

## —Dietz on Science—

FIVE BILLIONS  
OF YEARS SET  
AS EARTH AGE

Harvard Astronomer Bases  
Figure on Position  
of Nebraska.

BY DAVID DIETZ  
Scripps-Howard Science Editor

CAMBRIDGE, Mass., Nov. 27.—The universe is 5,000,000,000 years old, according to the latest calculations of Dr. Harlow Shapley, world-famous astronomer and director of the Harvard College Observatory, located in this city.

Scientists in all the parts of the world will heave a sigh of relief when they hear Dr. Shapley's new figure for it leads the world out of a difficult position in which it found itself during the last couple of years.

Determination of the age of the earth by a study of the radio-active content of rocks, the best and most accurate method known to science, indicated that the earth was 2,000,000,000 years old, but astronomers, working on the basis of the rate at which the universe was expanding, were unwilling to admit that the whole universe could be that old. Here was an obvious impossibility. How could the earth be older than the universe itself?

Obviously one set of figures must be wrong and yet no one was prepared to say which one. Dr. Shapley leads the way out of the difficulty with his new figures. He permits the universe to be more than twice as old as the earth, a state of affairs which will appeal to most scientists as entirely reasonable.

## Amazing Speed Shown

To understand how Dr. Shapley arrives at his figure for the age of the universe, we must keep in mind the way in which the theory of the expanding universe developed.

It is based upon the fact that observation of the distant spiral nebulae indicate that they are all moving away from our earth and that the more distant ones are moving the fastest, those farthest away showing such amazing speeds as 12,000 miles per second.

Now, if we knew how far away these various nebulae are, and how fast they are moving, we can calculate the age of the universe in a very simple way. We assume that in the beginning all the nebulae were concentrated in one spot. Then we calculate how long it would take them to get where they are now. That gives us the age of the universe and until now, scientists were puzzled by the fact that it gave such a small figure.

## New Figure Was Obtained

Now Dr. Shapley and his associates have solved the difficulty. They have just completed new photometric determinations of the distances of these various spiral nebulae. The work shows that these nebulae are further away than formerly had been thought. It will be seen at once that if the nebulae are further away, it would have taken them longer to get where they are now. Hence, the universe must be older than was formerly thought. The whole problem is just as simple as that.

Another conclusion from Dr. Shapley's new work is that the universe is not expanding as rapidly as formerly was thought. The rate of expansion is calculated from a consideration of both the speeds of the nebulae and their distances. As already mentioned, speed increases with distance.

But by showing that the nebulae are farther away than formerly thought, Dr. Shapley has also shown that the speed of these nebulae does not increase as rapidly per unit of distance as formerly was imagined. This means, therefore, that the universe is expanding at a slower rate than formerly was supposed.

## 'Last of Mohicans' Dies

Old Redskin Gave Valuable Data on Language to  
Smithsonian Institute Investigator.

MILWAUKEE, Wis., Nov. 27.—The last aged Indian who could speak the Mohican language died here last week. So passed a man who might be called "the last of the Mohicans."

The novelist Cooper was a little premature in coining that phrase, the last of the Mohicans, for the Indian hero Chingachgook and his son Uncas. The Mohicans, or Mahicans as scientists prefer to spell the name, have added a good many years to their history since Cooper wrote romantically of their decline.

But William Dick, who could speak the old tongue, did represent the end of a phase in that history. The Mahican greetings that Cooper's Indian heroes would have exchanged so lustily will never again be spoken by an Indian. William Dick was the last to know them.

There is some comfort for science in the fact that several years ago, Dr. Truman Michelson of the Smithsonian Institution visited Mr. Dick and recorded carefully many words and sentences of his mother tongue. These records are now among the valued possessions of the Smithsonian.

By the study of the Indian languages, it is possible to prove and check many events in America's Indian history; hence the importance that is attached to the gathering of data on these fast-vanishing forms of speech.

