

## LINGUISTICS

# New Research Promises To Solve Maya Writing System

## Hieroglyphics Stand For Sounds, Says Harvard Worker, As He Translates Text Abandoned by Most Scholars

**P**ERSISTENT efforts of scholars to decipher the strange picture writing system of the Mayan Indians of Yucatan will at last be rewarded, it appears from a report by Benjamin Lee Whorf, just published by the Peabody Museum of Harvard University.

For years archaeologists have pored over the stone monuments and the books that hold the written records of America's highest ancient civilization. The Mayan Indians had many books in their priestly and astronomical libraries, but when the Spaniards conquered Mexico, missionary zeal made huge bonfires of the heathen picture books, and only three Mayan books survived.

Modern scholars, studying these books and the numerous stone-carved inscriptions in ruined Mayan cities, were successful to the extent that they learned to read the signs that represented dates and astronomical calculations. This was more of an achievement than the bare statement would suggest for most of the inscribed monuments dealt with these matters. The students of Mayan writing also succeeded in recognizing some of the picture signs that represented Indian gods, and other symbols. But hope of understanding the system on which the writing was based has grown dim in recent years.

### On Phonetic Principles

Now, Mr. Whorf has announced that the system of writing evolved by the Mayan Indians was based on phonetic principles. That is, hieroglyphics were used to stand for sounds in the language. This is a view which early students of the Mayas advanced, but which has been almost entirely neglected for forty years.

As far back as conquest days, Mexico's most famous bishop from Spain, Diego de Landa, wrote down 27 characters of Mayan writing which he believed represented sounds similar to those in the Roman alphabet. The bishop included this list in his famous relation of things found in Yucatan.

But when this old Spanish work came to light in 1864, after centuries of oblivion in a library in Madrid, scholars were vastly disappointed to find that the Mayan "alphabet" was no neat key to unlock the secrets of the Mayan writings. The bishop, it was concluded, must have been the victim of a hoax played by some native informant.

### Bishop's Alphabet Defended

Defending the bishop's maligned alphabet, Mr. Whorf now declares: "Landa's list of characters has certain earmarks of being genuine and also of being the reflex of a phonetic system."

Most of the 27 characters, Mr. Whorf explains, are elements frequently met in the Mayan inscriptions, and yet the characters are not precisely the same. They look as though they were dashed off and simplified through habitual use. The 27 characters do not represent all the sounds in Mayan language, nor did the Spanish bishop claim that

they were any complete alphabet, it is now realized.

Aided by the old Landa alphabet and other data, Mr. Whorf has laid down some of the principles on which the Mayan writing was built. Using these, he has been able to translate some of the old texts, and with more study a much larger number will be read, Mr. Whorf declares.

That the matter is far from simple may be seen from this sentence of explanation in his scientific report: "I may now offer as conclusion that the essential principle of Maya writing lay in the use of a complicated syllabary with numerous polyphones and homophones such as the Sumerian syllabary also possessed, and with certain approximations to alphabeticism where the inherent vowel of the syllabic sign was not employed or was reinforced or varied by the addition of another sign."

Publication of Mr. Whorf's paper is hailed as an event of importance in American archaeology. Commenting on it, Prof. Alfred M. Tozzer, of Harvard, stated: "It is with no little satisfaction that the Peabody Museum publishes his paper on a subject which most Maya students have long felt was practically closed. With great acumen and courage Whorf dares to reopen the phonetic question. His paper is full of suggestions and may open up a vista for further investigations along the trail which he has blazed."

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## CHEMISTRY

# American Chemists Struggle to Overcome Potash Monopoly

**A**MERICAN chemists are successfully refuting Germany's alleged wartime boast that with the world's only source of potash within her boundaries she could starve the world into submission, Dr. J. W. Turrentine of the U. S. Bureau of Chemistry and Soils states in a report to be given at the Century of Progress meeting of the American Chemical Society.

America now ranks as the third largest producer of potash, a necessary agricultural fertilizer. Germany and France are the leading producers. Dr. Turrentine points out the economic value of this product by stating:

"Even during the short wartime period of potash scarcity, some of our

important crops showed evidence of potash starvation."

During the period from 1929 to 1932 imports to the United States declined by 68 per cent, and the ratio of domestic sales to the total quantity of fertilizer potash consumed has advanced from 16 per cent. to 37 per cent. This achievement has been accomplished without the aid of a tariff wall.

The condition of national self-sufficiency has not been attained as yet, for 63 per cent. of the domestic market is still supplied from foreign sources. The value of the 1932 imports was nearly \$6,000,000.

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