

been in the making for 300 years, Dr. Link explained. Physics and chemistry provided a mechanistic concept of the universe. Biology repeats much the same story. Astronomy reveals a universe in which man is an infinitesimal dot of little consequence.

"This degrading concept of man reaches its climax in the teachings of our social studies, economics, sociology, political science, anthropology," Dr. Link asserted. "Men and women, these studies assert with confidence, are the victims of their economic environment.

They are helpless in the clutches of a soulless economic system."

The assumption that people cannot be led or encouraged to help themselves, therefore they must be taken care of like cattle by some great, automatic social plan is the "foundation for fascism both as it exists abroad and as it is being prepared by the organized social trends in America."

"This definition of man," Dr. Link declared, "psychologists are finding, is not only horribly degrading but fundamentally untrue."

*Science News Letter, November 26, 1938*

MEDICINE

## Nicotinic Acid Hailed For Results in Curing Pellagra

### Violently Demented Patients Are Restored to Sanity Within From One to Six Days of This Treatment

DETAILS of the nicotinic acid cure for pellagra, known as the South's hard-times disease because it follows slumps in the cotton market and other economic disasters in Dixie, were related to southern doctors at the meetings of the American Society of Tropical Medicine and the southern branch of the American Public Health Association. They heard how a small daily dose of this acid cures the fiery tongue, the skin rash, the lack of appetite and the dementia of pellagra.

Violently demented pellagra patients were restored to sanity within from one to six days of nicotinic acid treatment, Dr. Tom D. Spies of Cincinnati reported. Associated with Dr. Spies in the pellagra studies are Drs. William Bennett Bean and Jean M. Grant of Cincinnati,

Robert E. Stone of Chapel Hill, N. C., and James B. McLester of Birmingham, Ala.

Mentally sick patients whose sickness is not due to pellagra cannot hope to be restored to sanity by nicotinic acid treatment, Dr. Spies emphasized.

A well-balanced diet must be followed along with nicotinic acid in the routine treatment of pellagra, Drs. Julian M. Ruffin and David T. Smith of Duke University School of Medicine, Durham, N. C., told fellow physicians. The Duke University physicians were among the pioneers in the use of this treatment for pellagra.

Pellagra comes from eating a poor diet. Scientists have known this for some years, and have also known that yeast, liver, red meat and fresh vegetables contained

the substance necessary to cure or prevent pellagra. The diet of large portions of the South's population was completely lacking in all these foods during periods of hard times. The pellagra preventing substance was at first labelled vitamin B<sub>2</sub>. Now, thanks to the work of Dr. C. A. Elvehjem and associates at the University of Wisconsin, it is known that the vitamin which cures pellagra is nicotinic acid.

It is not yet known whether nicotinic acid alone will prevent pellagra in persons eating a poor diet. Dr. Spies and associates are giving nicotinic acid to several hundred pellagra patients in Birmingham to find out about this.

Warning against too large doses of nicotinic acid were given by both Dr. Ruffin and Dr. Spies. Normal persons to whom Dr. Ruffin gave large doses of the acid became quite sick with extreme mental depression. Dr. Spies stated that not enough is known of the effects of a super optimal supply of the vitamin to warrant using it "in staple foods or as a national tonic," as has been suggested.

Nicotinic acid does not cure either the peripheral neuritis or the anemia of pellagra patients. These are due to other deficiencies of the diet and need other treatment.


For the neuritis, vitamin B<sub>1</sub>, now known as the chemical, thiamin, is needed. This is the anti-beri-beri vitamin. The difficulty in distinguishing nerve damage in pellagra, due to lack of nicotinic acid, from nerve damage due to lack of thiamin was discussed by Dr. George Cheever Shattuck of Harvard Medical School.

This vitamin, Dr. Shattuck pointed out, is widely distributed in nature and is closely associated with the body's utilization of sugars and starches. From these facts he concludes that the effects of deficiency of this vitamin may be "more numerous and widespread in man than has hitherto been recognized." Dr. Shattuck advised caution, however, in drawing sweeping conclusions on the subject and said that vitamin B<sub>1</sub> or thiamin should "certainly not be advertised as a 'cure-all.'"

