

## MEDICINE-PHYSIOLOGY

**Predict Epileptic Seizures Through Brain Waves**

**E**PILEPTIC seizures have been successfully predicted by means of brain wave studies at Harvard Medical School, it was disclosed for the first time at a symposium on the nervous system and its disorders, conducted as part of Harvard University's Tercentenary.

The announcement was made by Drs. F. A. Gibbs and W. G. Lennox, members of the Harvard medical faculty. They stated, in summary:

"By studying the electrical activity of the brain we are making good progress toward understanding the underlying disturbance which causes epileptic seizures. But until recently we have learned nothing that would be of immediate help to epileptics.

"In the last hundred days, however, we have been taking daily fifteen-minute records on a patient who has frequent convulsive seizures, usually one, sometimes two a week. We have found that in this case the electrical activity of the brain changes markedly as much as 18 or even 24 hours before a seizure.

"If we can predict seizures in one patient, the first we have studied with this in mind, we can probably do the same for others. If a patient could tell the day on which he was to have a seizure he would be relieved of the fear of having one in an embarrassing or dangerous situation. Furthermore, if one can tell when a seizure is about to occur, it should be possible in many instances to give a sedative drug in sufficient dosage to prevent the seizure."

*Science News Letter, September 26, 1936*

## PHARMACY

**Drug Stores to Swing From Present Hodge-Podge Style**

**T**HE "GENERAL STORE" type of drug store which handles everything from epinephrine to plain and fancy radios is on the way out, according to Dr. A. R. Bliss, Jr., dean of the School of Pharmacy, Howard College of Alabama.

Better conditions for the pharmacy profession, including cultural conditions, a higher type of professional pharmacist, and a definite salary increase are seen by Dr. Bliss as a result of the increasingly strict educational requirements for practicing pharmacists.

Two kinds of specialized stores will take the place of the old drug store, he

said. One group, with specifications probably set by the state boards of pharmacy, will carry on the professional functions of pharmacy.

"The most important of these functions is, of course, the compounding of prescriptions. Others are the handling of poisons, narcotics, and other drugs, the sale of medicines as a whole, the sale of sickroom necessities, and acting as a first aid station.

"I doubt if the stores in the other classification should be called drug stores. They will sell package goods and sedentary lines," Dr. Bliss explained.

The Howard College pharmacologist said a start has already been made in this direction in that there are state laws which reserve the name "pharmacy" only for stores which employ a registered pharmacist.

In predicting better conditions for the pharmacy profession, he said: "Graduates of four year courses in recognized colleges will not be content to work under the old conditions which correspond to school pharmacists work under."

"There is a willingness of most authorities," Dr. Bliss said, "to recognize that modern education is worth professional remuneration."

*Science News Letter, September 26, 1936*

## MYCOLOGY

**Fall Showers Bring Forth September Mushrooms**

See Front Cover

**A**S APRIL showers bring forth May flowers, so autumn showers bring forth September mushrooms. In damp fields and moist, leaf-carpeted woods their sudden, elfin appearance causes surprise and mystification, except to those who know that down out of sight the white, webby threads of mycelium have been growing slowly for months, sometimes for years, and that the now fast-expanding fruiting bodies were ready in the "button" stage long ago.

Among the most interesting, yet most common, of autumnal mushrooms is the elm fungus, *Pleurotus ulmarius*, that puts forth its really graceful clusters of thickish, creamy-white fans, ribbed underneath, from dead logs and stumps of the elm, and sometimes from branches of the living trees. This mushroom can be eaten freely without fear of ill consequences. It is well-flavored.

The photograph on the front cover of this week's SCIENCE NEWS LETTER is by Cornelia Clarke.

*Science News Letter, September 26, 1936*

**IN SCIENCE**

## PHYSIOLOGY

**Body Mobilizes Vitamin A When Fighting Infections**

**V**ITAMIN A seems to play a part in overcoming infectious diseases, research by Drs. S. W. Clausen and A. B. McCord of the University of Rochester Medical School show.

This has long been suspected from the fact that persons whose diets are lacking in this vitamin are liable to infection. Now the Rochester researchers find that the body mobilizes its vitamin A like part of a defensive army when called on to fight disease.

The vitamin, found in carrots, apricots, other vegetables and fruits and cod liver oil, is stored in the liver in man and other animals. When albino rats are sick with a disease known as mouse typhoid fever, part of the vitamin A disappears from their livers, and an increased amount of this vitamin is found in their adrenal glands, Drs. Clausen and McCord found.

A similar reaction appears to occur in patients suffering from pneumonia. During the acute stages of the disease, the concentrations of vitamin A, carotene and xanthophyll, closely associated substances, in the blood are very low, but after the crisis the amounts of these substances steadily increase. About the tenth day after the crisis, the concentration of vitamin A suddenly rises to a peak far above the average before returning to normal within a few days. Again it seems as if the vitamin must be called out to aid in the recovery.

Much the same changes in the amount of vitamin A in the blood occur in patients treated by artificial fever, indicating that the fever which accompanies infectious diseases plays an important part in bringing about the changes.

"We feel that vitamin A must play an important part in the struggle of the human body against disease and infection," the Rochester scientists concluded their report to the American Chemical Society. "As a supply of this vitamin in the tissues is exhausted by the fever, more of the vitamin appears to be mobilized from the liver to points where it is most needed."

