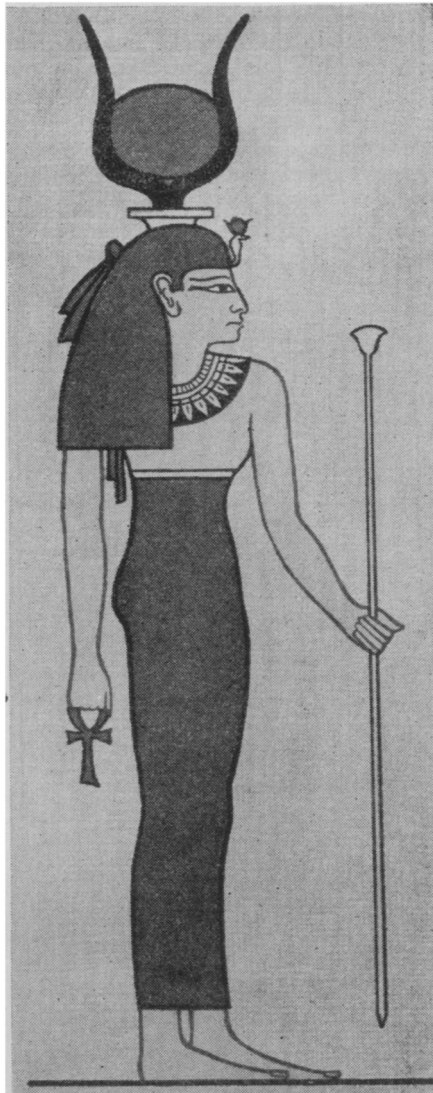
This, at least, is the belief of scientists who have been studying the evidence preserved near the copper and turquoise mines of the barren Sinai peninsula.

Sinai was pointed out as the most probable region where man first learned to use metals by Dr. Henry Breasted, noted Egyptologist and director of the Oriental Institute. Wealth of copper and turquoise hidden in its maze of rocks is the redeeming feature of the wilderness. But in the prehistoric Stone Age, men and women saw the glint of copper veins in the rock and went right on blindly making crude stone tools and weapons. Finally, about 4000 B. C., it is believed, an Egyptian wanderer in Sinai banked his campfire with pieces of copper ore lying on the ground, and next morning was pleased to see glittering beads of metal in the ashes. In time, he or his fellows learned to turn the magic trick at will. The shining metal was good for bead necklaces. It was good for making sharp blades. And so man entered into the Age of Copper.

Now, the alphabet's origin is also being linked with Sinai's mines—its turquoise mines, in this case. For years, scholars of languages have tried to trace back to its first chapter the story of how man learned to make his letters. They have shown that our alphabet traces its ancestry back to the alphabet invented by the Phoenicians, a practical people who believed they could simplify the difficult picture and sign writing of the Egyptians and Babylonians. But why, and when, and how the Phoenicians took the important step has been one of the great unsolved scientific mysteries.

It was more than twenty years ago that a British expedition in Sinai first discovered there some stone tablets carved with inscriptions in a strange alphabetic writing. Most of the evidence could not be moved back then to civilization, so the scientists made the best copies and photographs of the inscriptions that they could in the time they had and returned to tell about their important find.

And ever since, the Sinai inscrip-



HATHOR, the popular Egyptian Cow-Goddess, whom the Sinai miners adopted as one of their own deities

tions have been a big question mark. Were they the missing link in the evolution of the alphabet? Were they the exhibits of man's first attempts to use the great literary invention? Last spring, a Harvard-Michigan expedition, led by Prof. Kirsopp Lake, journeyed to Sinai in search of old manuscripts and stopped at the turquoise mines on their return. They discovered there three new inscriptions in the strange writing, and with much trouble loaded seven of the tablets on camels and brought them down to Egypt. At Cairo, the inscriptions were examined by Prof. Romain Butin, an American archæologist of the Catholic University, who at once set upon the

task of translating the set of writings, and now finally his interpretation has been reported to the Harvard Theological Review.

These inscriptions on tablets of stone are the oldest known alphabetic writing of the Phoenicians, Prof. Butin concludes. He estimates that they were made about 1900 B. C., several centuries before Moses or Tutankhamon—back in the days of a pharaoh who was one of the pyramid builders, Amenemhat III. But, old as the writings are, and they are several hundred years older than the alphabet has ordinarily been supposed to exist, they are not the very first samples of the famous Phoenician alphabet, he says, for they must have been preceded by some more primitive, more picture-like signs.