### Body May Starve Invaders

RESISTANCE to infectious diseases may be accomplished in our bodies by a process that starves out the invading organism that causes the infection.

Studies showing this self-starvation process is actually what builds up immunity to a rat ailment similar to hookworm disease, cause of much debility



## SHOW and SIDE-SHOW

By JOSHUA ROSETT

In this book scientists inadvertently win a war against the insect world, and the effect on our own mechanized civilization is so amazing that once read, this book will never be forgotten.

A fascinating plot...love interest...humor...mystery.

A masterpiece of satire as far in advance of Juvenal and Swift as the streamlined train and the airplane are in advance of the ox cart. \$2

**RODALE PRESS      Emaus, Pa.**

and economic loss in the South, were reported by Prof. Asa C. Chandler, of the Rice Institute, Houston, Texas.

Prof. Chandler believes that the starvation process may play "an important but hitherto largely unrecognized part" in resistance to bacteria-caused ailments as well as to many worm-caused sicknesses like hookworm disease.

Resistance to bacteria-caused ailments has till now been considered chiefly on the basis of the appearance of antitoxins or antibodies in response to presence in the body of germs that produce toxins or antigens.

Actual resistance to infection, however, is by no means parallel with production of antibodies in the body, Prof. Chandler pointed out. Other forces are presumably at work, of which the starvation process may be the most important. Studies of worm parasites, particularly those of the intestine, show how actual resistance to infection can develop independently of the circulating antibodies.

Prof. Chandler discovered this starvation factor in disease resistance through studies of the way rats develop immunity to an intestinal worm called *Nippostrongylus*, which is distantly related to hookworms.

*Science News Letter, November 26, 1938*

BIOLOGY

**Centenary of Cell Theory Celebrated This Year**

**B**IOLOGISTS the world over have been observing, during the current year, one of the most important anniversaries in the whole history of science: the centenary of the cell theory.

It is difficult nowadays, when everybody, layman as well as biologist, takes cells for granted (even though he may never have squinted through a microscope) to realize that only three generations ago the idea of the importance of these little living bricks of which all living things are built was as new as the sunrise.

Yet so it is. To be sure, cells had been seen before. Early in the seventeenth century, as soon as the first crude microscopes became available, observers saw these objects, either as cavities in the tissues of larger organisms, or singly as "animalcules". But though seen, they were not rightly interpreted.

It was not until 1838 that the right eyes and the right minds were applied to the cellular problem. First came Matthias Jacob Schleiden, son of a Hamburg physician, who at the age of 34



# This Christmas Gift Coupon Saves You MONEY, Time, and Work

**T**HOSE of your friends who would like to read SCIENCE NEWS LETTER, would enjoy getting a year's subscription from you as a Christmas Gift.

If you give *two* or more such subscriptions, they cost you \$3.50 each (a saving of \$1.50 per subscription)—or you can give *one* gift subscription, and *renew your own* subscription for a year, paying only \$3.50 per subscription.

Not only will it save you money to use the coupon, but think of the *time* and *work* you get rid of. No tramping in and out of department stores, gift stores, any kind of stores, during the jostling Christmas buying days. *Let the postman* do the walking. He is *paid* for it!

Fill out the coupon below and send it to SCIENCE NEWS LETTER. Solve at least one or two of your Christmas Gift problems that way. You can pay later, in January.

Mail This Coupon to SCIENCE NEWS LETTER, 2101 Constitution Ave., Washington, D. C.

**Please send Science News Letter for one year to:**

Name \_\_\_\_\_

Address \_\_\_\_\_

City and State \_\_\_\_\_

**AND**

Name \_\_\_\_\_

Address \_\_\_\_\_

City and State \_\_\_\_\_

Also  RENEW my own subscription at these rates.

**AND, send bill for above order to me in January.**

My Name \_\_\_\_\_

Address \_\_\_\_\_

City and State \_\_\_\_\_

**Special Christmas Gift Subscription Rates**

ONE SUBSCRIPTION, 1 year .....	\$5
TWO SUBSCRIPTIONS, 1 year .....	\$7
ADDITIONAL YEARLY SUBSCRIPTIONS, each .....	\$3.50

**No extra postage to anywhere in the world**