

## PUBLIC HEALTH

**Whooping Cough a Record Year-Round Disease**

**W**HOOPING cough has set an "amazing" record during the past eleven months, officials of the U. S. Public Health Service find.

This serious childhood malady was added to the federal health service's list of "reportable" diseases for the first time last October. The chart showing the number of cases throughout the nation each week since then has a horizontal, almost straight line, instead of the curving lines such as appear on the charts for each of the other diseases on which state health officers report each week. The whooping cough line is at about the 3,000-case per week level.

Whooping cough thus turns out to be a year-round disease, the only one of its kind among the whole group, which includes smallpox, diphtheria, influenza, and infantile paralysis. This means that throughout the nation just about the same number of children are whooping every week in the year.

Because whooping cough is especially likely to be fatal to infants and small children, the U. S. Public Health Service advises keeping all children under five years of age at home by themselves if there is whooping cough in the vicinity.

The federal health service seems rather lukewarm about the various whooping cough vaccines available. The results are not 100 per cent., but there is a chance they might do some good, sums up the service's advice on this subject.

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## PHYSIOLOGY

**Things That Make You Tired Besides Work**

**F**ATIGUE is defined as weariness from over-exertion but many a time a person feels weary when he wakes in the morning after a night's rest. At least five things or conditions can make you feel weary besides hard work.

One of these, according to Dr. F. L. Meredith, professor of hygiene at Tufts College, is the presence in the body of poisons other than those of fatigue. Such poisons are those produced by bacteria. You know how tired you feel when you are "coming down" with a bad cold or some other germ-caused illness.

Chemical disorders other than those due to excessive fatigue may make you feel very weary. For example, if you

are anemic, your body chemistry is upset by lack of iron and you feel tired all the time.

Cell changes other than those due to excessive fatigue following work may make you feel tired. Failure to eat enough vitamins, minerals or protein foods may cause a semi-starvation of the body cells which in turn causes changes in their condition that you feel as fatigue.

If your blood circulates slowly you may feel weary because the body cells are not quickly equipped for action and respond in the same sluggish fashion as when they have worked and are tired.

Your weariness may be due to a state of mind, rather than to work. Being worried or simply bored may make you feel tired. On this point Dr. Meredith says:

"Those who are not interested in what they are doing, or are troubled by anxiety and fears of various sorts, are prone to note signs of fatigue too readily, and to interpret their lack of zeal for work as lack of fitness for work."

Fun, excitement and competition, on the other hand, not only keep you from noticing fatigue but may even keep fatigue poisons from accumulating rapidly.

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## PHYSIOLOGY—CHEMISTRY

**Young Brains More Nimble Chemically Than Adults'**

**Y**OUNG brains are more nimble chemically than adult brains, it appears from studies with phosphorus made radioactive in the atom-smashing cyclotron of the University of California. The studies were made by Dr. I. L. Chaikoff, assistant professor of physiology in the university.

The rate of turnover of phospholipids or fatty substances in the young brain, Dr. Chaikoff found, is twice that of the adult, indicating twice the activity of the young brain, in this respect at least.

Nutritional conditions, he also found, do not affect the brain as much as other organs. The fasted brain showed as much phospholipid activity as the well-nourished brain, in adults particularly.

Whether the rate of chemical activity in the brain found in these studies is related to mental activity cannot be told yet. Dr. Chaikoff would draw no conclusions on this point. However, investigations of the relationship of such metabolic change to numerous conditions affecting mentality and brain function are to be continued.

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**IN SCIENCE**

## ARCHAEOLOGY

**Big Town of Basket-Makers Unearthed in Colorado**

**R**UINS of the biggest village of pre-historic Basket-Maker Indians yet found in Colorado are being unearthed by a Field Museum expedition, says a report just received from Dr. Paul Martin, in charge of the digging.

The settlement occupied by several hundred Indians over 1,300 years ago is so nearly invisible that a layman could walk among the trees grown over the site and never suspect that a thriving community once lived there. Nothing is left of post-walled, one-story houses but the holes where the posts were driven and the dirt floors of different color and hardness from the earth that has filled in above them. The dirt floors and walls of sunken pit houses can be cleared of surrounding earth by expert troweling. Artifacts of great antiquity used in the village are being found daily in the houses and granaries.

Age of the village, estimated at 600 A. D., will be more precisely determined by the aid of tree rings in ancient roof logs.

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## CHEMISTRY

**Explosion Danger Lurks In School Wells**

**D**ANGER of disastrous explosion lurks in wells attached to schoolhouses in certain coal-producing parts of the United States, such as Illinois, the U. S. Bureau of Mines warns in a recently issued circular. The danger comes from the presence of methane or "firedamp" dissolved in the water. Coming out of solution and mixing with the oxygen of the air, the gas awaits only a spark to set it off.

However, even if methane is discovered in the water, a well need not therefore be abandoned. The water is still good to drink, and the gas can be removed by flowing the water in thin sheets over baffle plates or otherwise aerating it before storing it in tanks or other closed reservoirs.

