

dealers in wild bird plumage, has placed on inventory all storks now in existence, and all this plumage has been placed in storage. Strict control should therefore be possible, the more so since the legitimate trade is keenly interested in the suppression of bootlegged plumage originating with poachers.

One exceedingly important and self-sacrificing thing was done by Feather Industries. They agreed to the immediate sacrifice of several classes of feathers that have long been an especially severe source of grief to conservationists: egret, heron, bird-of-paradise, and bald and golden eagle. Of course, a society matron possessing an aigrette may continue to wear it without breaking the law. But the thing has automatically become old, passé, dated. The chances are that in far less than six years aigrettes will be as scarce on ladies' heads as elk-tooth watch-charms are on the vests of B.P.O.E. members.

Some humorous situations have arisen as a result of the new plumage legislation. An officer of the Audubon Society repeats a story told him by a socially prominent woman of his acquaintance. She was stopped on the street by a policeman, who was evidently also something of an ornithologist. He asked her if she knew what kind of a feather that was, in the new hat she was wearing. She admitted she didn't know.

"Well," said the officer, "that's an eagle feather, a golden eagle feather, and it's against the law to buy and sell them now. I think I'm supposed to arrest you for having it, but if you'll go home and take it off your hat I'll say no more about it."

"And you can bet a hat," the woman concluded, "that I'll never be caught out with that feather again!"

Actually, of course, the lady was well within the law, and in no real danger of arrest for owning and wearing an eagle feather. The new setup merely bans the commercial importation and sale of wild-bird plumage. Moreover, ladies' hats will not have to go completely featherless after the present stock of wild-bird plumage is liquidated. The new legislation, and the voluntary action of the feather trade, provides for legal traffic in ten species of domesticated birds, ranging from chickens and ducks to ostriches and peacocks. What with the skill of present-day feather workers in trimming and dyeing, the old wild-bird plumage, marketed at the price of so much suffering and death, will hardly be missed.

*Science News Letter, July 5, 1941*

## BACTERIOLOGY

## Bacilli In Soil Prove Deadly Enemies of Many Bacteria

### Either of Two Species Found Able to Kill Cultures Of Bacteria of More Than Score of Kinds, Fungi Too

**T**WO species of bacilli that live in the soil have been found to be deadly enemies of a considerable number of species of bacteria and fungi that cause diseases in plants, animals and man, by Dr. P. A. Ark and Miss Marjorie L. Hunt of the University of California. This adds to the list, only recently started, of germs that kill other germs, in microscopic version of the "bug-eat-bug" struggle that has long been known to go on incessantly in the insect world. (*Science*, April 11.)

One of the two newly recognized germ-killing bacilli has been known for many years as an abundant but apparently harmless dweller in the soil. Bacteriologists call it *Bacillus vulgatus*. The other is a yellow bacillus that has not yet been identified; it may be a species hitherto unknown to science.

Either of the two species has been

proved able to kill cultures of bacteria of more than a score of species, as well as half-a-dozen kinds of disease-causing fungi. These included the diphtheria bacillus, the staphylococcus that causes common boils, the germ of a fatal disease of chickens, the fungus that produces wheat scab, the bacterium of soft rot in vegetables, and many other undesirable citizens of the microscopic world.

The two bacilli do their deadly work by means of substances, of still unknown composition, which they secrete. Dr. Ark and Miss Hunt have already learned, however, that these substances are soluble in water, that they are effective in extremely small amounts, and that they can be boiled for an hour without losing their potency. Further investigations are still in progress.

*Science News Letter, July 5, 1941*

## MEDICINE

## Alcohol Only Incidental In Causing Liver Cirrhosis

**O**LD Man Alcohol was absolved largely, if not completely, from blame as causing cirrhosis of the liver in a report by three government scientists to the Federation of American Societies for Experimental Biology, meeting in Chicago. The scientists are Dr. R. D. Lillie, Dr. F. S. Daft and Dr. W. H. Sebrell, of the National Institute of Health.

Too little protein or maybe too few vitamins in the diet, rather than too much alcohol, is seen as the fundamental cause of the condition.

Rats kept on a diet low in protein foods, which would mean little meat, cheese, eggs and nuts in human diet terms, got cirrhosis of the liver, Dr. Daft reported. When the rats were given 20% alcohol instead of drinking water, the cirrhosis was a little worse and developed a little faster, but the rats got cirrhosis on the poor diet without any alcohol.

