MENTAL HYGIENE

U. S. Not So Sane Since Depression

THE United States is not so sane as it was before the depression, if the number of mental patients in New York State may be considered typical of the nation as a whole.

More people were in mental hospitals for treatment during the years of the depression than for a corresponding period before that economic catastrophe. During both periods the number was constantly increasing, but in the pre-depression era the increase was at the average rate of 1,600 per year. Since 1929, this increase has jumped to 2,500 per year.

All types of mental disease were affected to some extent by the economic crisis, although it may not have been the dominant fact in the increase in any one disease. This is the conclusion of Dr. Horatio M. Pollock, statistician of the New York State Department of Mental Hygiene, who compiled the figures. (*American Journal of Psychiatry,* January).

The increase in the group of alcoholic insanities was more affected by liquor legislation than by economic conditions, he decided. The number of first admissions to New York State mental hospitals for these psychoses increased from 537 cases in 1929 to 593 in 1932 and then jumped to 706 in 1933, it was revealed.

Science News Letter, March 9, 1935

PLANT PATHOLOGY

New Currant Variety Resists Rust Fungus

"VIKING" is the sturdy name given to a disease-resistant variety of red currants that may solve the costly problem of white pine blister rust in this country. White pines are tied up with currants and their relatives the gooseberries in the problem of blister rust disease, because the same fungus lives first on the currants or gooseberry bushes, then goes to the pines and ruins them. To save white pine it is necessary to destroy both wild and cultivated currant and gooseberry bushes in the pine forest areas.

Destruction of these favored small-fruit bushes has caused horticulturists much grief and expense, so that resistant substitute varieties are being sought by the U. S. Department of Agriculture. The "Viking" has been tried for several years under experimental conditions in the greenhouse, Dr. Glenn Gardner Hahn, pathologist of the bureau of plant industry, states in a new Department of Agriculture bulletin. The fruit is excellent, too, so that if the bush can show equally good resistance under field conditions a part of the blister rust problem may be regarded as on the way to solution.

Varieties related to the "Viking" have already shown another valuable characteristic, drought resistance in the prairie regions. It is hoped that the new currant will possess this quality also.

Science News Letter, March 9, 1935

PATHOLOGY

Tumor Virus Potent After Sixty Freezings

FROZEN and thawed sixty times, the virus or causative agent of one kind of cancer is still potent enough to produce tumors when injected into chickens, Prof. H. E. Eggers of the College of Medicine of Nebraska and Dr. John K. Miller of the Nebraska Methodist Episcopal Hospital and Deaconess Home have reported (*American Journal of Cancer,* Jan.).

The Omaha investigators worked with the famous Rous chicken tumor. Although it is twenty-three years since Dr. Rous showed that this particular kind of tumor can be ground up and filtered without losing its tumor-producing quality, scientists are still uncertain as to whether the causative agent is a living substance or something in the nature of a chemical enzyme, without life but capable of inciting changes in the body which result in cancer.

Prof. Eggers and Dr. Miller started their experiments in the hope of shedding light on this problem.

Because this tumor filtrate could withstand being frozen rapidly with carbon dioxide snow sixty times and sixty times thawed out without losing completely its tumor-producing property, Prof. Eggers and Dr. Miller believe it is probably not a living agent. It showed a resistance to freezing and thawing greater than other known living agents, such as bacteria or other cellular organisms.

But they do not feel their work has completely ruled out the possibility that the agent is living, since the filtrate might contain organized bodies so minute as to escape the effect of sudden and repeated changes of volume.

Science News Letter, March 9, 1935

IN SCIENC

RADIO-PHYSICS

Roofs to Capture Sunshine; Radio to Broadcast Taste

ROOFS of houses in the year 2035 will be made of photo-electric shingles that will convert sunshine falling upon them into electricity, Dr. Orestes H. Caldwell, editor of *Electronics* magazine, predicted. So plentiful will this electric energy be that he foresees high frequency magnetic oscillations keeping everyone warm inside houses, even though windows are open to winter's breezes. He also predicted that tastes would then be sent by radio so that a jam manufacturer might distribute over the radio a taste sample.

Science News Letter, March 9, 1935

GEOLOGY

Geological "Jawbreakers" In Special Dictionary

WHAT is diastrophism? peridotite? a geosyncline? a batholith?

If you don't know the answers, look them up in Miss Rice's new dictionary of geological terms. "Jawbreakers" as hard as the rocks they label should have no more terrors for struggling students.

Fifteen thousand technical terms are defined in a scientific dictionary of geology, one of the first of its kind ever assembled, which has been completed by Miss Mabel Rice, secretary of the Department of Geology of Princeton University for the past fifteen years. She began her career as a lexicographer in 1920, when she started to jot down unfamiliar terms.

Each definition in Miss Rice's dictionary has been edited or approved by an authority, and she lists various conflicting opinions, in case of a disagreement, in Oxford English Dictionary fashion. The Princeton geological faculty and more than twenty other scientists have aided in the work.

Faculty members and graduate students now consider her card-index of 15,000 geological terms one of their most important pieces of scientific apparatus.

