

have proved one of the most baffling of ancient peoples to understand. The beauty of their bronze craftwork and their other possessions, and their alphabetic writing—which is still incompletely understood—have lured scholars to try persistently to learn more about Etruscan civilization. A new bit of information about a single Etruscan alphabet letter is apt to be heralded as news of importance.

Dr. Eva Fiesel of Yale University has been studying three Etruscan inscriptions at the Metropolitan Museum of Art in New York and the University Museum in Philadelphia, and she has learned something new about the letter X in Etruscan. This letter has heretofore been recognized in its place

in the Etruscan alphabet, which, by a curious Etruscan custom, was often inscribed on vases or other objects. But how the letter X sounded in Etruscan words no one could say.

From the three American inscriptions, Dr. Fiesel finds evidence that early Etruscans before 600 B.C. pronounced X as S or Sh, or in some similar way. This pronunciation ties the Etruscans, by language, to ancient Asia Minor, suggesting that the Etruscans brought their alphabet with them when they migrated to Italy. At the same time, it suggests that the Latin alphabet was borrowed elsewhere, for in using this strategic letter X the Romans gave it a sound value familiar to Greek colonists in Italy.

Science News Letter, April 4, 1936

PHARMACY

Vitamin Experts Confer on Standard for Vitamin B₁

THE NATION'S vitamin experts recently sat around tables in a hotel room in Washington, D. C., for an entire morning and attempted to draw up a standard for one of the B vitamins to put in the next revision of the U. S. Pharmacopoeia.

This volume is the legal standard in the United States for medicines. It is revised every ten years by a committee of physicians, pharmacists and other medical scientists. It is instrumental in preventing the sale of inferior medicines to the public.

The revision committee of the Pharmacopoeia called in the leaders in vitamin research to give advice on which method of determining the presence of vitamin B₁ in food and drug products should be made the official standard. Sitting in at the conference was Dr. Katherine H. Coward, one of England's leaders in vitamin research.

A tremendous number of food and drug products, claiming to be of health value because they contain vitamin B₁, are now on the market. At present there is no way for a physician to be sure which of these is best for his patients, because there is no standard to judge them by.

Since the original discovery of vitamin B and its importance for health, scientists have found that there are some four or five, or maybe six B vitamins. All of them are necessary for health. One of them prevents pellagra.

Others have other effects on the body. The one chiefly discussed, known as B₁, protects against nervous ailments and particularly against the serious disease, beri-beri. It is found most abundantly in whole grain cereals (refining or polishing removes it), in yeast, egg-yolk and liver.

Standards for vitamin B₁, unlike standards for chemical medicines, depend on animal studies. Scientists may test for B₁ by determining the amount of a vitamin-containing substance, such as yeast or rice polishings, that will cure beri-beri in a pigeon or in a rat, or the amount that will promote normal growth in the animal or bird.

The experts meeting here agreed that it would be helpful for the U. S. Pharmacopoeia to recognize one method of determining vitamin B₁, but that it should not be made the legal standard until it had been tried generally by vitamin researchers and manufacturers of vitamin products. They seemed to favor using pigeons for test animals. Yeast as a test material was not favored because it contains too many of the other B vitamins which might interfere with the results.

The consensus of opinions expressed will be used to guide the revision committee in deciding whether to adopt a vitamin B₁ standard for inclusion in the U. S. Pharmacopoeia. Physicians, general public and manufacturers will all benefit from such a standard.

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ORNITHOLOGY

Mallard Duck Built Nest In Tree Instead of Grass

By GEORGE A. SMITH

SPRING is here, and the wild ducks are coming back. And I am wondering whether the pair of mallards I got acquainted with last spring will repeat their strange behavior, and build another nest in a tree.

One morning early in the season, while taking a walk along the shore of Jones Lake, just south of the New York State Fish Hatchery, Cold Spring Harbor, Long Island, New York, I noticed a mallard duck fly out of a tree. Knowing that mallards seldom alight on trees, I guessed that the duck had built her nest in it, so I climbed the tree to satisfy my curiosity.

