

# Weather Science as College Course

*Meteorology*

The scientific study of the weather, meteorology, should be offered as a well-developed college course. There should be three different types of instruction, one of the highly technical nature demanded by candidates for professional work in meteorology, one less technical but still highly practical, designed for agricultural students, and finally a purely cultural course for persons who would not expect to make practical use of it but would study the weather as they now study botany or geology, just for the satisfaction of knowing about it.

This is the program advocated by Dr. W. J. Humphreys, physicist of the U. S. Weather Bureau. The courses in meteorology offered in many of the universities and colleges at the present time, he says, are quite

inadequate, being taught, as a rule, as a side-line in the geology department by a professor who is not trained as a professional meteorologist. They are, however, frequently misnamed, being called meteorology when they should be called climatology, which is the study of "past weather".

"Meteorology, on the other hand, treats of the weather of the very present, especially why it is, what it is, and from that in turn deduces what it next must become," Dr. Humphreys says. "Climatology integrates the past and infers the general average for years to come. Meteorology analyzes the present and deduces the exact state of the future, but as yet in terms only of hours to come, or days (*Turn to next page*)

## Rubber Work Curtailed

*Economics*

Much of the experimental rubber work previously planned and started by the U. S. Department of Agriculture will have to be abandoned and curtailed during the next fiscal year, due to a decrease in appropriations in the bill now before the U. S. House of Representatives.

The chief curtailment will occur in the work in the tropical and sub-tropical possessions of the United States, such as Panama and the Philippines. Experiments with the guayule plant in the Salinas Valley of California are to be continued.

Regarding these experiments, Dr. William A. Taylor, chief of the Bureau of Plant Industry, said before the House Committee on Appropriations: "It is in small acreage yet, and the ultimate method of producing it under cultivation can not yet be said to be perfect. It is a four-year crop, practically, from planting to harvest."

The entire guayule plant is used in making this type of rubber, he said, and therefore its production is a very different undertaking from the hevea-rubber production, where the trees are tapped and the exuding milk is collected.

Hevea rubber trees planted in Florida, Dr. Taylor said, were doing very well, but were not old enough yet to tap.

Rubber production in the Philippines, he declared, is not yet beyond the experimental stage, despite the fact that there were a few plantations there. He (*Turn to next page*)

## Buildings Have Diseases

*Bacteriology*

Buildings die of germ diseases just as people do. The decay of stone castles, cathedrals and monuments is not due to the solvent action of gases in the air, reinforced by fumes from coal smoke and chemical works. Dr. R. M. Buchanan, a London botanist, reported that he has found bacilli, yeasts and moulds infecting decaying stone surfaces. Their prevalence in regions remote from smoke justifies a definite disease name, and Dr. Buchanan proposes "Lupus lapidis", which Englishes into "stone consumption". The germs of stone decay have been artificially cultured by their discoverer, and he finds that each type of decay is characterized by a definite germ flora, just as each human, animal or plant disease has its own special causative organism.

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## Island Yields Phosphate

*Chemistry*

Phosphate cargoes bulking over a quarter of a million tons a year are now being shipped from Nauru, a small island only 26 miles south of the equator, whose resources are being exploited by Australians. The phosphate is marketed in Australia, New Zealand and Japan.

Some thousands of Kanaka and Chinese laborers are employed in the workings, their labor supervised by a force of 100 to 120 Europeans. The latter are recruited mainly in Australia. They "take on" for a two-year "hitch."

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## NATURE RAMBLINGS

By FRANK THONE

*Natural History*



*Titmouse*

"On the bank of a river a little tom-tit Sang 'willow-tit-willow-tit-willow'..."

Why Gilbert should have made out the cheerful little titmouse as the singer of a lugubrious song is hard to figure out. Gilbert was a cheerful person, and he should have given fraternal credit to another cheerful person. To be sure, it is highly probable that the little bird would frequently have "a rather tough worm in his little inside", but this is something he would be used to, for he is a great destroyer of wire-worms, caterpillars and other insect larvae in the summer, and of insect eggs and pupae in the winter.

The crested titmouse is a rather common bird throughout most of the United States east of the Rocky Mountains, frequenting winter thickets along stream courses, but is very apt to be overlooked because of his inconspicuous coloring and retiring habits. He is gray all over his upper parts and white underneath, except for a small area of brighter feathers back of his legs, so that he blends very well with gray trees and sky and white, snow-covered ground. His one mark of gayety in attire is his conspicuous crest; and his wife is crested also.

He does not sing "tit-willow", but "pe-to", repeating the notes about five times; this has earned him the name "Peter-bird" in some localities. Like his cousin the chickadee, he also has a call note, "de-de-de-de", which he uses when he wants more immediate attention. He resembles the chickadee also in his liking for acrobatic stunts, swinging about on twigs in all sorts of upside-down attitudes, as he spies about for insect eggs.

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