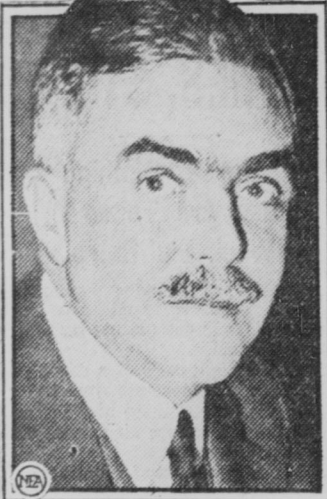
Indiana Man Wins  
Long Fight With  
Stomach Disorder

After suffering for several months with stomach disorders, Fred Lapshire, Route 2, Monroeville, Ind., reports he was finally healed by a simple home treatment. He says that within three days after starting "The Udda Treatment" he began to feel better, hasn't had a single pain since and eats three meals every day. He wants all other stomach sufferers to know about his experience.

Mr. Lapshire advises all sufferers from stomach ulcers, gas pains, excess acid, belching, pains after eating, constipation, sour stomach, poor digestion, dyspepsia, gastritis, and other stomach disorders due to hyperacidity or faulty diet, to try Udda at once. Now we offer the same treatment which produced such splendid results for Mr. Lapshire to all stomach sufferers on 15 days' trial, with money back if not satisfied. Also testimonials, a sworn affidavit of genuineness and a free book explaining the cause and treatment of various stomach disorders, including stomach ulcers. If you suffer, ask for the 15-day trial treatment today. If it fails to help you, we'll give you your dollar back.

Udda's, Walgreen's, Hook's and other good druggists.—Advertisement.

## TREASURY AID



Appointed by Acting Secretary of Treasury Henry Morgenthau Jr., to be the special assistant in charge of fiscal affairs is Earle Baile (above), New York lawyer. Baile, a native of Milwaukee, will take over the duties nominally performed by the under-secretary.

REPORTS U. S. ARMY  
BELOW DANGER LINE

General McArthur Gives  
Figures; CCC Praised.

The United States army is "below the danger line, both in strength and efficiency," according to the annual report of General Douglas MacArthur, chief of staff, for the fiscal year ended June 30.

Contents of the report just have been made public. In contrast to the lowered army standards, "mobilization of the citizens' conservation corps was incomparably a greater success than was the recruiting campaign in the spring of 1917," for efficiency and economy, the report asserts.

## Chiseler?

NRA Collection Racket  
Tried by Woman.

POLICE today were seeking a woman reported to have represented herself as a "NRA collector," and to have attempted to obtain money "for the government" at two Indianapolis groceries Saturday afternoon.

Employees of the Lowell Sims grocery, 468 Dickson street, reported that the woman said she "represented the NRA at Washington," and asked for forty-nine 2-cent stamps and 98 cents in money, or the equivalent in groceries. When they refused, she left.

The same procedure was followed at the Gabe May grocery, 1313 Henry street, where she also was refused, it was reported. She was said to be driving a car with Michigan license plates.

The City  
in Brief

## TOMORROW'S EVENTS

Rotary Club, luncheon, Claypool.  
Gyro Club, luncheon, Spink Arms.  
Mercator Club, luncheon, Columbia Club.  
Architectural Club, luncheon, Architects and Builders' building.  
Medical Society, 8:15 p. m., Athenaeum.  
American Chemical Society, luncheon, Severin.  
Universal Club, luncheon, Columbia Club.  
Theta Chi, luncheon, Washington.  
Purchasing Agents, luncheon, Washington.

## Nose Broken as Table Falls

Nose of W. T. Wilson, 60, of 105 North New Jersey street, was broken yesterday when a rope with which he was lowering a table from an upstairs window broke. He was treated at city hospital.

Natural Curly Hair—

Unbreakable Face and  
Head—

Soft, Life-like Rubber  
Arms and Legs—

22 Inches Tall.

Cries When Leg Is  
Squeezed!



Oh Lo  
Here Is  
This F

This is my  
actual size!

Every girl is invited to  
come in and see Cinderella,  
the Flossie Flirt doll,  
where she is on display at  
The Indianapolis Times of-  
fice, 214-220 W. Maryland  
Street.