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# E FIELDS

## MEDICINE

### Horse Encephalitis Vaccine Made of 5-Year-Old Germs

**A** VACCINE that is effective against horse encephalomyelitis, Western type, has been made from germs (virus) of the disease obtained from an animal that died of the disease five years ago, Drs. C. E. Beck and Ralph W. G. Wyckoff of the Lederle Laboratories report. (*Science*, Sept. 16).

This means that veterinarians fighting the horse ailment now epidemic in several mid-western States and Canada can use vaccine prepared from old strains of the causative virus and need not depend on virus obtained in the present epidemic for their vaccine.

The discovery was made in the course of studies of the stability and other characteristics of the virus that causes the horse ailment. The virus of the western type is entirely different from that of the eastern type of the disease and immunity to the one does not protect against the other.

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## PSYCHOLOGY

### Urges Psychology Course For Beauty Specialists

**M**AYBE YOU think of a woman psychologist as a spectacled spinster of uncertain age. They are not like that. Most of them are young women and some are extremely good looking.

A group of these pretty girls attending a recent psychology meeting were engaged in one of those "bull sessions" that are such a profitable part of all scientific gatherings. They were talking about psychology in the beauty parlor.

One, an outstanding beauty of the Irish type, was saying that all beauty parlor technicians should take a course in applied psychology.

Many states and cities now have strict regulations for beauty parlors. Girls learning to marcel and give facials are also struggling with *materia medica*. They must go to school and take special courses so that deft fingers will be accompanied by trained minds.

But, the beautiful woman psychologist protested, beauty is more than skin deep.

Women go to a beauty parlor for more than creams and ointments. They want to be soothed by conversation as well as massage.

Of what use is a wrinkle-removing treatment if accompanied by tactless reference to increasing gray hairs? What good does it do to build a person's morale by flattering rouges and soft hair-dresses if such ministrations are conducted to the tune of personal troubles or irritable remarks? Gentle massage on tired nerves can work magic, but the work may be undone by a display of impatience in the operator.

So let the beautician study what goes on inside the head on which she works. Let her discover how she can relax a frown and add sparkle to the eyes, by giving her customers peace of mind and mental uplift as well as masks and lotions.

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## AGRICULTURE

### Committee Urges Caution In "Dirtless Farming"

**"D**ON'T plunge," might summarize the counsel given by the Committee on the Relation of Electricity to Agriculture on the subject of "dirtless farming"—the raising of vegetables and flowers in trays or tanks of fertilizer salt solution.

Recognizing that the tank culture technique may have a definite place "in the growing of special high-priced crops, particularly out of season in greenhouses, in localities where good soil is not available, or where it is found too expensive to maintain highly favorable soil conditions," the Committee nevertheless strongly advises interested possible investigators against being rushed off their feet by glowing accounts that may be used by promoters.

Profs. D. R. Hoagland and D. I. Arnon of the University of California, who made the survey for the Committee, suggest: "Those who contemplate installation of the water-culture method for commercial purposes should make a preliminary test with a few tanks of solution to compare yields from soil and water-culture media and to learn some of the requirements for control of the process. Without expert supervision, commercial success is unlikely."

The two California scientists also warn against "highly misleading claims" made by certain purveyors for small packages of nutrient salts now available to amateurs who may contemplate experiments with the "dirtless farming" method.

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## GENETICS

### Evening Primrose Mutant Displaces Former Variety

**S**OMETHING quite new under the scientific sun has appeared among the thousands of evening primrose plants cultivated by Prof. George H. Shull, Princeton's well-known researcher in genetics. In simplest terms, a new variety has cropped up where an old one used to be, and the old one has utterly vanished before it.

One kind of evening primrose in Prof. Shull's breeding stocks, when in-bred or "selfed" with its own pollen, regularly produced a progeny two-thirds of which were plants like their parents, while one-third were so different as to rate a separate name for themselves.

During the present season the parent strain has suddenly dropped the old one-third of variants among its offspring, and in their place produces a like proportion of mutant plants of an entirely different type.

This is the first published instance of anything of the kind occurring in plant genetics; although Prof. Shull informed Science Service that twice before he has observed a like shift in the progeny of "selfed" evening primroses. These cases were not reported publicly.

No immediate application of the discovery in the breeding of economic plants is anticipated.

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## ARCHAEOLOGY

### Ancient Mammoth Hunters Trailed In Texas

**B**ONES of a mammoth killed by Americans "of considerable antiquity," and an unusual type of stone weapon used in the slaying, have come to light in Texas, 30 miles from Abilene, Cyrus Ray of Abilene, Tex., and Prof. Kirk Bryan of Harvard University, report (*Science*, Sept. 16.)

The stone point adds to information regarding America's mysterious oldest inhabitants, generally believed to have lived over 10,000 years ago. The point is described as smaller and differing somewhat from the standard Folsom point of the ancient hunters, which came to light at Folsom, N. M. Calling the stone weapon Folsomoid, the report says:

"It is distinctly different from most of the points found with bison at either the original Folsom locality or at the Lindenmeier site."

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