

MEDICINE

## To Humans From Cats

**Atypical pneumonia, prevalent in recent years, is related to or the same as pneumonia in cats. Symptoms like those of influenza or grippe.**

► THE ATYPICAL PNEUMONIA cases which have puzzled physicians for the past several years are related to or perhaps the same as a pneumonia which has afflicted cats during the same period. Evidence for this is reported by Dr. James A. Baker, of the Rockefeller Institute for Medical Research at Princeton, N. J. (*Science*, Nov. 20)

During the past year or so in the northeastern United States, when atypical pneumonia was attacking humans, cats have frequently been attacked by an infection variously called "nasal catarrh, influenza, or distemper," Dr. Baker reports.

The atypical pneumonia in humans has also masqueraded under symptoms suggesting influenza, grippe, or some similar ailment other than pneumonia, and has often missed being diagnosed as pneumonia, medical scientists believe.

The infection in cats, Dr. Baker found, is due to a virus that forms elementary bodies. Human atypical pneumonia is not caused by the pneumococcus and medical scientists have believed it is due

to infection with a filterable virus.

The cat pneumonia virus, Dr. Baker found from tests with human and cat blood during and after the illness, "is the same as or closely related to the one causing some of the so-called atypical pneumonias in man."

Whether the humans got the pneumonia from the cats or the cats got it from their owners is not as yet clear.

"A number of instances of contact between sick cats and people who subsequently developed atypical pneumonia have been brought to our attention," Dr. Baker states. "For example, Dr. Francis G. Blake, of Yale University, observed an atypical pneumonia in a rural family in Connecticut which occurred where cats were sick with a pneumonia. Dr. C. W. Barber, of the New York State Veterinary College, noted the reverse, where a child sick with atypical pneumonia played with a kitten that later became sick. It may be of epidemiological interest that the disease in man and in cats is occurring simultaneously."

*Science News Letter, December 5, 1942*

On the debit side, Dr. Lawson states, is the lack of success with this drug when the central nervous system has become involved.

The drug is given daily for 10 days by injection into the patient's vein. Dr. Lawson concludes that, although 53 cases is a small number on which to determine the efficacy of a drug, pentamidine seems "probably the best drug so far produced for early cases of sleeping sickness."

*Science News Letter, December 5, 1942*

PHOTOGRAPHY

## Army Films Saved By Removing Scratches

► IMPORTANT ARMY FILMS which have been accidentally scratched are now being saved. These scratches sometimes appear on the nitrate base of negatives made by the Army because of the difficulty of handling films taken in the field. A method for removing these scratches from the nitrate base has been developed by the United States Army Signal Corps Photographic Laboratory, Army War College, Washington, D. C. The procedure has saved many thousands of feet of film which would be extremely difficult to rephotograph.

The scratched film is run through a tank of chemicals in a manner similar to the developing of movie film. It is then dried so that it will not curl excessively. The solution partially dissolves

MEDICINE

## New Remedy Successful

**Chemical used in treating African sleeping sickness, pentamidine, has trial reported in *Lancet*. Required only ten days.**

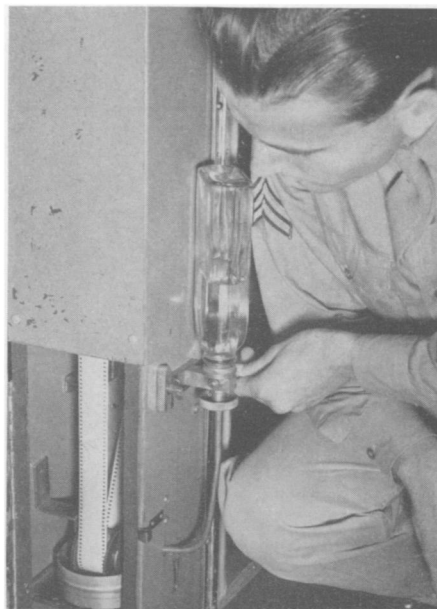
► SUCCESSFUL use of a new chemical remedy for African sleeping sickness is reported by Dr. T. L. Lawson, of the Medical Services of Uganda. (*Lancet*, Oct. 24)

The chemical is 4:4 diaminodiphenoxypentone, with the trade name of pentamidine. Out of 53 patients whom Dr. Lawson was able to re-examine three months after treatment, 41 were clinically cured, three were much improved, four improved, and four unaltered or worse.

"As regards gland puncture, 100% cure could be claimed," Dr. Lawson reports, since no trypanosomes were found in the juice obtained by puncturing

glands in the neck in any of the patients after the treatment. Trypanosomes are the germs that cause African sleeping sickness and swollen glands are among the early symptoms.

Advantages of pentamidine, Dr. Lawson points out, are that it swiftly destroys the germs in the peripheral blood and in the gland juice; treatment is complete in 10 days instead of 10 weeks as with other drugs; and toxicity is extremely low. The effective dose for treatment is not more than half the poisoning dose and probably almost one-fifth the killing dose. The speedy results obtained are important both to the patient and from the preventive medical aspect.



**SALVAGE—Important Army films which have been accidentally scratched are being saved by a method for removing the scratches.**

the nitrate base and allows the scratch marks to flow smooth. The process is carefully timed because too much time in the solution would cause an excess of film base to dissolve and make the negative thin.

