

The Indians borrowed, but they did not weaken their own vivid and individual art of color and design. In highland villages weavers still employ symbols of ancient Mayan gods and nature signs, and use symbolic colors that their ancestors used: yellow symbolizing food, color of corn; red for blood and sacrifice; blue for royalty; black for weapons of the shiny volcanic glass called obsidian.

From her study of Indian needlework and weaving, Miss Reeves and her associates have begun the process of adaptation, to show the public how Indian designs can be used. Designs from the Indian motifs have been worked into hand-

woven and hand-printed fabrics. Others have been put into machine production.

Practical use of the study is already evident. There remains another value in this showing of Indian art. Says the Carnegie Institution:

"It is believed that opportunity to see and examine this collection of superb specimens of the handiwork of these representatives of an ancient race will go far toward proving that the Americas have a cultural past which compares favorably in many respects with that of the first great civilized societies that developed in the ancient Near East.

*Science News Letter, April 6, 1935*

## ARCHAEOLOGY

## Raise Pot Lid, Find Dinner Left on Stove 6,000 Years

**R**AISING a cooking pot lid, archaeologists exploring the oldest city yet discovered in the world have found meat bones still in the pot, says a report just received from Tepe Gawra, Mesopotamia, by the University Museum in Philadelphia.

This uneaten dinner, left in the oven for 6,000 years, reveals how sudden was the downfall of Tepe Gawra's twelfth city, the oldest yet probed. A heavy layer of ashes and charred refuse shows that the city was burned, probably by its enemies.

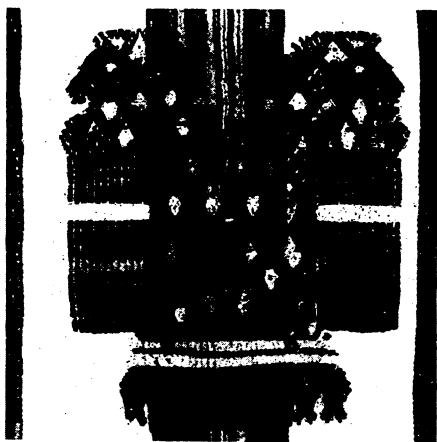
This twelfth level is about three centuries older than the buried settlement found last month at Tepe Gawra, says the report from Charles Bache, field director, of the joint expedition to Tepe Gawra from the University Museum of the University of Pennsylvania and the American School of Oriental Research.

Mr. Bache expects to push the history of the site back through eight earlier levels, which are known to exist from exploratory trenches.

These nine earliest cities, including the one now being unearthed, were all built by "the painted pottery peoples," as the archaeologists call them. Striking geometric designs painted on clay household wares are the conspicuous badge of their culture. These "painted pottery peoples" are known to have swept like a conquering horde from the East over Persia, India, and Mesopotamia, some six thousand years before Christ. Tepe Gawra, with its long series of their cities, is counted on to reveal the customs, household crafts, architecture, perhaps the racial type of these little known city-builders of the ancient world.

Builders of the 4000 B.C. Tepe Gawra were still in the Neolithic or New Stone Age, totally unacquainted with metal implements, reports Mr. Bache. As recently as ten years ago it was believed that no Neolithic culture was to be found in Mesopotamia. The Stone Age city just discovered proves superior in architecture to the three settlements which followed it.

*Science News Letter, April 6, 1935*



AN AMERICAN EAGLE

Whether Indians of Middle America borrowed this two-headed eagle design from the Hapsburg coat of arms, or whether they invented the bird themselves long before Spaniards arrived in America, is controversial. This material from the village of Santo Tomas Chichicastenango, Guatemala, has the double eagle embroidered in red, yellow, and white.

## PUBLIC HEALTH

## Says School Funds Wasted Without Health Care

**T**HE POOR school work and low intelligence levels of children handicapped by physical defects, such as poor teeth and posture, are an argument for state medicine or some form of social insurance against sickness, in the opinion of Melissa Brafon Stedman of the Bell High School, Los Angeles.

Pouring money into education is sheer waste unless at the same time medical and dental care are provided so that students may be healthy enough to receive full value from schooling.

Her opinion regarding the need for attention to the child's health as well as his education is based on her findings in a survey of 450 high school pupils. Healthy children are more intelligent and get better grades than the physically handicapped, she found. Her report will be published in the *Journal of Applied Psychology*.

Over 91 per cent. of the group had one or more health defects and the average grades of these pupils were only 76 per cent of the average attained by the healthy children. There was also a difference of 4 points in intelligence in favor of the healthier pupils. Despite their abilities the children with no physical defects were distinctly in the minority. There were only 39 of them.

Rating second with respect to grades were 312 children with postural and orthopedic defects. They dropped to fourth place in intelligence while the 128 possessing defective tonsils and

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adenoids took second place in mental level. The lowest average both in grades and mentality was shown by the group having defective lungs.

