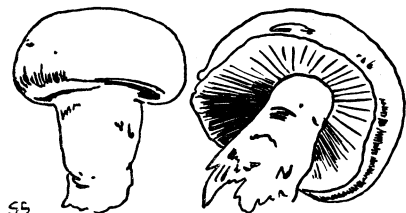


## NATURE RAMBLINGS

By FRANK THONE



Mushrooms

With the coming of warm spring rains, our woods and fields will be showing the usual rich crops of mushrooms and tempting the epicure forth with his basket on his arm. For mushrooms, though having no food value, have such a variety of toothsome tastes that most of us reckon little of the cost in collecting time and preparation labor that results in a dish of them on the table.

Many are deterred from knowing the delights of wild mushrooms because they are afraid of the poisonous species—"toadstools," they generally call them, though there is really no distinction between mushroom and toadstool, but only between non-poisonous and poisonous mushrooms. There is no easy, rule-of-thumb test for poisonous species. The blackening of a silver spoon, or the peeling of the cap, are superstitions, and dangerous to follow. One simply has to know his mushrooms, species by species.

For the guidance of the hardy amateur, and the reassurance of the timid, there are a number of good publications, mostly well illustrated, that will tell what you want to know. The U. S. Department of Agriculture has a publication, Bulletin No. 175, which the Government Printing Office sells for thirty cents, telling of the principal edible and poisonous species. Then there are a number of good books on mushrooms, of which McIlvaine and Macadam's "Toadstools, Mushrooms, Fungi, Edible and Poisonous" is perhaps to be ranked as the classic. This is a ponderous volume, containing almost 800 pages, and tells about everything known concerning mushrooms up to the date of its publication.

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In a recent examination of the hearing of over 4,000 school children it was found that 575 had defective hearing unknown to either parents or teachers.

## Insect Carries Plant Ill

Just as yellow fever is due to an invisibly small germ or virus carried from person to person by an insect, so are some of the most serious and destructive illnesses of plants due to invisibly small germs carried from plant to plant by an insect.

In a report to the Engineering Foundation, Dr. L. O. Kunkel, plant pathologist at the Boyce Thompson Institute for Plant Research, Yonkers, tells how a little gray insect, the aster leafhopper, spreads the yellows disease of asters by first biting sick plants and then, after the virus has had ten days to incubate in its interior, biting healthy ones and planting the infection in their tissues.

The same leafhopper that transmits yellows to the China aster also carries it to more than fifty other species of wild and cultivated plants. Lettuce is one of the most important hosts of aster yellows. On this plant it has long been known in the Southwest as the Rio Grande disease and in New York and other eastern states as the white heart disease. In the winter, yellows lives on perennial weed hosts. During the summer, when the carrier-leafhopper is very active, it spreads rapidly to susceptible annual plants such as the China aster and lettuce.

Spread of aster yellows and its host range depend largely on the likes and dislikes of the aster leafhopper. The African marigold is quite susceptible but seldom takes the disease even when grown adjacent to yellowed aster plants. The leafhopper does not like the marigold and seldom feeds upon it when other plants are available. If confined in a cage containing only marigold plants, hunger drives it to feed upon them and they readily take the disease. It is fortunate that although wheat and other cereal crops are favorite hosts of this leafhopper, they are immune to the yellows.

The aster leafhopper is thought to have been accidentally introduced into the United States from Europe fifty or more years ago. Although it is prevalent in Europe and the Orient, where the China aster is extensively grown, the aster yellows disease is known only in America. Thus, a disease which is apparently endemic in America has been rendered much more serious through the importation of a European leafhopper, and of an Oriental plant, the China aster.

No satisfactory means is known of controlling the aster leafhopper, but the yellows which it spreads can be held in check by digging out all infected perennial weed hosts in the vicinity of the field to be protected and by destroying all diseased annuals as soon as observed. A yellowed plant is a menace to nearby healthy plants just as a malaria patient is a menace to a healthy community in a region infested with the *Anopheles* mosquito.

At the same time fruit growers and consumers in this country have a new cause for worry with the announcement by the U. S. Bureau of Entomology that the Mexican fruit fly has crossed the Rio Grande and made its appearance recently in the southern tip of Texas, an important grapefruit area.

For many years the presence of this fruit pest in sections of central and southern Mexico has been a constant source of anxiety to the U. S. Department of Agriculture and was the cause of an embargo on the importation and entry from Mexico of fruits which it attacks. These fruits are oranges, grapefruit, peaches, plums, mangoes, sweet limes, guavas and acheras sapotes. In certain sections of Mexico it has damaged these fruit crops forty per cent.

According to Dr. A. C. Baker, of the U. S. Bureau of Entomology, it is hard to say just what damage the insect would do in this country because it is not known how far it can adapt itself to conditions unlike its natural, somewhat tropical ones. However, the establishment of the insect in Montemorelos, Mexico, shows that it can survive in a climate where there is occasional frost.

What is to be done about its appearance in Texas will be decided after a meeting of the Federal Horticultural Board of the U. S. Department of Agriculture to be held at once.

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A small sized gas mask for use by train crews and railroad yard employes has been invented.

A land entrance is planned to the famous Blue Grotto of Capri which has always been entered by water only.

Methods of toughening translucent glassware have reduced the loss from breakage from 60 per cent. to 3 per cent.