*Science News Letter, September 26, 1936*

# CE FIELDS

## BIOCHEMISTRY

## Cabbage Vitamins Vary As Seasons Change

**C**ABBAGE isn't the same vegetable all the year round, so far as vitamin content is concerned. Experiments at the New York State Agricultural Experiment Station reveal that varieties of cabbage grown commonly for early summer harvest are much richer in vitamin C than autumn cabbage.

The summer cabbage is even richer in this vitamin than orange juice, on a percentage basis, the experiments show. Autumn cabbage, on the other hand, contains only a little over half the vitamins in orange juice.

*Science News Letter, September 26, 1936*

## PSYCHOLOGY

## Peace as Natural to Man As Warlike Ways Are

**W**AR IS NOT a universal and inevitable product of human nature, declares Miss Regina Flannery of the Catholic University of America.

Miss Flannery's researches in anthropology have convinced her that "So far as anthropology can see, peace is just as 'natural' to man as war is. All depends on what man chooses to do with his own nature."

In an essay written for the quarterly journal, *Thought*, Miss Flannery cites her own first-hand observations among the Cree Indians, who live in the "Big Woods" of northern Canada, around the southern end of Hudson Bay. Despite the fact that these Indians are a primitive people who live by hunting (or perhaps because of that very fact) they are "without even traditions of war and without warlike offensive or defensive weapons." Other primitive peoples, widely scattered over the earth and widely diverse in race, are similarly rooted in the ways of peace.

But peace is "natural" to greater cultures and higher civilizations than theirs, Miss Flannery continues, pointing out the predominantly non-military character of both the Chinese and the peoples of India, despite long history of wars in both lands. The Hindus have held up the ideal of peace ever since

the rise of Buddhist and Jainist religious philosophies, and the Chinese, who like to crystallize all their thoughts into proverbs, have a saying: "Good iron is not used for making a nail; good man is not used for making a soldier."

Where intense nationalism steps into the picture, whether now or in past centuries, Miss Flannery contends, it is the consequence of what she calls the double ethical code. This code (which of course has nothing to do with the so-called double standard in personal morals) is the tendency among peoples to make their particular set of rules for social conduct valid within the tribe or nation only, with the tacit proviso that "foreigners don't count."

Researches into the terrifically confused tangle of primitive moral and ethical codes, conducted at the Catholic University, have sifted out a sort of "natural decalogue." Interdicts against murder, adultery, incest, theft, malicious lying, cruelty to children, inhospitality, and certain other offenses are worldwide among the most primitive peoples, and have apparently existed as long as the human race has been on the earth.

But at the tribal borders, with many peoples, these rules stop. Hospitality toward the stranger, however, is fairly common, and is the first crack in the wall of the double ethical code. As man becomes more civilized, has wider and readier communications with other peoples in other places, the rift becomes wider, other "rights" are extended toward strangers, and more fellow-humans are included within the circle.

But even yet, the double code, "this graybeard survivor from the days of the caves and river drifts," keeps a tenacious hold on the ways of mankind and only through long and patient effort, undiscouraged by slowness of progress within any single human generation, can men of good will eventually hope to dislodge it.

*Science News Letter, September 26, 1936*

## CORRECTION

## Smithsonian Appropriation Not Made by Congress

**U**NFORTUNATELY the Smithsonian Institution has not received an appropriation of \$200,000 from Congress to continue and extend its studies upon solar radiation variations and their relation to world weather, as stated SNL, Sept. 12, p. 171. The expected appropriation passed the Senate, but died in conference on the urgent Deficiency Bill.

*Science News Letter, September 26, 1936*

## ICHTHYOLOGY

## Making Fish Clean House Is Scheme of Scientists

**A**N INGENIOUS way of making a young trout clean house, that is to say, sweep out the debris in their pond, has been devised in a new type of trout-rearing pond.

By putting the fish to work, the Bureau of Fisheries expects to save considerable time of attendants who have had to scrub the ponds with brooms. The new housecleaning system is to draw off the water in the pond to a low point, introduce a stream of water low in the pond, and then the fish mop up by scurrying over the bottom, carrying the debris with them and dumping it in a catch basin.

*Science News Letter, September 26, 1936*

## PSYCHOLOGY

## Greed for Money Traced To Childhood Indigestion

**C**HILDREN who cannot digest their food may later develop greed for food and then excessive greed for money, reports the famous psychologist, Prof. Alfred Adler, in the *International Journal of Individual Psychology*. Many money magnates have suffered from lifelong digestive disturbances, he points out.

*Science News Letter, September 26, 1936*

## CHEMISTRY

## Five \$2,500 Fellowships In Chemistry to Be Given

**T**HE LALOR Foundation will grant five fellowships valued at \$2,500 each in chemistry and related sciences for the academic year 1937-38 it is announced by C. Lalor Burdick, Foundation Secretary.

The awards may be used for research anywhere in the United States or abroad.

The only restriction of the fellowships is that at least one, each year, goes to a research fellow assigned to Massachusetts Institute of Technology since the Foundation is a memorial to the late Dr. Arthur A. Noyes, founder of the physical chemistry laboratory of Massachusetts Institute of Technology.

Appointments are open to both men and women, including professors on sabbatical leave. Applications and information may be obtained from the Secretary of the Lalor Foundation, of Wilmington, Del. Closing date for applications is December 1, 1936.

*Science News Letter, September 26, 1936*