

valuable known in the commercial field. A price of \$150 is asked for a gram. At this rate a teaspoonful is worth nearly \$600; a quart, \$150,000. Princeton now has on hand about a glassful and is about to raise its production to a thimbleful a day.

What effect the drinking of heavy water will have on animals and human beings is not yet known, but it is believed that it may bring on a fever, and therefore might be useful in diseases that are treated by raising body temperatures.

*Science News Letter, October 14, 1933*



#### DOWN TOWN DISTRICT

*Looking over the ruins of Minturno, Italy, where an American expedition is finding much buried history. The theater in the foreground was a gift to the city from the Emperor Augustus, as a peace offering because the city was aroused over having to look out for a detachment of returned soldiers. The outer wall of the theater was divided into 24 shops, arranged in a semi-circular arcade. One of the shops was converted into a Christian chapel and a bronze tablet with small Christian crosses has been unearthed in it.*

#### RADIOLOGY

## Birthmarks Permanently and Safely Treated By Radium

**M**OLES, birthmarks and similar masses which are known to physicians under the name of nevi may for the most part be safely and permanently removed by radium treatment, it appears from the experience of Dr. William S. Newcomet, Philadelphia radiologist. Dr. Newcomet reported to the American Congress of Radiology the results he had obtained in treating such cases during the last fifteen years.

"There is a well grounded idea existing among the laity that to treat a nevus is to invite malignancy," said Dr. Newcomet. "Yet it is a well established fact that many cases of malignancy start from nevi. Unfortunately, even with the publicity that has been given to this

subject, there still remains, among a certain class, a constant fear that it is dangerous to remove nevi."

Dr. Newcomet prefers radium to X-rays for treating these cases on account of the susceptibility of the surrounding parts of the body and also because it is easier to confine the effects of radium to a more limited area. In fact, he stated that these marks should always be irradiated with radium, never with X-rays. Occasionally the radium treatment must be followed by surgery to remove scars in the case of very large marks. Sometimes when the patient has been treated in childhood, some slight deformity has resulted in adult life from lack of development of the affected

part or because some of the natural tissues were replaced by the tumor mass. These cases are comparatively rare, Dr. Newcomet finds.

"In the majority of cases results of treatment were very satisfactory," he declared. "The marks or tumor masses had disappeared; the site was practically normal and without scar. No other method could accomplish so much and, while the treatment is not so rapid as some other method, results are better.

"These lesions are not dangerous to life, therefore there is no justification for the employment of any dangerous procedure. In conclusion the fact is stressed that in all cases the mild application of radium may bring about a diminution of the tumor mass and it should always be used previous to operation. . ."

*Science News Letter, October 14, 1933*

#### ARCHAEOLOGY

## Ruins Shed Light On Rome's "Bonus Army"

**A**RCHAEOLOGISTS excavating the ruins of Minturno, Italy, have dug up relics of evidence showing how the Roman Empire solved one "bonus army" problem. The evidence is found in the city's water pipe system which has been investigated by the University of Pennsylvania Museum expedition to Minturno, led by Dr. Jotham Johnson.

Dr. Johnson, who has just returned to Philadelphia, said that a length of lead water pipe was found bearing the name of the slave who made it. It dates back to a period in the career of Augustus between 40 B.C. and 14 A.D. The Emperor Augustus had sent some returned soldiers, "bonus army" men as it were, to the vicinity of Minturno, about 100 miles south of Rome. This aroused the people of Minturno to great discord and dissatisfaction. To appease the city, the Emperor presented it with an aqueduct and theater. The city thus acquired "modern" plumbing, with water under pressure in the pipes. Dr. Johnson remarks that it is significant that the wells previously used, were filled in.

The lead pipes were made from sheets folded over and clamped. The lengths as originally found varied from six to twenty feet according to diameter. About 18 tons of this ancient pipe were excavated by peasants during the World War and sold as scrap metal.

When Minturno acquired its improved water system, it had already had a most elaborate system of sewers for about a hundred years. So extensive and complete was this sewer system, says Mr. Johnson, that the expedition could survey much of the city from beneath the ground by setting by surveying instruments inside the big sewers. In this way, surveying of Minturno has been completed long before the ruins are all uncovered.

