

Then the substance, in larger dosage, was given to twelve children exposed to the measles in a hospital ward. After the injection of the substance, none of them "took" the disease.

In a preliminary report, the council of pharmacy and chemistry of the American Medical Association considers the new substance, which is a placental ex-

tract first used experimentally by Dr. C. H. McKann and his co-workers. It regards the product as a promising immunizing agent. Both the council and the journal editor, however, think it to early for doctors to put the extract into general use, until further evidence of its value is available.

*Science News Letter, September 7, 1935*

PUBLIC HEALTH

## Education of Dog Owners Urged as Rabies Preventive

### Tendency of Dogs to Bite Varies With Breed; Dogs Bite More Frequently in June Than in "Dog Days"

**E**DUCATION of dog owners and adequate penalization of owners of biting dogs are important measures for the prevention of rabies, in the opinion of Dr. Robert Olesen, U. S. Public Health Service medical director. Dr. Olesen states these opinions in a report on the control of rabies in New York City.

June, contrary to general opinion, is the number of greatest animal bites in New York City. Animal bites are fewer in the so-called dog-days of July and August, than in May and June.

Some breeds of dogs bite more frequently than others, it appears. Dr. Olesen tentatively lists dog breeds, in order of greatest frequency of bites as follows: German police, chow, poodle, Italian bull, fox terrier (crossed), chow (crossed), airedale, pekinese, German police (crossed).

While this is the order of frequency according to the records in New York City, Dr. Olesen pointed out that popularity of a given breed, for example, which would make many such dogs present in a given community, might affect the listing. Training and environment of dogs undoubtedly plays a considerable part in the infliction of bites and these factors should also be considered, in listing frequency of bites according to breed.

Prevention of rabies by vaccinating the dogs in the community is not practical at present. Anti-rabic vaccination is still in the experimental stage. It should therefore not be relied on, although it is hoped that a successful anti-rabic vaccine will be developed in the future.

Instead Dr. Oleson recommends "Increasingly effective application of such obviously practical methods of licensing, quarantining and the destroying of stray animals."

While he approves thoroughly of such measures as control and observation of the biting animal and Pasteur treatment of the bitten person, Dr. Olesen believes that in addition public health officials should emphasize the need for discrimination in the selection, training, and care of dogs. He suggests decreasing the dog population by weeding out the unfit. Surely animals, unable to distinguish between friend and foe, and vicious animals should be destroyed.

"If dogs were given reasonable consideration and care, as befits their peculiarities when living in close proximity to human beings, it is conceivable that bites would be fewer," he suggests.

Putting the responsibility for preventing dog bites on the owner with adequate penalties for bites inflicted by his animal, should materially reduce the occurrence both of dog bites and of rabies, in Dr. Olesen's opinion.

Rabies prevention costs the city of New York approximately \$100,000 annually. Unlike many other communities, this city does not derive any income from dog licenses. This income goes instead to the American Society for the Prevention of Cruelty to Animals. The society's animal shelters, however, are available for the observation of dogs that have bitten.

The cost of preventing human and canine rabies Dr. Olesen thinks should be borne by dog owners rather than by the city. He also believes that each person bitten, whether the bite is provoked or unprovoked, should be compensated for his pain, fright, torn clothing and medical expenses.

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Tuberculosis takes its heaviest toll between the ages of 15 and 45.

ZOOLOGY

## Dog, Hero of Research, Honored by Monument

**H**ONORING the dog, so often the hero and invaluable aid of medical research, a bronze monument will be erected on the grounds of the All-Union Institute of Experimental Medicine at Leningrad.

The Monument to the Dog, as it is to be called, will be erected at the suggestion of Academician I. Pavlov, whose famous discoveries in physiology were made by means of studies with dogs.

The monument is to be a bronze image of a sitting dog on a pedestal. Bas-reliefs on all four sides of the pedestal will depict separate moments from the life of the dog at Pavlov's laboratory.

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ASTRONOMY

## New Comet Found During Search for Minor Planets

**T**HE heavens' newest comet, the second to be discovered by and be named after Prof. G. Van Biesbroeck of Yerkes Observatory, consists of a star-like nucleus surrounded by a round nebulosity, without any tail.

Prof. Van Biesbroeck found it on photographic plates exposed with the Yerkes 24-inch reflecting telescope while studying asteroids or minor planets. He then spotted the new comet in the 40-inch telescope.

Several known comets have also been rediscovered by Prof. Van Biesbroeck in past years.

*Science News Letter, September 7, 1935*

GENETICS

## Moth Pest of Beehives Found Scientifically Useful

**B**EE MOTHS, which are a destructive pest in beehives and are hated by all beekeepers, have found scientific usefulness in the zoology laboratory of the College of the Ozarks, Clarksville, Mo. Prof. T. L. Smith of that institution demonstrated before fellow-scientists at the summer meeting of the Genetics Society of America, the results of breeding experiments illustrating certain principles of genetics.

