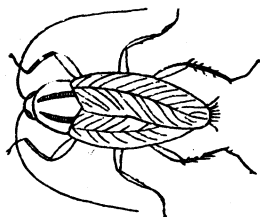


## NATURE RAMBLINGS

By FRANK THONE



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## Two Unwanted Guests

Man has, with infinite labor, made domesticates of a number of his lower brother animals, to serve him; and he has admitted a lesser few into the privileged position of housemates. There are others that have domesticated themselves and become man's housemates whether he will or not, but they never serve him, and they take no thought at all of pleasing him. They stick to him more faithfully than do his dog and cat, and try as he will he can not get rid of them.

Of such is the clan of the cockroach. Let a man build his house never so tight and dry, let his wife keep it never so clean, sooner or later this sleek dark mephistophelean insect will come scuttling up the plumbing, and establish its numerous progeny in almost undislodgable possession. It is like the rat; always with man and always hated by him.

But it was on this planet long before either man or his works, and in sooth most cockroaches even now never trouble human dwellings. The original cockroaches were, as their less known and therefore less offensive descendants still are, dwellers in the forest, making their homes among fallen leaves and under the loosened bark of dead logs. And they had strange leaves and logs to dwell in, too, for they were in the Coal Age, some twenty millions of years ago.

The odd thing about it is that though almost all the other animals and plants of the earth have passed through the most astonishing changes in evolution since then, these original cockroaches were so much like the n-th degree great-grandchildren that if one of them were to appear in a modern kitchen the least scientific of housewives would reach for her broom without an instant's hesitation. Cockroaches are very conservative—they neither believe in evolution nor practise it.

(Just turn the page)

## Corn Borer's Appetite

Results of breeding experiments in which European corn borers were reared, in Ohio, on plants other than corn, are reported by C. R. Neiswander and L. I. Huber of the Ohio agricultural experiment station. It was found in the breeding experiments that the borers fed as readily on smartweed, ragweed and dahlia as on corn, while but few larvae were able to reach the full grown stage on sorghum or celery, and not a single borer reached this stage on pigweed, potato and velvet leaf, they stated. The borer is quite commonly found in pigweed, smartweed, and cocklebur in heavily infested cornfields but, so far as is known, occurs there only by migration from corn where the eggs were deposited and the young larvae fed.

Science News-Letter, January 15, 1927

## Crime Situation

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sons have been examined, Dr. Glueck said. Of the 295, 26 were declared insane, 25 were mentally deficient, and 11 were psychopathic cases, which belong on the borderline of mental disorder, and are considered partly responsible for their acts. In 226 cases no evidence of mental abnormality sufficient to call for treatment or other special disposition was discovered.

A large percentage of those found to be mentally deficient were committed by the courts for an indeterminate period to the special institution for defective delinquents. Others were put through the usual court trial and given brief definite sentences, although Dr. Glueck stated, "for the benefit of themselves and society they should have been disposed of as the former group were."

As matters stand throughout the country, persons who are dangerous to general security because of some mental defect or disorder are frequently not detected until after they have committed some shocking crime, the criminologist said. The Massachusetts law, he declared, makes it possible to discover such individuals early in their delinquent careers and to protect the public against them.

Science News-Letter, January 15, 1927

Soil problems of the southern sand hill belt are to be studied by the U. S. Department of Agriculture at a new southern test farm.

## Weevil Waves Start Small

Despite the remarkable way insects learn to adapt themselves to environment, the cotton boll weevil is still a little non-plussed about how to deal with the alternate freezes and thaws of a winter in the more northern cotton states.

F. A. Fenton of the United States Bureau of Entomology states that less than one per cent of weevils in northern South Carolina survive long enough to produce the summer generations that infest cotton. A larger proportion actually survive the winter but die in the spring before their cotton food is at hand.

Yet this region is heavily infested with the weevil each year. This is because even the few surviving are sufficient to produce thousands of weevils. The weevils breed rapidly, each surviving female laying about 600 eggs before she dies.

Science News-Letter, January 15, 1927

## Tree Efficiencies Measured

How to make our forests more efficient is the aim of investigations carried on in the Rocky Mountain Forest Experiment Station at Colorado Springs by C. G. Bates and J. Roeser. By growing seedlings of various kinds of evergreen trees on a table under the light of tungsten-filament blue-glass lamp for ten hours a day for nine months they determined the limit of light essential for the development of each kind of tree. They found that some species were five times more efficient than others at trapping the roving rays and utilizing their energy for construction purposes. The California redwood ranked first in efficiency as light-catcher, for it could keep alive with less than four-fifths of one per cent. full noon sunshine. Engelmann spruce and Douglass fir ranked next with one and a quarter per cent. Most of the pines require two to three per cent. while the scrubby pinon of the Colorado foothills, failed to flourish with even thirteen per cent. of sunlight intensity. This accounts for the phenomenal ability of the redwood and spruce to make rapid growth in shade of deep timberland and shows why they have outstripped many other trees in evolutionary development. Mr. Bates concludes: "Broadly speaking, we can not afford to give space in the forest to a species which is relatively inefficient in photosynthesis, unless it is producing a wood of exceptional technical value."

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