"The concert artist does not really doubt his ability to fill the house. The inability to hear himself, however, bothers him, sometimes enough to lead him into faults which militate against a good performance."

Mr. Burris-Meyer finds that the method works best when only the higher frequencies of the voice, those above 500 cycles per second, reproduced. At the relatively low intensities used, the absence of low frequencies is not apparent, he stated, and if they are used they are more likely to spill over and be heard by the audience.

"The enthusiasm of the artists who have tried it beats anything of the sort I have encountered," Mr. Burris-Meyer declared. "We inveigle them into trying the technique and they won't go home. We have heard expressions like 'I could sing all night' and 'Why, it shrinks the room way down.' These are standard first reactions. The enthusiasm of the artists seems to be justified. In the first concert in which the technique was tried at Carnegie Hall, Mr. Robeson was able to sing 'Water Boy' in a lower key than he had ever used before for that number in concert.

"It is important to emphasize the fact that the technique has no effect on the sound as the audience hears it."

Science News Letter, November 30, 1940

ARCHAEOLOGY

# Americans Have Salvaged Much of Athens' History

## Ten Years of Digging in Athenian Market Place Have Brought To Light Impressive Array of Relics

WHILE Athens lies in the zone of devastating war, American scientists in Philadelphia listened to the deeply impressive summing up of history and art relics that Americans have saved in ten years digging in the old, buried Athenian Market Place.

Eight thousand Greek treaties, decrees, and other records have been unearthed, greatly enriching Athens' history, Dr. T. Leslie Shear, director of the American School of Classical Studies at Athens, told the American Philosophinal Society. His expeditions, which have excavated a 25-acre area to examine the long-lost civic and trade center of classical Athens, have recovered much sculpture, including unique masterpieces, and well-preserved vases showing art progress

The plan of the Market Place has been accurately mapped, and the appearance

from 4000 B. C.

# RADIO

D. B. Mason, director of Freeport Sulphur Company, will describe a flotation process pioneered in Cuba to improve low grade manganese ores to make them suitable to be made into ferromanganese for use in steel manufacture, as guest scientist on "Adventores in Science" with Watson Davis, director of Science Service, over the coast to coast network of the Columbia Broadcasting System, Thursday, Dec. 5, 3:45 p.m. EST, 2:45 CST, 1:45 MST, 12:45 PST.

Listen in on your local station. Listen in each Thursday.

of this scene of so many historic Greek events can be vividly shown on paper, now. About 90,000 coins from all over the Mediterranean world have been unearthed, furnishing significant evidence of trade history. War conditions interrupted the excavations this summer.

Science News Letter, November 30, 1940

### King Solomon's Naval Base

ONTINUING to dig this spring at Solomon's seaport of Ezion-geber, despite disturbed international conditions, Dr. Nelson Glueck of the American Schools of Oriental Research learned more about King Solomon's ancient Hebrew Empire and trade expansion ventures in the Near East, he reported.

Ezion-geber was a strong fortress and an important naval base, Dr. Glueck has determined. Located by one horn of the Red Sea in Transjordania, this city which Solomon built far beyond Palestine could guard the junction of roads leading to and from Arabia. Copper and iron ingots and metal objects which were turned out in the factory area of Eziongeber were loaded on Solomon's ships and dispatched through the Red Sea to Arabia, returning with incense and other precious wares.

In Ezion-gebef's ruins, Dr. Glueck reported unearthing a signet seal-ring of

Jotham, king of Judah, Aramaic writings on scraps of pottery, and the rare find of a Minaean inscription, a fragment of writing of a Semitic people of Arabia who established an extensive empire

Science News Letter, November 30, 1940

#### **Ancient Seals Arranged**

•HE largest collection of Mesopotamian cylinder seals in the United States, in the Pierpont Morgan Library, is being catalogued, Miss Edith von Porada reported to the American Philosophical Society. More than a thousand records of Babylonian and other ancient Tigris-Euphrates peoples who wrote on clay are in the collection.

Science News Letter, November 30, 1940

#### Mercury Transit Films Indicate Planet Was Early

WHEN the planet Mercury passed in front of the sun on Armistice Day, it was about half a minute earlier than the time predicted in advance, according to observations made at the Mt. Wilson Observatory. (See SNL, Nov. 23 for photograph.)

Astronomers do not regard this difference as very important, however, since the atmospheric conditions through which the light passes could easily make it this much early or late. Though cloudy weather over much of the nation prevented many planned observations by amateurs as well as professional astronomers of the transit of Mercury, it is hoped that a number of them secured satisfactory results. By averaging these, accidental differences may be ironed out, and a precise value obtained. This is important in checking both the rotation of the earth and the movement of Mercury.

The Mt. Wilson photographs were made with the two tower telescopes, one 60 feet, the other 150 feet in height, which are especially designed to observe the sun. A preliminary reduction of these films was made by Dr. Seth B. Nicholson, who finds that Mercury was completely on the face of the sun beginning at 12 hours 50.4 minutes p.m., Pacific Standard Time. According to advance prediction, it should have been 50.9 minutes.

Science News Letter, November 30, 1940

Some primitive languages have no word for "word."

Welding, instead of riveting, may be tried in construction of Army tanks.