But if man's first attempts at his letters have not been discovered, from the clues now available it is possible to reconstruct the manner in which the alphabet was devised.

From early days of Egypt, the pharaohs knew of the treasures buried in the Sinai wilderness, and sent expeditions across the Red Sea to mine for precious stones and copper. Many of the miners of about Amenemhat's time were Semites from Phoenicia and Syria. Whether or not they were of the Hebrew branch of the Semitic race and whether they had any connection with the Hebrew tribes of the Bible had not been determined. They were not the oppressed slaves of later pharaohs at any rate, because it is known that they came willingly to Egypt in large numbers, and there is evidence that they were fairly treated.

The Semitic miners of Sinai took rounded stones to make rock huts for themselves. They found near the mines a rock shrine to the Egyptian Cow Goddess Hathor, Lady of Turquoise, and the miners, eager for the favors of the goddess who brought success in the quest for the blue stones, worshipped her with Semitic rites. They used the old, old method of setting up tablets as permanent reminders to the goddess of their petitions. And it is some of these stone carvings that Prof. Butin has pronounced the oldest known writings in the Phoenician alphabet.

Now, the Phoenician workmen might have been content to let the Egyptians carve out their sentiments in the difficult Egyptian hier- (*Turn the page*)

Making of Alphabet Traced—Continued

oglyphics. But perhaps they wanted to be able to read the tablets of petition and to assure themselves that their petitions to Hathor were just as they wanted them. They probably felt, too, that the Phoenician tongue, which they used, was more appropriate in approaching a Semitic deity.

Whatever the outstanding reason was, Prof. Butin concludes that some of the Semitic leaders, perhaps with the aid of an Egyptian, worked out for the miners a set of symbols with which prayers to Hathor and records

of important events could be more simply written. The working models for the alphabet were the great array of pictures of the Egyptian hieroglyphics in the region. The ox-head sign became one letter, later on our letter A. The Egyptian box-like picture of a house became the forerunner of our letter B, and so on. So, mostly from the Egyptian monuments, they selected enough signs to represent the different consonant sounds in their own Phoenician language.

It seems fairly certain that the alphabet was made in this lonely place from Egyptian inscriptions nearby, because the alphabet signs that appear here are so much more like the Egyptian picture writing of Sinai than like the picture writing of Egypt. The pharaohs did not send their best craftsmen out to the wilderness. Even the crudities of the Egyptian workmanship are reproduced by the inventors who were trying to simplify the business of writing.

“Some people find it hard to believe that such an epoch-making invention as the Phoenician alphabet could have come out of this unlearned mining colony,” said Prof. Butin. “It is popularly supposed that the benefactor who made this great contribution to civilization must have been some learned Phoenician aiming to promote scholarship.

“But the opposite is more likely to be the truth. Highly educated people, familiar with the complex methods of writing used in ancient times, would have scorned a simple method, considering it useful to the ignorant but not worthy of their attainments. The Egyptians themselves had an alphabet system, but they never used it exclusively and clung to their old system of writing partly in pictures and partly in alphabetic signs. Even when the fame of the Phoenician alphabet spread to Egypt, they clung to their old complex system, the badge of intellectual superiority. So, it seems that the forerunner of the modern alphabet must have been invented for everyday people, who could not learn anything more difficult.”

The Semitic miners used their alphabet chiefly for religious purposes, but they also recorded events on the tablets, and in at least one case it served to record for them an eventful time when they displayed bravery in action.

An inscription recently discovered, cut in the wall of one of the turquoise mines, is interpreted by Prof. Butin: “The gang, consisting of nine men, successfully protected the baskets (of turquoise) for the superior officer (whereupon) Ram and his people made a great celebration.”

