



#### TRIFLE TOO LARGE FOR A GEM

Not a big cake of ice on a hot August day, is this crystalline mass that holds the interested attention of three scientists in the American Museum of Natural History, but the largest topaz in the world. (Usually we think of topazes as little things, worn as gems in rings or other jewelry.) This single crystal, weighing 596 pounds, is more than two feet long, almost two feet wide and more than a foot and a half high. It was discovered in the Brazilian state of Minas Geraes.

*Science News Letter, August 10, 1940*

#### BACTERIOLOGY

## Sick Eggs May Prove Help In Fight Against Disease

### Virus Grown on Eggs Deficient in Vitamin Enables South African Scientists to Study Disease of Sheep

**S**ICK EGGS are destined to be a new aid to scientific disease-fighting, it appears from a report by Dr. J. H. Mason, Dr. J. D. W. A. Coles and Dr. R. A. Alexander, of the Department of Agriculture and Forestry at Onderstepoort, South Africa, to the English scientific journal, *Nature*.

This may sound like some of the tales you have read about the strange concoctions medicine men of primitive tribes give to their patients. It is far from being that, however. The eggs are not fed to patients. They are to be used as food for germs about which scientists need to learn more in order to conquer disease.

Fertile eggs have been used for this purpose for some years. One of the newest vaccines, that for typhus fever, was

made by growing the typhus fever germs on fertile eggs.

The South African scientists tried, unsuccessfully, to use fertile eggs for growing the germ of bluetongue, a disease of sheep. Then it occurred to Dr. Coles that the germ might grow better on sick eggs than on normal ones. So they made the eggs sick.

This was done by feeding the hens a diet that was deficient in one of the B vitamins, riboflavin. For some not clearly understood reason, the bluetongue germ or virus grew on these sick eggs. After growing on four such eggs in succession, it was able to grow on normal eggs also. This gives the scientists a chance to study the virus in the laboratory with a view to finding a way of

preventing or curing the disease in sheep.

The sick eggs, however, have further disease-fighting possibilities. The South African scientists point out that at least 20 different sick conditions—vitamin deficiencies, intoxications and combinations of these—can be produced in eggs if the hens are put on appropriate rations. Such sick eggs might support the growth of other viruses or germs that have not been grown on normal eggs. The germs of horsesickness, rat typhus and tick-bite fever, however, did not grow any better on sick eggs than on normal ones.

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#### BIOLOGY

### Electron Microscope Fellowship Established

**K**NOWLEDGE of hitherto hidden details of bacteria, viruses and other ultra-small things will be sought under a new fellowship in electron microscope research, established in the National Research Council by the RCA Manufacturing Company. Carrying an annual stipend of \$3,000, it will be open to candidates qualifying to use the electron microscope, a powerful new instrument of investigation in which streams of subatomic particles are used instead of light rays, giving vastly higher magnifications than are possible with even the most powerful of ordinary microscopes.

The work will be carried on in the RCA research laboratories in Camden, N. J., where the American electron microscopes have been developed. In considering candidates, it is announced, "preference will be given to versatile young men of United States citizenship, who have sound training in microbiology, a doctor's degree (Ph.D. or M.D.) and a record of original work." Applications are to be sent to the division of biology and agriculture, National Research Council, Washington, D. C.

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A new insulation material from peanut hulls is pronounced almost as efficient as cork and cheaper to produce.

## ● R A D I O

Charles M. Upham, engineer-director of the American Road Builders' Association, will tell of America's needs for Roads for Defense, as guest speaker on "Adventure in Science" with Watson Davis, director of Science Service, over the coast to coast network of the Columbia Broadcasting System, Thursday, Aug. 15, 4:00 p.m., EDST, 3:00 EST, 2:00 CST, 1:00 MST, 12:00 PST.

Listen in on your local station. Listen in each Thursday.