

ENTOMOLOGY

Grasshoppers Menace

Toasted grasshoppers! Will this delicacy become, of necessity, the main part of the daily menu of people from southern Argentina to northern Mexico?

For the past four years, tropical migratory grasshoppers have descended in tremendous hordes upon this region, bearing destruction with them to all vegetation in places where they alight. They do their work as thoroughly as enemy invaders that burn the fields behind them. A horde of these grasshoppers will consume practically everything edible in sight in ten minutes. They come in such swarms that they actually obscure the sun for seconds at a time. In addition to their devastating work upon vegetation they often prevent transportation, making the rails dangerously slippery with their body fat.

So serious have been the recent plagues that archeologists are beginning to realize that here lies a possible explanation of the migrations of ancient American civilizations. Grasshopper plagues like the recent ones might easily have caused the abandonment of magnificent Mayan cities for new places unmolested by these food-consuming pests. Or perhaps the Mayas ate the grasshoppers, as it is known that inhabitants of certain parts of Africa and Asia do.

But before the culinary art of modern peoples of the infested regions is required to include the making of tasty dishes of grasshoppers, it is hoped that some method will be devised to prevent the return of such plagues.

The state of Vera Cruz in Mexico has enlisted the services of Dr. Carlos C. Hoffman to discover the source of these dangerous grasshopper migrations. He believes that they probably originate in the zone about Lake Peten in Guatemala. Cooperation of neighboring republics in further investigation of this region would, Dr. Hoffman feels, be of great benefit. Once the breeding places of these grasshoppers are discovered, the pest could, perhaps, be stopped at its source.

The increase of natural enemies of these grasshoppers is another hopeful sign, says W. R. Walton of the U. S. Bureau of Entomology. There is a parasitic swift-flying two winged fly which overtakes the grasshoppers in flight and deposits maggots on their backs. The maggots at once begin eating into the bodies of the grasshoppers. Due to the increase of these parasite flies a waning in the severity

of grasshopper plagues can be expected soon, Mr. Walton says. Another natural check to the pest is found in some beetles native to the infested region which lay their eggs in the grasshopper egg nests. The parasites hatch first and feed upon the grasshopper eggs.

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BIOLOGY

Bermuda Biological Station

Arrangements for cooperation between American, Canadian and British scientists in the development of an international laboratory for marine biological research at Bermuda have just been completed, it is announced by a committee headed by Prof. E. G. Conklin of Princeton University. These islands, which lie 700 miles southeastward from New York and about the same distance directly east of Charleston, are ideally situated for the study of subtropical sea animals and plants, it is pointed out; and their easy accessibility, only 48 hours sail from New York, makes the location of the station here especially convenient for students who lack either the time or funds for an expedition into regions farther south. Biological work on a considerable scale has been conducted here for a number of years on more or less informal basis, and the effort will now be made to unify and coordinate these activities and to make the advantages of the station better known and more available to biologists.

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SOCIOLOGY

Parasitized, Says Inge

"We are not yet a degenerate people but we are not in healthy condition," the very Rev. W. R. Inge, dean of St. Paul's, told members of the Royal College of Physicians in a recent lecture on social degeneration.

Unless the problem of racial decay is taken in hand promptly, the Dean fears that it may be too late and accordingly registers an appeal to the medical profession to do their share to stem the tide of general social debility.

Machinery has transformed a skilled into an unskilled population and modern workers are parasitic on the machine which has ousted them from natural human occupations, the noted divine declared. With this disastrous change has come the growth of anti-social movements, both anarchistic and parasitic. Dole receivers, representing an acute social problem of England that has grown up since the war, were

scored as an example of this parasitic attitude.

"Society," he continued, "may become like the majestic sunfish, its scales covered with lice, its intestines one tangled mass of tapeworms, its eyes pierced by trematodes, no organ of its body free from swarming masses of parasites. And it may not be easy to recall the parasites to healthy social habits."

The most immediate way of helping, according to the Dean, will be to persuade people how pressing these social problems really are.

"The great medical societies," he declared, "can do much, if they will speak out. I do not think they quite realize how glad the public would be to listen to them. The modern man may deny that he has a soul, and forget that he has a mind; but he is acutely conscious that he has a body, and therefore he has a great respect for the doctors."

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ENTOMOLOGY

Bee Eugenics

No longer will the scientific beekeeper permit his choice, blooded stock of queen bees to fly out of sight up into the heavens and mate with drones of unknown stock, coming back, perhaps, to introduce an unwanted mixture into his hives. Dr. Lloyd R. Watson, of Alfred, N. Y., has devised a method for mating queen bees by artificial means.

Hitherto, the queen breeder had no direct control over the male parentage of his stock, but had to trust to chance that his Italian queen bee would mate with a drone of as good stock as herself. Dr. Watson, after years of persistent effort, has solved the problem. He placed a virgin queen bee in a strange sort of bed, snared and tied with many loops of silk, an unwilling bride. A drone was sacrificed on the altar of his race and the mating was artificially effected.

Queen bees, thus inseminated, have laid eggs naturally, and are now heading hives of their own. Hitherto, no matter how valuable any queen proved herself to be, the strain would soon be dissipated through uncontrollable matings with low-caste native males. Now, the breeder who has a queen heading a colony that produces hundreds of pounds of honey in a season, can mate her daughters with drones from another colony of equally good productivity, and thus keep his stock up to standard as effectively as do the breeders of cattle or horses.

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