Explaining his translation of this dramatic bit of history, Prof. Butin says:

“There seems to be an allusion to a raiding party which attacked the convoy carrying the baskets of turquoise to the officer, or (Turn to page 249)

SINAI	PHOENICIAN	EARLY GREEK	LATIN	ENGLISH
𐤀 𐤁 𐤂	𐤀	Α Δ Α	A	A
𐤃 𐤄 𐤅 𐤆 𐤇	𐤃	Β Γ Δ	B	B
𐤈 𐤉 𐤊 𐤋	𐤈	Ϝ ϝ	CG	CG
𐤌	𐤌	Δ Δ	D	D
𐤍 𐤎 𐤏	𐤍	Ε Ζ	E	E
𐤐 𐤑 𐤒 𐤓	𐤐	Ϟ ϟ Ϡ	FV	FVU
𐤔 = =	𐤔	Ι	...	Z
𐤕 𐤖	𐤕	Η Θ Η	H	E H
𐤗 𐤘 𐤙	𐤗	Ϝ ϝ	...	TH.PH
𐤚 (𐤛)	𐤚	Ζ Ξ Ι	I	I
𐤜 (𐤝)	𐤜	Ϟ	...	K.KH
𐤞 𐤟 𐤠 𐤡 𐤢	𐤞	Λ	L	L
𐤣 𐤤	𐤣	Μ	M	M
𐤥 𐤦 𐤧	𐤥	Ν	N	N
𐤨 𐤩 𐤪 𐤫	𐤨	Ξ Π	X	X
𐤬 𐤭 𐤮	𐤬	Ο	O	O
𐤰	𐤰	Ρ	P	P
𐤲 𐤳 𐤴	𐤲	Μ Ν	...	S
𐤶	𐤶	Ϟ ϟ Ϡ	Q	Q
𐤸 𐤹 𐤺	𐤸	Ρ	R	R
𐤼 𐤽	𐤼	Ξ	S	S
𐤿 𐆀	𐤿	Τ Τ	T	T

STEPS IN THE EVOLUTION of our modern ABC's. Ten additional signs have been found on some of the stone writings in Sinai, making 32 letters in that ancient alphabet

Alphabet Traced—Continued

which attacked the camp where the officer lived, and where the raiders expected to find a rich booty. Ram, who was evidently interested in the gang, organized a celebration in which his people or clan, took part. The inscription may have been written by order of Ram himself."

The great inspiration of the inscription carvers, however, was Hathor, the Lady of Turquoise. All of the tablets found in the pile of rocks at the entrance to the mine deal with Hathor, or as she was sometimes called, Baalat, the Lady.

A typical inscription near her shrine has been translated by Prof. Butin:

"O, Baalat, kindly answer (me in) my sleep in the shelters in which people spend the night."

This plea for an answer from the goddess means that the person who set up the tablet went to the temple to sleep, hoping that in the sacred place he would get a dream message.

This idea, that religious dreams come in holy places, was a prevailing one during the time, the archæologist states. Among the ruins to the temple of Hathor near the turquoise mines, are a number of small box-like rooms, and these are believed to be sleepers' quarters reserved for the ceremony of dreaming religious dreams.

Jacob, perhaps a contemporary of the Sinai miners, had a religious dream vision of angels when he slept in the open, and he set up a stone pillar afterward to mark the site as holy. In Greece, somewhat later, the sick went to dream in the shrine of the god of healing, Asklepios, hoping to learn what treatments they ought to take.

The miners of Sinai dreamed at the temple chiefly in the hope of getting aid in the mining quest and to ask protection from robbers. And judging from the number of compartments and rock shelters in front of the temple, dreaming was an important part of their religious ceremonies.

Among all the Sinai inscriptions, the one that has had most fame is one that now turns out to be commonplace. Four years ago, a German scholar, Prof. H. Grimme, studied a photograph of this inscription and declared that it was written by Moses, the leader of the Israelites. Moses, Prof. Grimme announced, was identified in the inscription as the superintendent of the miners and caretaker of the temple of Hathor,

which was also the temple of the Jewish Jehovah. According to the professor's translation, Moses set up the tablet to give thanks to Pharaoh's daughter Hatshepsut for rescuing him as a child from the Nile River and for the positions of power she had bestowed upon him.

Most scientists were frankly incredulous at this interpretation. Now, after seeing the original tablet, which has been brought to the Cairo Museum, Prof. Butin reports that many of the marks that Prof. Grimme took for alphabet signs in the photograph of the tablet are really scratches and cracks from the long exposure of the red sandstone to the weather. Prof. Grimme has been in Cairo recently and is preparing a new translation.

