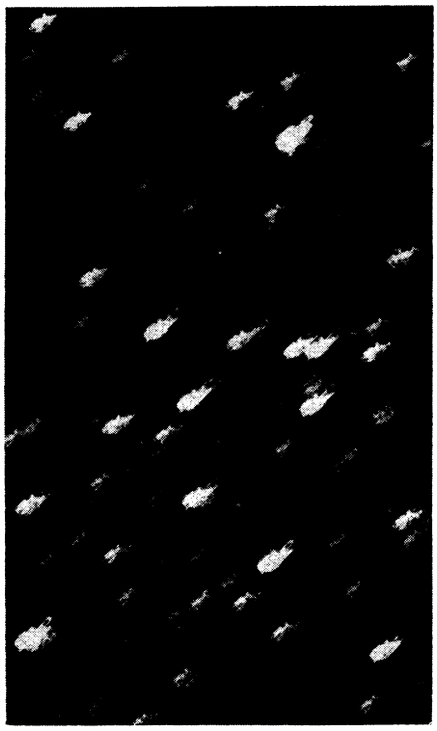
portedly detected photographically (SN: 3/26/66).

The most recent evidence concerning a pair of dust-laden clouds in lunar orbit comes from Dr. Charles Wolff and Lawrence Dunkelman of the National Aeronautics and Space Administration's Goddard Space Flight Center in Greenbelt, Md., and Louis C. Haughney of NASA's Ames Research Center, Moffett Field, Calif.

The three scientists took photographs of the regions where the cloud satellites were predicted to be from a jet airplane flying nearly 40,000 feet over the Pacific Ocean and 600 miles west of Baja California, a distance sufficient to eliminate all interference from artificial lighting. They used Tri-X film and exposures of one, three and nine minutes.



NASA

Only stars, no cloud satellite.

Although observers on the flight reported they saw luminous areas where the clouds should be, the photographs showed no cloud satellites.

This does not mean that the clouds do not exist. It does mean that the NASA scientists could not record the objects on film because they are so faint and therefore very difficult to photograph against the background of other competing light sources.

That is why, reporting their results in the July 28 SCIENCE, they urge further observations of the cloud satellites from airplanes carrying cameras equipped with the super-fast film.

The first astronomer to report having found the faint objects photographically was Dr. Kasimir Kordylewski of Krakow Observatory in Poland. In 1961 he said that a 10-year search for the elusive clouds culminated in successful photographs of the luminous patches in March and April.

No one in this country, however, has had a chance to examine the film. ◈

GENETICS

Hope from Diabetic Mice

Four million diabetics in the United States and another 30 million to 60 million around the globe could be indebted to a strain of diabetic mice being bred in Bar Harbor, Maine.

In diabetes research, "this mouse is the best working model to date," one of its discoverers, Dr. Katharine P. Hummel, says. "It is the kind of discovery that is leapt upon by researchers, because the diabetes in the mouse resembles that in mature humans." A satisfactory animal subject had eluded diabetes researchers, until the mouse was found.

The latest research with mice has given hope that their diabetes may be discoverable five days after birth instead of three weeks, when obesity, a symptom, becomes evident.

If diabetes can be found early, study of the developing syndrome will be possible for the first time.

Dr. Douglas L. Coleman, a biochemist and collaborator on the mouse work at Jackson Laboratory, reported this and other progress in research last week in Stockholm, Sweden, at the International Diabetes Federation Congress. He found that the mice—genetically—are cooperative enough to color-code themselves.

"The most recent genetic studies," he says, "have established that the diabetes is linked to two coat-color genes, brown and misty. This information can be used to establish lines in which all the diabetic mice will be of one coat color while the normals and the carriers will be another."

The diabetic mouse was first discovered because of its tendency to obesity and its markedly increased water consumption and urinary output —symptoms of human diabetes also.

The mice, however, do have a drawback as experimental subjects: Their life-span is four to six months. Dr. Coleman believes that this is not long enough for some of the complications of diabetes to appear. There were no cataracts or retinal hemorrhages in the eyes of the mice at any age. Kidneys, hearts and lungs were normal, and the thyroid, pituitary and adrenal glands showed no obvious abnormalities.

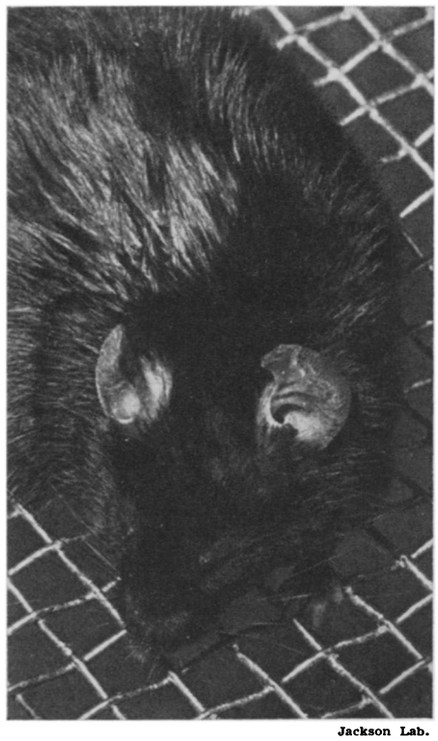
Also like other mutant mice, the diabetic ones cannot reproduce, and their ovaries must be transplanted into healthy females before ovulation can take place. Because both males and females are nonfertile, the diabetic stock must be maintained by the mating of carriers. The disease is inherited through transmission by both parents.

But because scientists believe human diabetes also has a genetic basis, hope for understanding the cause and ways to prevent the disease has arisen from the mouse studies.

In the diabetic mouse, it is the islets of Langerhans, in the pancreas, that are the only organs to show alterations with the advance of the illness. The disease develops in two stages, and in the advanced stage the mice are resistant to insulin treatment.

The reason for this remarkable insulin resistance in older mice is not yet known, Dr. Coleman says. It does not appear to be related to the degree of obesity.

But the researchers did find that when the pancreas of diabetic mice is not stimulated by the effects of almost constant eating, the islet tissue has an opportunity to rebuild its stores of insulin.



Jackson Lab.

Adult, obese diabetic mouse.

Both men and women of all ages get diabetes. It has been reported in a nine-day-old infant and in a woman of 99, but it is predominantly a disease of middle and old age. ◈