On an overhanging branch about ten feet from the ground, directly over a path, and only a few feet from the lake, I found a nest lined with down and containing nine duck eggs. It is rather uncommon for mallards to build nests in trees. They often lay their eggs and hatch their young in a field, or even close to a thoroughfare, or in some secluded spot in a park, but the nest is usually on or near the ground or in very low bushes.

I watched the eggs every day or two until the young ducks hatched. The



A HIGH HOME

These mallard duck eggs in the nest were found on a tree branch ten feet above the ground where this kind of bird usually builds its nest.



UNUSUAL MOTHER

The shy bird that has turned its back on the camera is a Mallard duck, found nesting on this big branch.

first week of nesting the mother would leave the nest whenever anyone came near, but later she would stay until I approached within eight feet. After leaving the nest the mother mallard swam around the lake, appearing indifferent, even to crawling on the bank to sun herself and to preen her feathers. However, she would not return to the nest until she was sure that no one was near. Then she would fly to the ground, just below the nest, and look all around, before flying to a nearby branch to sit awhile before cautiously approaching the nest to sit on the eggs.

I visited the nest at 3 P.M. on the day before the eggs hatched, and noticed that only one egg was cracked. When I picked up this egg the duckling was squirming in the shell. Upon returning the following day at 1 P.M.,

the baby ducks were out of the nest and swimming about in a small ditch of water beneath the tree. Five of the eggs had hatched.

As I approached the mother and her brood, the young ones scurried for cover, while the mother flew a short distance out over the lake and tried to distract my attention from her babies by screaming and flapping her wings, doing a tail-skid along the top of the water and pretending she was injured.

I gathered the five downy ducklings together and after photographing them put them into the water so that they could swim to their mother, who was now about 30 feet from the shore. Immediately one of the little ducks dived from sight and swam under water for about six feet.

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drinking. As little as one part per million of fluorine in the water will cause the condition, for which there is no cure. So far, there has been no practical preventive either. A few communities have been able to solve the problem by changing water supplies, but most communities where the water supply is high in fluorine content are located in the arid Southwest where there is no other water available.

Working with rats, Dr. Sharpless found that he could prevent the dental condition resulting from fluorine by adding aluminum chloride to the animal's diet. The result is achieved by a chemical reaction in which the aluminum combines with the fluorine to make a compound, aluminum fluoride. Aluminum compounds are not absorbed by the rat, so when the fluorine enters into compound with the aluminum it is eliminated from the body without getting a chance to harm the teeth.

Other substances that form insoluble compounds with fluorine were tried but were ineffective.

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NUTRITION

Spinach Not So Healthful As Has Been Supposed

GOOD NEWS for spinach-haters! The leafy vegetable, obnoxious to many and unwillingly eaten because of widely heralded health value, is losing its high standing, discussions at the opening session of the American Institute of Nutrition revealed.

Spinach has been considered a valuable food because it has a high content of blood-and-bone-building iron and calcium. Less than half of the iron content of spinach, however, and less than a third of its calcium are in a form that can be used by the body, it appears from a report by Drs. M. K. Horwitt and G. R. Cowgill of research made by them at Yale University with the late Prof. L. B. Mendel.

Similarly, the amount of protein available for human nutrition is not what would be thought from the amount found in spinach by analysis.

In their research, the Yale investigators devised a method which in the future can be used for determining in other foods besides spinach the amount of nourishing substances actually available to the body, as compared with the amount theoretically available as judged by the total content of these substances found in foods by analysis.

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MEDICINE

Study May Make Possible the Prevention of Mottled Enamel

AWAY to prevent the dental condition known as mottled enamel which has disfigured thousands of children in the Southwest and certain other parts of the country was suggested by Dr. George R. Sharpless of the Henry Ford Hospital, Detroit, at the meeting of the American Institute of Nutrition.

If the human body reacts toward aluminum compounds as the rat's does,

a preventive for the disfiguring tooth condition may have been found. All that would then be necessary would be to add the right amount of aluminum chloride, which is a salt, to the diet of infants and children in regions where the water supply is high in fluorine content.

Mottled enamel is caused by fluorine in the water used for cooking and