Prof. Butin's translation from the same badly worn tablet is that it is a petition addressed to the goddess Hathor by one of her devotees. Part that can be read in spite of the worn surface says: "This libation altar Mash, head of the stele setters, erected. Arise, now, O Baalat—"

The great interest of this inscription, he says, is the fact that the name of the head stone worker is given here, and it might be Moses. There are no vowels in the Phoenician writing, just as there were none in the Egyptian. The name is simply carved M-SH, which might be Mash or Mosheh. But, in any event, the mine official of the Sinai wilderness lived long before the struggle of the Children of Israel in Egypt, and he had nothing in common, except his name, with the great law-giver of Israel.

One small clue indicates that Sinai's mines have more to reveal about the alphabet. It is a puzzling coincidence, says Prof. Butin, that so many memorial tablets should be found tossed among the stone heaps before a mine entrance. Apparently, this was a workshop where the "writers" carved out their inscriptions. But why were those particular inscriptions never set up in their proper places beside the altar or structure for which they were designed? Were they defective, or was there some earthquake, plague, attack by robbers, or some other disaster that prevented the tablets being formally set up? And, most important of all, surely there were not merely fourteen tablets to Hathor in this camp of her devoted followers. Are there many others buried under the rock-strewn soil that could be uncovered by the spade of the archæologist? (Turn the page)

Rescues Indian Language

Anthropology

Rescuing a dying language is a task which Dr. F. G. Speck, professor of anthropology of the University of Pennsylvania, has set himself. Dr. Speck recently returned from a hurried expedition to the Catawba Indian reservation in South Carolina, where he collected legends, medicine practices, and formulas, many of them in the Catawba tongue.

Languages of some Indian tribes are spoken by thousands of living Indians, but the remarkable Catawba language has faded from use until it is now spoken by only two Indian women, Mrs. Samson Owl and Sally Brown. Dr. Speck was appointed by the Committee of Research in American Indian Languages to make records of what these old people remember about their language and their unique customs.

This southern tribe is descended from the famous Ohio mound builders, Dr. Speck explains. In early times the Catawbias inhabited the Appalachian Mountains from Virginia southward. They were numerous and powerful and they spread over a large area. Their language and their blood were passed on to the great Sioux and plains nations.

"The Catawbias spoke a language made up of monosyllables," Dr. Speck says. "It was a much simpler language than the Indian languages in other parts of the south."

"The passing of a great and prominent human language from the earth must have happened many times in the history of races having no written language. But science will not stand by now and see this unhappy drama enacted without making some effort to save some record of a dying tongue."

The mighty Catawbias have dwindled fast since the white man's coming. A little over a century ago they were credited with 1,700 warriors, which would mean a population of about five times that number. At present the tribe has 30 warriors, and altogether 170 people.

Science News-Letter, April 21, 1928

Ground squirrels are nicknamed flickertails because of their habit of flicking their short tails up and down when uttering their call notes.

A German automobile club has offered court judges in Hamburg free driving lessons so that they may better understand automobile traffic problems.



WHAT PRICE KNOWLEDGE?

In ages of the past those who sought it—found it

But it was often expensive and limited to a few

What is it, then, that distinguishes this age of amazing scientific progress from the slowly moving ages of the past?

Is it not because new information, valuable to science, is no longer confined to its source?

Is it not because new discoveries are known almost immediately after their accomplishment?

THE WISTAR INSTITUTE BIBLIOGRAPHIC SERVICE

brings to your desk today, in AUTHORS' ABSTRACT form, the results of yesterday's experiments and researches in anatomy and zoology before the papers actually appear in printed form!

These advance abstract sheets contain prices for reprints of the complete papers listed therein. This makes it possible, for those who desire, to purchase copies of papers of most interest, at slight cost, without the necessity of subscribing to any or all of the journals which are included in

THE WISTAR INSTITUTE BIBLIOGRAPHIC SERVICE
ADVANCE ABSTRACT SHEETS - - \$3.00 per year

Issued every few days

BIBLIOGRAPHIC SERVICE CARDS - - \$5.00 per year

With complete bibliographic references

THE WISTAR INSTITUTE OF ANATOMY AND BIOLOGY

Thirty-sixth Street and Woodland Ave. - - - Philadelphia, Pa.

Alphabet—Continued

These questions, raised by the translator, may be answered, for the Harvard-Michigan expedition has announced its intention of setting out again in 1929 to probe still further the mysteries of the alphabet in the Sinai wilderness.