The Signal Corps Laboratory under the direction of Lieut. Col. R. C. Barrett has designed and put into operation the machine which automatically times the process of running the film through the scratch removing bath and drying it afterwards. The machine can process about two to four feet per minute.

*Science News Letter, December 5, 1942*

#### ZOOLOGY

### Red and Violet Snow Due To Minute Forms of Life

➤ FIELDS of red and purple snow in the Northland are due to microscopic plants. These single-celled algae, one of the most primitive groups of living things, were investigated by Erzsébet Kol, Hungarian woman scientist working under a Smithsonian fellowship.

Her report of the vivid "blooms" in Alaskan mountain ranges has just been published in Washington by the Smithsonian Institution.

In this forbidding arctic environment, she found nearly 50 examples of the tiny plants living in almost infinite numbers on perpetual ice and snow.

Collecting living specimens, Miss Kol headed for her laboratory high in the Swiss Alps where she planned to cultivate and study this strange form of life.

War has now severed communication with Miss Kol. Except for news of the loss of her living specimens, no word has been received on how the war has affected the project.

Her previous reports indicated that some of these algae are very fussy about their home surroundings. One wouldn't live on ice. Another wouldn't live on snow. And there are striking changes in algae types depending on whether surrounding mountain slopes are acid or alkaline in composition.

This is probably due to their reliance on air-borne particles of decomposing and shattered rock for food. Dust dissolves slowly in the moisture on snow or ice surfaces, providing the minerals essential for life.

The snow and ice plants perhaps serve as the chief food for some other form of life, it is believed, which in turn supports higher forms.

*Science News Letter, December 5, 1942*

#### AGRICULTURE

## Healthy Army in 1962

**Recruits twenty years from now will have sound teeth and solid bones if fields where their food is raised are properly fertilized now.**

➤ RECRUITS for the Army of 1962 (if we need one then) will have sound teeth and solid bones if farmers and dairymen of 1942 put the right fertilizers on their fields and take proper care of the soil. The health and strength of the coming generation lies in today's fields and pastures, Prof. W. A. Albrecht of University of Missouri pointed out before the National Industrial Chemical Conference in Chicago.

Soils are the halfway stage between rock in the mountains and silt on the bottom of the sea; mankind seizes upon this geologically brief interlude in the endless cycle of erosion to extract a living from this mass of mineral particles plus humus added to it by other living things. If his use of the soil is wise, man can slow down the erosional cycle to his own advantage; if he abuses the soil it takes revenge by hastening the erosional process and leaves him hungry and faced with a stone-bare cupboard.

When soil "goes into a decline" it shows any number of warning symptoms before it is really ready to die.

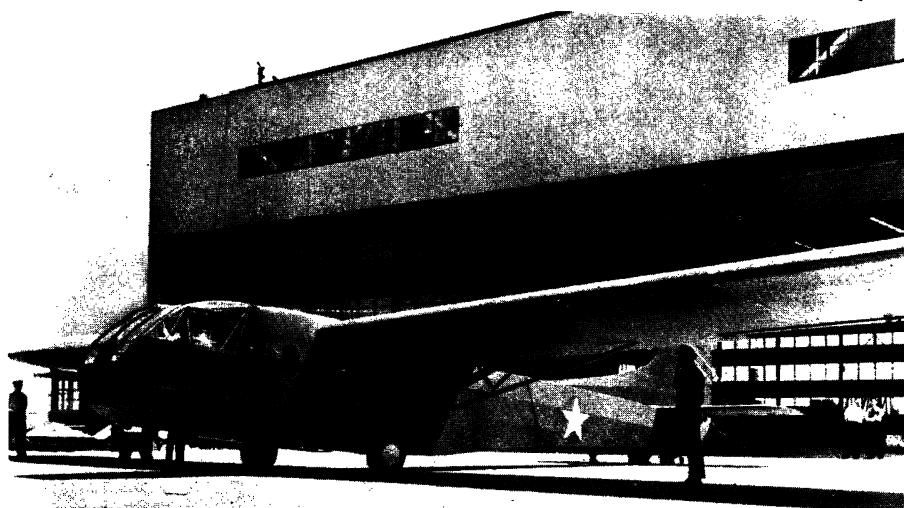
The speaker pointed out rising soil acidity, changes in the type of plants the soil will support, and various debilitating diseases in livestock pastured on the thinning range. A declining soil will not produce good crops of muscle- and bone-making plants; if an attempt is made to maintain total tonnage without regard to quality the new crops will have to consist more and more of "roughage" plants—bulky stuff with lots of woody tissue in it, but less and less of real food.

Prof. Albrecht suggested that one agricultural college's motto: "Our national wealth lies in the soil," might well be amended by the change of one letter: "Our national health lies in the soil."

*Science News Letter, December 5, 1942*

### Many Factors Affect Plants

➤ MANY FACTORS influence plants in their use of elements taken from the soil to produce nutritional value, Dr. L. A. Maynard of the U. S. Department of Agriculture pointed out. With the



**GLIDER**—This little motor-less craft will carry fifteen soldiers. It is the CG-4A transport glider, designed by the Waco Aircraft Company, of Troy, Ohio, under the direction of the experimental department, U. S. Army Air Forces, Wright Field.