Defective teeth are almost as detrimental to school progress as weak lungs and they are more often found. Thirty per cent. of the whole group had them and the grades of pupils so affected indicated that they were getting only 64.5 per cent. of the potential value of their education.

The low accomplishment on the part of the physically handicapped children holds good for each group at each intelligence level. The very bright children, however, are more affected by bad teeth than are those who are just average since the mentally superior have more sensitive nervous systems.

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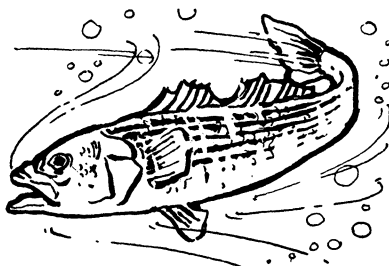
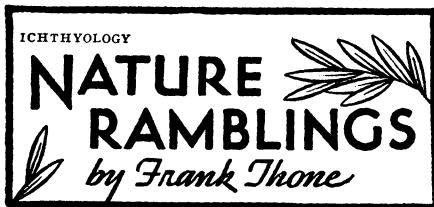
ASTRONOMY

**Sun's Probable Age Ten Million Million Years**

**T**HE outside limit of the probable age of the sun is ten million million years, according to Dr. Donald H. Menzel, of Harvard College Observatory, in an address for Science Service over the Columbia Broadcasting System.

In the report of Dr. Menzel's address in SCIENCE NEWS LETTER of March 30, the probable age of the sun was erroneously reported as 500 sextillion years. This figure in Dr. Menzel's address referred to the energy liberated by the sun from its surface as radiation and not to the probable age of the sun.

*Science News Letter, April 6, 1935*



**Fish Can Be Drowned**

**I**SN'T it odd, that a fish can be drowned? Or maybe it isn't so odd after all, when you consider what a fish is, and what it must do to remain alive.

A fish is an animal—as much so as a cow or canary, a toad or a turtle, or any other creature that walks or hops on land and breathes air with lungs.

Land-living animals breathe the air for one prime necessity: oxygen must somehow be sent to all the cells of their bodies, there to unite with food substances in the low-temperature combustion we call life. Stop either oxygen or food, and you stop life.

In all land-living vertebrates, or backboned animals, the oxygen is carried to the cells by the red blood corpuscles. In insects and their kin, the oxygen is carried in another way—but that is another story. The central fact is that the oxygen simply must reach the cells.

The cells of fish, and of all other water creatures as well, have this same imperious need for oxygen. Fish, like their backboned "rich relations" of the land, depend on red blood cells to carry the oxygen.

But where is the oxygen to come from? You can see the answer if you warm up a little common tap-water. Before it is hot enough to start giving off steam bubbles, little bubbles of air rise to the top and escape. Oxygen—and the other air gases—are in solution in all natural waters. Fish can take out this dissolved oxygen from the water with their gills, as we take oxygen out of the gaseous mixture we call air with our lungs.

When a man or other air-breathing animal drowns, the real cause of death is oxygen lack—for our lungs are not so made as to take dissolved oxygen out of the water. Drowning is therefore really a form of strangulation.

Keep active fish in water without oxygen, and they, too, soon strangle. They are dead of drowning, as surely as a drowned man.

This drowning of fish can take more than one form. The fish can be trapped in water wholly sealed in by ice, as when "anchor ice" forms across the bottom of a pond in a long cold spell. Or, in a hot and droughty summer, they can be caught in a dwindling pool, in which swarming animal life sucks out all available supplies of this life-element. You can even starve pet goldfish for oxygen by crowding too many of them into too little water, in a narrow-topped bowl.

*Science News Letter, April 6, 1935*

PSYCHIATRY

**No Rise in Serious Mental Disease During Depression**

**S**ERIOUS mental disease has not increased notably as a result of the depression. This fact, contrary to current belief, has been found in a study made during the past year by the National Committee for Mental Hygiene in collaboration with the American Psychiatric Association.

"This study shows no rising tide of hospital admissions that can be ascribed to prevailing economic conditions and reveals no striking increase in new cases or in total institutional populations," is the conclusion of the study made public recently.

The increases in number of cases of mental disease that were reported during the depression are not considered numerous enough to be significant and are thought due to increase in hospital facilities and in public confidence in hospitals for the care of the mentally ill. A substantial part of recent increase is thought due to exhaustion of family resources.

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**● RADIO**  
 Tuesday, April 9, 4:30 p. m.  
**THE MINOR PLANETS: STRAY SHEEP OF THE SOLAR SYSTEM,**  
 by Dr. A. O. Leuschner, Professor of Astronomy, University of California.  
 Tuesday, April 16, 4:30 p. m.  
**THE MEANING OF MATHEMATICS,**  
 by Dr. E. R. Hedrick, Professor of Mathematics, University of California at Los Angeles.  
 In the Science Service series of radio addresses given by eminent scientists over the Columbia Broadcasting System.