Prof. Smith chose the moth, he said, because it is easily handled under laboratory conditions and is a prolific breeder. He used a wild strain, and has carried it through several generations.

Among the most curious of the progeny that came from these carefully watched

moth nurseries are insects that are half male and half female, called "gynandromorphs" by scientists. Others are not sharply divided into male and female halves, but have male and female markings and form-characters scattered in a "mosaic" pattern over their bodies.

If unmated female moths are kept isolated, about ten per cent. of them are still able to lay fertile eggs, though the proportion of these is very low when compared with the eggs from mated females, and they take much longer to hatch than do normally produced eggs. However, the resulting offspring are of both sexes and apparently quite normal in every respect.

*Science News Letter, September 7, 1935*

## GENETICS

## Injected Sex Hormones Influence Glands of Embryos

**M**ALE SEX glands of unhatched chicks were caused to develop decidedly female characters by injecting the female sex hormone substances theelin and theelol through the eggshells, in experiments reported before the meeting of the Genetics Society of America. The research was carried on by Dr. B. H. Willier of the University of Rochester and Drs. T. F. Gallagher and F. C. Koch of the University of Chicago.

The theelin and theelol were injected in rather heavy quantities. From day to day, eggs were removed from the incubator, opened, and the developing embryos dissected. The ovaries of the chicks that would have grown up to be hens were not affected. Neither were the left sex glands of the chicks that might have been roosters. But the right sex glands developed, surrounding their characteristic male tissues, other tissues just as characteristically female. The glands were half-way turned into ovaries. Even their general shape was changed in a female direction.

*Science News Letter, September 7, 1935*

## SEISMOLOGY

## Earthquake Strikes Baffin Bay Region

**B**AFFIN Bay was rocked by an earthquake on Aug. 22, reports from St. Louis University indicate.

Calculation of the epicenter shows the point on the earth's surface directly above the shock was in latitude 73.7 degrees north and longitude 64.2 west. The time when the quake occurred beneath the surface was at 20 hours 30 minutes and 43 seconds Greenwich standard time.

*Science News Letter, September 7, 1935*

## GENETICS

# Genes Have Double Function: Vital as Well as Hereditary

## Genetics Conference at Woods Hole Brings Out Many New Facts and Viewpoints on Nature and Activities of Units

**G**ENES, the invisible units of heredity, do double duty. They determine the expression of the body's thousands of characters, such as color of hair or eyes, and they also serve a general purpose in merely keeping you alive. If every gene needed for every special purpose were not also present in every cell, even in places where it is not needed, you would not be alive at all.

This double function of genes was brought out in discussion by Dr. M. Demerec of the Carnegie Institution of Washington, speaking at the meeting of the Genetics Society of America, held at Woods Hole, Mass.

Every cell in the body contains exactly the same set of genes as every other set. The cells in your toes have the same hair-color genes as the cells on the top of your head. But just because you have

no hair on your toes is no indication that those particular genes are lacking there. If they were not present the cells themselves would not exist. There would not be any toes. There would not even be any *you*. And so for all the rest of the genes everywhere.

The discussion was conducted in an endeavor to find out more about the working of genes—how they operate to make our hair blond or brunette, our eyes blue or brown, our legs long or short, our dispositions placid or vehement. Genetics thus met embryology.

Genes act like enzymes, which are chemical agents that change things without themselves being changed. The digestive ferment pepsin is an example of an enzyme.

But genes are not enzymes, chemically speaking, most of the speakers contended. They are much more complex in their makeup and they increase and multiply themselves, which ordinary enzymes are unable to do. It is considered more likely that they create special enzymes and work through them to produce their effects on body development.

Dr. Calvin Bridges of the Carnegie Institution of Washington displayed

## ARCHAEOLOGY

## Assyrian Sculpture in Boston Shows Pollination of Date

**P**OLLINATING date trees by hand, to insure a good crop, was practised many centuries ago by the ancient Assyrians. So important was the process in the food economy of the land that it came to have a very high religious significance, as is strongly brought out by a newly acquired sculptured panel just placed on display at the Museum of Fine Arts at Boston, Mass.

The great stone panel, which used to adorn the walls of Ashur-nasir-pal IV, king of Assyria from 885 to 860 B.C., shows a winged god holding a bucket in one hand, while with the other he thrusts the cone of the male date tree among the flowers of a female tree, thus pollinating them.

Among the ancient Assyrians as among the modern Arabs of the same land, the date palm was literally a tree of life, for its fruit was used, not as a delicacy, but as a staple food like bread. It was therefore not beneath the dignity even of a god to insure its abundant yield.

*Science News Letter, September 7, 1935*



DIVINITY AS TREE TENDER