Science News-Letter, April 21, 1928

Ferns like shade, but grow best in an airy, slightly sunny place rather than in a dark sunless corner of a room.

A new island has appeared near the island of Krakatao since the recent eruption of Krakatao's famous volcano.

A health campaign in a northwestern city has resulted in ten times as much spinach being eaten as in previous years.

A loblolly pine tree in Louisiana grew so fast for ten years that its diameter increased an average of an inch and a half each year.

China is having trouble with private mints, which illegally turn out coins containing much less silver than the government standard.

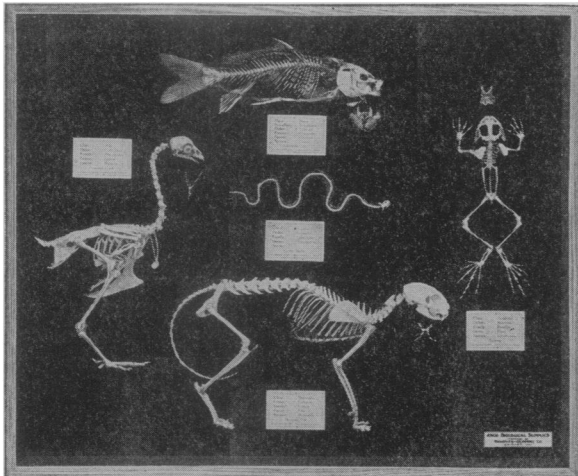
The corn belt of the United States produces more food for livestock and more meat for human use than any other area of its size in the world.

Staff of Science Service—Director, Edwin E. Slosson; Managing Editor, Watson Davis; Staff Writers, Frank Thone, James Stokley, Emily C. Davis, Marjorie MacDill; Sales and Advertising Manager, Hallie Jenkins.

Board of Trustees of Science Service—Representing the American Association for the Advancement of Science, J. McKeen Cattell, *Treasurer*, Editor, *Science*, Garrison, N. Y.; D. T. MacDougal, Director, Desert Laboratory, Tucson, Ariz.; M. I. Pupin, Professor of Electromechanics, Columbia University, New York City. Representing the National Academy of Sciences, John C. Merriam, President, Carnegie Institution of Washington; R. A. Millikan, Director, Norman Bridge Laboratory of Physics, California Institute of Technology, Pasadena, Calif.; Dr. David White, Chairman of the Division of Geology and Geography, National Research Council. Representing National Research Council, Vernon Kellogg, *Vice-President and Chairman of Executive Committee*, Permanent Secretary, National Research Council, Washington, D. C.; C. G. Abbot, Secretary, Smithsonian Institution, Washington, D. C.; Victor C. Vaughan, Professor Emeritus of Hygiene, University of Michigan. Representing Journalistic Profession, John H. Finley, Associate Editor, *New York Times*; Mark Sullivan, Writer, Washington, D. C.; Marlen E. Pew, Editor of Editor and Publisher, *New York City*. Representing E. W. Scripps Estate, W. E. Ritter, *President*, University of California; Robert P. Scripps, Scripps-Howard Newspapers, West Chester, Ohio; Thomas L. Sidlo, Cleveland, Ohio.

High Grade Prepared Skeletons

At Favorable Prices
Satisfaction Guaranteed



Of the extensive line that we prepare and carry in stock, the following select items are favorites with High School and College instructors:

Z015 Squalus, cartilaginous, in museum jar	\$25.00
Z050 Necturus on base	11.00
Z061 Bull Frog in glass	12.00
Z066 Grass Frog in glass	6.50
Z0105 Turtle, 8" to 10"	12.50
Z0116 Alligator on base	25.00
Z0130 Chicken on base	16.00
Z0135 Cat on base	18.00
Z0195 Monkey on base	25.00

We have frequent calls from High Schools for a set of vertebrate skeletons mounted in a hardwood glass-covered wall case, size 24x32". This set includes the Perch, Pigeon, Turtle, Rat and Grass Frog, price \$53.00.

The larger set with specimens as illustrated above costs \$75.00.

Our skeletons are excellent for class use as well as for building up the permanent school museum.

Write for complete list and for biology catalog No. 5B.

DENOYER-GEPPERT COMPANY

Makers and Importers of Anatomical Models, Charts, Skeletons, Specimens and Slides

5235-57 Ravenswood Avenue

Chicago, Ill.