*Science News Letter, October 14, 1933*

## ZOOLOGY

## World's Biggest Reindeer On Island of Sakhalin

**T**HE WORLD'S largest reindeer live on the island of Sakhalin, which lies between the Sea of Japan and the Sea of Okhotsk off the coast of Siberia. According to Arthur A. Yust, a leading Russian reindeer breeder, the biggest male animal ever found in the Sakhalin herds had a weight of approximately 450 pounds, which is nearly twice the weight of ordinary reindeer. Females of the Sakhalin reindeer average around 280 pounds, but specimens weighing about 360 pounds have been found.

Mr. Yust has made a systematic study of the reindeer that range clear across the vast sub-polar stretches of the U. S. S. R., and has distinguished nine separate varieties or subspecies.

*Science News Letter, October 14, 1933*

## ANIMAL PSYCHOLOGY

## Animals Know Phonograph Voices of Own Species

**"H**IS MASTER'S Voice" is not just a bit of clever advertising; animals do recognize the voices of their own and other species when played on a phonograph record. So reports Prof. Bastian Schmid of Munich in the German scientific publication *Die Umschau*.

Prof. Schmid tried a phonograph record of a mewling cat on a fox terrier that hated cats. As soon as he heard the voice of his pet antipathy he tore around the room hunting for it, and when he found the phonograph horn he tried to dive into it. The same record was then tried on a cat, which listened for a moment and then responded with the same melancholy meowling.

Another record, of a hen cackling

## PSEUDO-HISTORY

## Plato Devised Atlantis Myth, Scholar's New Study Indicates

**T**HE LOST continent of Atlantis! How many times has human imagination been stirred by thoughts of a huge island in the Atlantic Ocean, suddenly engulfed by the sea in a horrible day of earthquake and flood? Was there ever such a place, or was Atlantis a myth?

So much has been written arguing for and against, that Prof. W. A. Heidel, Greek scholar of Wesleyan University in Connecticut, brings up the hackneyed theme apologetically. His justification for mentioning it, he says, is that he has a new suggestion to offer.

Studying Plato's dialogues, where the Atlantis story got its start in writing, Prof. Heidel believes he can discern what was in Plato's thought as he framed the story that was destined to puzzle and intrigue the world. The story of Atlantis, concludes Prof. Heidel, was fiction devised by Plato. Greek pride caused him to put in some details. And there was an air of playful irony in the telling.

The philosopher Plato was teaching how the ideal republic would function in the crisis of war. To make the ar-

gument real, he asked his audience to suppose the citizens of the ideal republic to be their venerable ancestors in a very ancient Athens. And then he outlined the drama of primitive Athenians, 9,000 years before, engaged in conflict with people from the great island Atlantis, and as an epilogue he told of sudden disaster which plunged Atlantis into the depths of the sea.

What has misled some scholars into thinking that Plato might be talking about a real country, says Prof. Heidel, was Plato's statement that he got his facts about Atlantis from the Egyptian priests. Egypt, to the ancient world, was the land of the oldest wisdom, the priests were the great authorities. But, Prof. Heidel's interpretation is that Plato attributed Atlantis to the Egyptians merely to give weight to his words and a touch of realism.

"Like accomplished creators of fiction in all ages," says the Professor, "he multiplies the circumstances which give verisimilitude to his story."

Moreover, Plato seems to have enjoyed taking a dig at the Egyptian wisdom and antiquity. For he proudly makes his primitive Athens a thousand years older than an Egyptian town in the narrative. And as he tells of the struggles between the Greeks and the conquering armies from Atlantis, he says that Greece defeated the invaders and liberated all the inhabitants of Europe and Africa.

Since Plato is the only writer of antiquity who refers to Atlantis, the solution of the Atlantis problem is most likely to be found in his direction, Prof. Heidel believes. As in the children's game of hide-and-seek, the seeker would seem to me "warm" when investigating Greek history and geography, in order to see what ideas were borrowed and used to make a "lost continent." And, considering that Plato had no modern knowledge of the world's geologic history, and could scarcely have held theories of land bridges in the Mesozoic era, the Atlantis seekers who approach the problem geologically are "cold"—so far as their chances of explaining Plato's Atlantis are concerned.

*Science News Letter, October 14, 1933*

*Science News Letter, October 14, 1933*