

## ASTRONOMY

**Astronomer Observes Meteor Showers**

**S**UCCESSFUL observation of the Perseid meteors on the nights of Aug. 11-12 and Aug. 12-13 was reported by Prof. C. P. Olivier of the Flower Observatory of the University of Pennsylvania to Science Service.

Prof. Olivier, observing at Shadwell, Va., reports that cloudiness and moonlight on the first night of the Perseid shower made the meteor watch difficult. Forty-seven meteors were seen, however. Thirty-four of these were in the Perseid group.

The next night observing conditions were much better and a total of 72 meteor streaks was seen. Fifty of these were Perseid in origin.

One especially fine sporadic meteor, reports Prof. Olivier, crossed nearly half the sky, disappearing and reappearing as it neared the end of its path.

One brilliant Perseid meteor left a flaming train which lasted 10 seconds. Other bright Perseids, mostly red in color, left sparks as well as trains. The average Perseid meteor was yellow in color, as usual, and nearly all had trains of brief duration.

Since Prof. Olivier was observing far away from Flower Observatory, which is the national headquarters of the American Meteor Society, he has not yet received reports from other observers throughout the country and thus cannot give an account, at the present time, of the Perseid shower's richness.

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## BIOLOGY

**Pure Protoplasm Grown On Oat-and-Water Diet**

**P**ROTOPLASM, the material basis of life, is grown in quantity for experimental purposes in the laboratory of Dr. William G. Camp of Teachers College, Columbia University. He feeds it on a simple diet of oatmeal and water.

Dr. Camp's material consists of myxomycetes or slime-molds, very lowly organisms on the dividing-line between plant and animal life, whose bodies consist of naked masses of practically pure protoplasm. They flow around on moist decaying logs in the woods and in other damp places.

Slime-molds have been cultivated by other scientists on shallow dishes filled with agar-jelly containing oatmeal, but in Dr. Camp's new technique the

troublesome agar is done away with, making the protoplasmic mass much easier to gather.

He simply folds gauze or filter-paper over one of the shallow dishes, leaving it empty. Then he sets the dish in a wide-mouthed jar containing a little water. The water soaks out into the gauze or paper, making the kind of a place where slime-molds like to grow.

On the wet gauze he "plants" a few bits of inactive slime-mold material, which presently begins growing and creeping about. Then he sprinkles oatmeal directly on it, and covers the little dish up with a glass lid.

The creeping protoplasmic substance engulfs the oatmeal and digests it. As fast as it will "eat," Dr. Camp gives it more oatmeal, until at last he has it in thick sheets, covering the whole gauze layer and creeping up on the sides of the glass jar. It is then an easy matter to scrape it off with a thin-bladed spatula or other suitable instrument.

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## ZOOLOGY

**Okapi, "Rarest" Animal, Perhaps Not Very Rare**

**O**KAPI, the giraffe's even weirder jungle cousin, may not be so rare or so near extinction as has usually been believed.

So states Attilio Gatti, an experienced African naturalist, who has spent much time in the Congo, where these strange animals dwell. Despite the strict protective laws promulgated by the Belgian government for the okapi's protection, the black pigmy inhabitants of the jungle still capture them in nets and pitfalls and kill them with spears. M. Gatti declares that last year over 100 okapi were thus killed by the little blacks, who have no end of things made of okapi skins in their villages.

M. Gatti proposes two possible ways out of the difficulty: First, he would have okapi sanctuaries created in certain extensive forest areas which the pigmies never enter because of their dread of spirits supposed to be on guard there. Wild animals seem to find out very soon where they will be safe from molestation, and to congregate in such places. Second, M. Gatti would have the Belgian authorities buy uninjured okapi captured by the pigmies and turn them loose in suitable protected parks. The natives, he declares, will be very ready to exchange the animals for white men's prized trade goods.

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**IN SCIENCE**

## ARCHAEOLOGY

**First Evidence for Goth Migration Is Found**

**A** WEAPON depot of the Goths has been discovered on the Danube River near Vienna which is one of the first tangible traces of the famous Goth migration through Europe that, hitherto, has been known mainly from historical writings.

Particular interest is due to a two-edged iron sword about three feet in length, with amber pommel, the wooden handle covered with silver leaf and the sheath adorned with a transversely grooved silver band. This is the typically Gothic form of a sword which was imported to western Europe from the Pontus district by the Goths and which became especially popular with the Alemannic tribes in Wurttemberg. Hitherto no sample of this sword form was known in the intermediate territory between Pontus and southern Germany. Only one important find made in a tomb near Komorn in Czechoslovakia had preceded, the interpretation of which, however, was controversial.

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## CLIMATOLOGY

**This Summer Near Bottom Of 46-Year Rainfall Cycle**

**B**Y MEASURING the water levels in the Great Lakes for the last century, scientists have now discovered that the great farming and grazing area in the North Central United States is near the bottom depth of what appears to be a 46-year snow and rainfall cycle that is associated with the variations in the radiation coming from the sun.

Dr. Charles G. Abbot, secretary of the Smithsonian Institution, and expert on the solar cycles of radiation, states that the droughts of 1934 and 1936 constitute striking evidence for the now-celebrated 23-year weather cycle which he first announced three years ago. The drainage areas of the North Central section have the local peculiarity of having their least precipitation at double this 23-year cycle.

