

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