the poverty-stricken inhabitants of the South.

He came back to Washington, to his old quarters in the Hygienic Laboratory, wondering how he was going to find a cheap food that would prevent pellagra. Then at just the crucial moment, he heard of some experiments that had been going on at Yale University. The Yale investigators had been trying to find the effect of meatless diets on dogs. What they found was that their dogs got sick, had very sore mouths, and died of a disease called black-tongue which was very much like pellagra in human beings.

Experimental Animals

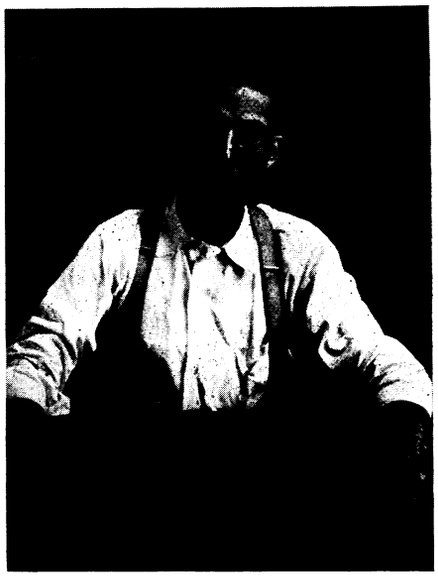
This gave Dr. Goldberger just what he needed—a handy way of studying the pellagra-preventing value of various foods. If, as he soon found to be the case, black-tongue disease of dogs is the same as human pellagra, the foods that cure the dogs of black-tongue will cure pellagra too.

He found the pellagra preventive, which he called P-P factor, in a number of vegetables and milk, butter, lean fresh meat and eggs. Finally, he discovered it in yeast, just in time to save the lives of the victims of the Mississippi flood in 1927. A small amount of this cheap stuff, either fresh or dried, will cure or prevent pellagra. Even the poorest folks, who cannot buy milk or fresh meat, can pay three cents a day for the yeast that will protect them from pellagra.

Death Cut Short Work

In the midst of his investigations on the pellagra-preventive factor of foods, Dr. Goldberger was called on to make his last fight against disease. Although he had risked his life many times before, disease came uncourted this time, and death followed despite all the efforts of fellow scientists and his colleagues of the U. S. Public Health Service. On January 17, 1929, he died at the Naval Hospital in Washington, a victim, not of any disease he had investigated, but of a tumor of the kidney.

So he did not live to see pellagra routed during the worst depression in history, as a result of his discoveries and research. For while all scientists are not yet convinced that pellagra results from lack of a certain vitamin, as he thought, the Red Cross has heeded his teachings. When the first effects of the present depression became apparent, the Red Cross started distributing yeast to the poor people in the South and encouraged and helped them to plant vegetable gardens and to can the surplus vegetables for the winter's use.



SUFFERING

This patient not only has on his hands the symmetrical pellagra rash, but, judging from his expression, is also suffering from the mental depression which is a striking feature of pellagra—the victims of this disease are sometimes so affected mentally that they have to be confined in hospitals for mental disease.

There has been no devastating epidemic of pellagra during this depression, in fact, the pellagra death-rate has been reduced by about one-third. Regardless of whether his theories were right or wrong, the practical teachings of the immigrant boy who grew up to be a great scientist seem to have saved thousands from pellagra suffering and death.

Science News Letter, June 23, 1934

MEDICINE

Glands May Play Part In Cancer Among Women

DISTURBANCE of certain glands, particularly the pituitary gland at the base of the brain, may play a part in the development of cancer of the child-bearing organs, Dr. J. Isfred Hofbauer of Cincinnati told members of the American Medical Association.

Cancer patients were improved by treatment which slowed the activity of their pituitary glands, before their cancers were treated locally, Dr. Hofbauer reported as evidence of the influence of the pituitary on this type of cancer.

This approach to the cancer problem is based on the theory that the pituitary which stimulates normal growth also acts as a stimulant to the excessive growth of cells that eventually become cancer. According to the new view explained by Dr. Hofbauer, the prolific growth of cells before the birth of a child may be caused by a change in the balance of the glands of internal secretion. This overgrowth has been known to remain for months after the birth of a child and it may be that it persists after several experiences of childbirth. Experiments have shown that the same type of overgrowth of cells can be produced in guinea pigs and monkeys by giving them pituitary hormone.

Further indication that the glands may influence the development of cancer is seen in the fact that this type of cancer occurs so frequently toward the end of the childbearing period in women's lives when a change in the balance of the glands and the body functions takes place naturally.

Heretofore cancer of the childbearing organs has been attributed to injuries received during childbirth with resulting chronic infections. The army of cancer fighters is beginning to doubt whether this is an adequate explanation in all cases, Dr. Hofbauer said.

Science News Letter, June 23, 1934

ORNITHOLOGY

Young Desert Hawks Secure in Natural Fort

See Front Cover

DOUBLE defiance to a hard and hostile world is offered by the splendid pair of young desert hawks pictured on the cover of this issue of the SCIENCE NEWS LETTER. In addition to their own armament of beak and claw, formidable even in their immature state, these hawklets have around their nest in the top of a tree yucca a forbidding *cheval-de-frise* of down-pointing, spine-tipped tough leaves that defies any climbing enemy. Bristling birds in a bristling home, they are the very epitome of the rugged and truculent self-sufficiency that is the price of survival in the wilderness.

The picture, taken in the recently established Carlsbad Caverns National Park, constitutes striking evidence that there are worthwhile things to see under the vast open desert sky in this region, as well as in the caverns' tremendous depths. The birds of Zeus, no less than the bats of Dis, are worthy of our attention when we ride into the West in search of wonders.

Science News Letter, June 23, 1934

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