Whether it is the small amount of protein in the diet or some other feature of it that caused the cirrhosis is not yet known. The government scientists have a

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whole laboratory full of experiments going and hope soon to have the answer.

The relation, or lack of it, between alcohol and cirrhosis of the liver has puzzled scientists for a long time. More and more clues point to the importance of diet, particularly since lack of vitamins, rather than too much alcohol, has been called responsible for the mental illness that afflicts many chronic alcoholics.

Diffuse nodular cirrhosis of the liver was produced in rats fed very little protein and large amounts of fat, Dr. Harold Blumberg and Dr. Hugh G. Grady, of the Johns Hopkins School of Hygiene and the National Cancer Institute, discovered in experiments they reported.

Liver damage resembling that seen in

human eclampsia, in which the patient has convulsions, developed in rats fed a low fat diet 10% of which was made up of cystine, one of the amino acids that builds protein, Dr. Joseph Victor and Dr. David P. Earle, Jr., of Columbia University College of Physicians and Surgeons reported.

Large amounts of lard or cod liver oil protected the rats against this liver damage, but neither butter, yeast, nor protein did. Drs. Victor and Earle, with Dr. Joseph Post, also investigated the effect of yeast, which is a source of vitamins, on the kind of cirrhosis rats get from carbon tetrachloride. The yeast did not seem to check the liver damage from the carbon tetrachloride.

*Science News Letter, July 5, 1941*

ARCHAEOLOGY

## Conqueror Mohammed Wrote Poetry As Religious Exercise

### His Poems Were Literary Exercises or Word Games Written According to Rule and Without Originality

**D**ISCOVERY in Near Eastern ruined cities of ancient Jewish synagogues provided with attached living quarters for transients and attendants sheds new light on evolution of synagogue architecture.

The ruins confirm the assumption in ancient literature, that early synagogues had living quarters, Dr. C. H. Kraeling of Yale University reported to the American Oriental Society, meeting in Chicago.

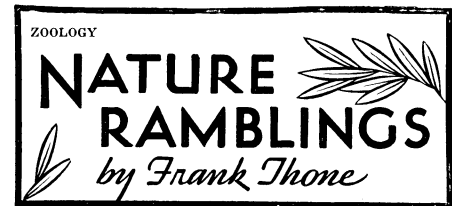
Earliest and most elaborate remains of such a synagogue have been found at the caravan city of Dura in Syria, he stated. This building dates from the third century A.D., and was developed from a private house used as a place of worship. A Christian chapel in Dura also is recognized as a house turned into a church. Fifth century synagogues found

at Stobae and el-Hammeh recently also show provisions for residence, he stated.

That the fierce conqueror Mohammed was a not very original poet who wrote as a religious exercise, was the verdict of Prof. A. H. Lybyer, University of Illinois.

"Under the pseudonym of Avni, the Sultan wrote a group of poems which perhaps reveal no noteworthy poetry of soul, profound insight, or originality of any kind," Prof. Lybyer pointed out. "Rather they are literary exercises according to accepted rules, 'word games' or love poems which are not revelations of intense human feeling, but rather displays of mystical religious symbolism. The verses fit well the portrait of a calm Mohammed who sits looking intently at a rose in his hand."

*Science News Letter, July 5, 1941*



### Unusual Prey

**D**UCK HAWKS forsaking their normal prey to make their meals off bats is the unusual occurrence reported by Kenneth E. Stager of the Los Angeles Museum.

He observed these bat-eating hawks while he was studying the enormous bat colony that lives in Ney Cave, in Medina County, Texas. While waiting outside the cave entrance one afternoon, he noticed three duck hawks circling about. These were presently joined by three more. The six birds kept diving close to the cave mouth, uttering shrill, fierce cries, Mr. Stager relates.

At about half-past three the bats suddenly erupted out of the cave, pouring upward in a dense stream about 15 feet in diameter. Into this uncountable mass of bats the hawks dived time after time. Apparently they did not single out any particular victims, but just sailed in and grabbed whatever they hit.

Whenever one of the hawks emerged with a dead bat in its talons, it flew around the side of the hill and disappeared for a time, apparently to devour its prey. Then it would reappear and again dive to the attack.

After a time four of the hawks, apparently having satisfied their hunger, flew away. The remaining two kept up their raiding until all the bats in the first flight had emerged from the cave. The first flight lasted about an hour.

After a pause of another hour, a second flight of bats poured out of the cave, even larger than the first. A pair of the hawks reappeared and began to harass the outcoming bats, but in a more or less desultory fashion, as if their appetites were no longer keen. The second flight

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