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# FIELDS

## PUBLIC HEALTH

### Bubonic Plague Reported On the West Coast

**D**ETAILED of a mild case of bubonic plague occurring in an eleven-year-old lad living in Monterey County, Calif., have been received by the U. S. Public Health Service from Dr. Harlin L. Wynns of the California State Health Department.

This is the third human case of plague reported in the United States thus far this year, one of the others also occurring in California, while the third was near Beaver, Utah.

Plague has been ever-present in the rodent population in California since an outbreak of human plague occurred in San Francisco early in this century. The disease is transmitted from rats or other rodents to humans by fleas. Plague-infected ground squirrels have been found as far east as Montana and Utah and these animals are a potential source of danger to humans.

Concerned at the spread of plague among the rodents, the U. S. Public Health Service last year doubled its plague-fighting force on the West Coast, assigning two officers to the work instead of one. The California State Health Department also carries on extensive anti-plague operations.

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## ICHTHYOLOGY

### Erosion Silt in Water Provides Hazard for Fish

**E**ROSION not only makes the land unfit for crop production; it also fills the rivers and lakes with silt that makes the water unfit for fish production. Some of the ill effects of erosion silt have been demonstrated by researches of Dr. M. M. Ellis of the U. S. Bureau of Fisheries. He states (*Ecology*, January):

"Erosion silt alters aquatic environments, chiefly by screening out light, by changing heat radiation, by blanketing the stream bottom, and by retaining organic material and other substances which create unfavorable conditions at the bottom."

If light does not penetrate well into

the water, it becomes less suitable as a home for fish and other desirable water animals. Silt-filled waters in the central United States reduce daylight to a millionth of its surface intensity at a depth of about a yard, or in especially bad places only half that much. Normal penetration in inland fresh waters ranges from 15 to 35 yards.

Erosion silt also alters the rate of temperature change in river waters, continues Dr. Ellis. This is especially noticeable in lakes through which rivers flow. Here a surface layer of warm, muddy water flows over the deeper, clear, cold water during the summer months. The deeper water, of course, receives little or no sunlight because of the muddy screen above it.

Erosion silt acts murderously on river mussels, often called freshwater clams, which are economically important as the chief source of shell for pearl buttons. Though these animals are usually thought of as mud-dwellers, they actually prefer sand or gravel beds, and cannot stand being silted over. Dr. Ellis states that in water otherwise suitable a layer of silt from one-quarter of an inch to one inch deep produced a high mortality among mussels.

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## PALEONTOLOGY

### First Record of Dinosaur Found On West Coast

**T**O A California high school student goes the honor of finding the first evidence that dinosaurs once lived on the West Coast. Western scientists have for years searched for remains of these great prehistoric reptiles, which lived in the Cretaceous period of geological time some 65 million years ago.

The keen-minded high school student was Allan Bennison, who reported his discovery to paleontologists at the University of California. Assistant field directors Curtis J. Hesse and S. P. Welles of the University's Museum of Paleontology have just confirmed the discovery and make their report. (*Science*, Aug. 14).

The discovery, report the University of California scientists, was made in an upper Cretaceous rock formation near Patterson, Calif., and consisted of over 500 bone fragments which seem to have once been the hind quarters of the gigantic, meat-eating reptile, that walked around on its huge hindlegs.

Assembly of the bone fragments is soon to be made in the hope that the exact type of dinosaur can be determined.

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## HISTORY

### Modern Nations Join to Map Old Roman Empire

**C**OUNTRIES of the world that once formed part of the ancient empire of Rome are now making a survey of that one-time empire.

The French have completed their survey of the frontier in Syria, says a report to *Nature* (July 11). A great part of the survey is necessarily being carried out by airplane, as many sites are in the desert and can only be spotted from the air. Records made by the French include ancient roads, forts, and water supplies. The mapping is on a scale of 1:1,000,000.

Sir Aurel Stein, British archaeologist, has made an offer to authorities concerned to survey that part of the eastern frontier in Transjordan and Iraq.

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## PUBLIC HEALTH

### New Syphilis Program Provides for Training

**A** FURTHER step in the fight against the Hush-Hush Plague, syphilis, was announced by the U. S. Public Health Service. This is the establishment of a training center for health officers on syphilis control. Details of the arrangement are being sent to all State Health Officers by Surgeon General Thomas Parran.

The Johns Hopkins Medical School and the Johns Hopkins School of Hygiene and Public Health have entered into the arrangement with the U. S. Public Health Service. An elective course in syphilis control will be offered to all students at the School of Hygiene. In addition, the Johns Hopkins University is offering a fellowship for a one or two year term at an annual stipend of \$1,800 without maintenance; and from four to six post-graduate students recommended by the Surgeon General will be admitted to the University for special training. These latter, recommended to the Surgeon General by state or local health officers, may be paid the fellowship stipend by the state health officers from Social Security allotments for the training of personnel.

The fight against syphilis has been hampered by the dearth of health officers who have specialized in control of venereal diseases. It is hoped that through this training center a nucleus of well-trained officers will be built up.

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