Science News Letter, March 9, 1935

E FIELDS

ZOOLOGY

Hawaiian Lobster Species Found in South America

HAWAIIAN lobsters are evidently out to see the world. A species of the crustaceans at first known only from Honolulu has turned up on the coast of Natal, where it was identified by E. C. Chubb, curator of the Durban Museum.

The wandering lobster, which has already half encircled the globe, was reported successively from the East Indies, from Reunion Island in the Indian Ocean, and from Mauritius. Zoologists are waiting now to see whether it will continue its journey around the Cape of Good Hope and into the South Atlantic.

Science News Letter, March 9, 1935

ARCHAEOLOGY

Carnegie Scientists to Aid Repair of Mayan Ruins

RUINS of the beautiful Mayan city of Copan, Honduras, shaken by recent earthquake and attacked by encroaching waters of the Copan River, are to receive scientific first aid.

The Government of Honduras has invited the Carnegie Institution of Washington to assist in the repairs and the protective work needed to safeguard the famous ruined city against its enemy, the river.

A report from Gustav Stromsvik, technical expert sent by the Carnegie Institution to Copan, says:

"The ruins have suffered from the all-destroying earthquake; a big chunk of the high bank has fallen into the river. The walls of the beautifully sculptured interior chamber of Mound 22, excavated by Maudslay about fifty years ago, have collapsed. The room can be restored, however, as all the pieces are there, but the part that fell into the river is permanently lost."

From the time of its founding, early in the Christian era, Copan's Indian inhabitants built and re-built temples, pyramids, stairways, and plazas, often enclosing old structures with bigger new ones, until the result was highly complex. Where the Copan River has cut through the eastern side of the site, a vertical section of ruins, a hundred feet in height, has been exposed, revealing a cross-section of the city's development.

Science News Letter, March 9, 1935

PSYCHIATRY

Play Reveals What is Going On in Child's Mind

A CLUE to what is going on in the mysterious depths of a little child's mind is provided by his play when he is allowed to make up his own games. How the make-believe, the childish drawings, and the story telling of young problem children may be interpreted by the physician to aid in solving their difficulties was related by Dr. Edward Liss, child psychiatrist of New York City, in an address at the Child Research Clinic of the Woods Schools.

Helen, a little girl who was filled with strange fears and who had difficulty with her food, especially before some new situation and on Monday mornings, was one of the children treated with this technique.

Since the child was greatly interested in theatricals, the physician allowed her to use a puppet show and listened as the play went on. Soon the action was centered about food and the "dialogue" proved very illuminating in revealing the child's emotional difficulties.

Tom, who liked to paint and draw, was encouraged to make drawings. The subjects he selected told the physician more plainly than words what was "on his mind."

Study of the free creative play of normal children was urged by Dr. Liss as a basis for comparison with the problem or ill children that come to the physician for treatment.

Science News Letter, March 9, 1935

BOTANY

Seek New Plants In Northern Persia

PERSIA, home of some of the most ancient gardens of the world, is being visited by an agricultural expedition from the Tashkent Institute. The scientists are especially interested in finding new varieties of citrus fruits, tea, date palms and other plants suitable for cultivation in a dry climate.

Science News Letter, March 9, 1935

SEISMOLOGY

Washington's Birthday Marked by Earthquake

WASHINGTON'S birthday was marked by a sharp earthquake shock that disturbed the bottom of the North Pacific in the neighborhood of one of Uncle Sam's remotest landholdings, Attu Island, in the Aleutian chain. On the basis of wire and radio reports collected by Science Service and interpreted by the U. S. Coast and Geodetic Survey, the epicenter was placed in latitude 53 degrees north, longitude 175 degrees east. Time of origin was 12:06.3 p. m., Eastern Standard Time.

Stations reporting were those of the Dominion Meteorological Observatory, Victoria, B. C.; the Manila Observatory, Manila, P. I.; the University of Montana, Bozeman, Mont.; Georgetown University, Washington, D. C.; and the observatories at Honolulu, Sitka and Chicago.

Science News Letter, March 9, 1935

PHYSIOLOGY

Enough Oxygen in Normal Air for All Body Needs

THE AIR normally has more than enough oxygen to supply the needs of the human body, even under conditions of strenuous physical exertion. The amount of oxygen a man consumes in a minute is the same whether he breathes ordinary outdoor air or air containing 40, 60, or 90 per cent. of oxygen.

These are among the conclusions of a study conducted by Dr. Francis G. Benedict at the Nutrition Laboratory of the Carnegie Institution of Washington, located in Boston.

In the experiments the amount of oxygen consumed was measured first while the subjects were at rest, then while they expended measured amounts of energy on a bicycle, and finally while they were recovering following the strenuous exertion. A helmet placed over the subject's head enabled the investigators to measure the amount of oxygen consumed, whether the subject was breathing air, or air enriched with varying amounts of oxygen.

Inhaling oxygen-rich air has no effect on the rate of breathing, either during rest or work, nor did it change the character of material burned in the body during muscular work, but it did affect the heart rate.

Science News Letter, March 9, 1935