

All over the world explorers from the Department of Agriculture are looking for insects to send back—insects that eat insects already here. Some of these parasites have already been found.

Since 1888, more than 100 parasites have been successfully established on about 40 different pests in this country. The vedalia beetle from Australia saved the early California fruit industry by devouring the cottony-cushion scale. The other parasites artificially introduced have not been quite so effective, although they have simplified some control problems.

At present entomologists have great hope that parasites of the European corn borer and the pink bollworm can be established to help control these multi-million dollar pests.

The future could get very complicated with a combined insecticide-parasite approach. The problem is how not to kill off your parasites with your pests.

There are still plenty of mosquitoes to whack in summer and pests to bedevil the farmer, but accomplishments so far represent signal victories for man over his ancient enemy. The victories have been won by a very small army.

### Bar at Entrance Port

Fewer than 1,000 persons today work full-time in research on insect problems. In its 100 years, the profession of entomology has had less than 6,500 members. What they lacked in numbers, these scientists possessed in ingenuity, scientific ability and determination.

It early became apparent to them that most of the serious insect pests were not natives to this country. In 1865, Glover suggested that all seeds and foreign plants be investigated at the port of entry for harmful insects. With frightening accuracy, he said, "One pair of new noxious insects will do more harm than hundreds of well-known varieties."

Congress did not get around to passing plant quarantine legislation until 1912. Among the harmful insects that entered the country between 1865 and 1912 were the gypsy moth, sweetpotato weevil, California red scale, greenbug, horn fly, boll weevil, European corn borer and Japanese beetle. Their total "take" from the nation today is close to \$1,000,000,000 in an average year.

Not all of these could have been stopped,

since some serious insects have entered in spite of inspection and quarantine. However, there is no doubt that early action on Glover's suggestion would have kept most of them out. In 1949, the corn borer did \$350,000,000 damage; the boll weevil hit a peak in 1950 with damage estimated at \$750,000,000. These are not small items in the nation's economy.

### Came Over on Mayflower

Naturally many of our destructive insects came from Europe on the Mayflower and other ships. Lice, fleas, bedbugs, fabric pests such as clothes moths, house flies, ants and cockroaches are among this group of "colonizing" insects.

We owe the Hessian fly indirectly to the Redcoats. It came over with the German mercenary troops the British hoped would help win the Revolutionary War for them. As soldiers, the Hessians were not very successful, but the Hessian fly has made up for this by becoming one of our worst wheat pests.

The insects have been cagey enemies, responding to every new scientific offensive with a strong defensive, but it is not too much to say that the scientific successes in the 100-year war have helped this country become one of the strongest, and its people among the healthiest and best fed anywhere on earth.

Science News Letter, May 29, 1954

### BIOCHEMISTRY

## Clumped Blood Cells Show TB in New Test

► A SUCCESSFUL blood test for diagnosing tuberculosis was announced by Dr. James F. Morris of Fort Douglas Veterans Administration Hospital, Salt Lake City, at the meeting of the National Tuberculosis Association in Atlantic City.

The test depends on the clumping of red blood cells suspended in diluted serum from the patient's blood. When tried on 54 patients, only one false positive and one false negative resulted.

This test is a modification of the Middlebrook-Dubos test developed several years ago. In this first version, red blood cells from sheep sensitized to tuberculin were suspended in patient's diluted blood serum. If the cells clumped, it was believed to show the presence of the disease.

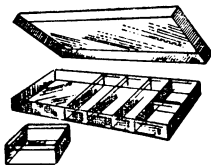
When the red cells from the patient were substituted for the sheep cells, the test gave "reliable results as a diagnostic procedure," Dr. Morris reported. The use of sheep cells did not give a valid test for active tuberculosis.

The new test is most reliable, Dr. Morris found, in patients with early active lung infiltration, miliary tuberculosis and tuberculous meningitis.

Dr. Morris began his studies of a TB blood test at the Trudeau Sanatorium, Trudeau, N. Y., and continued it at the University of Rochester, N. Y.

Science News Letter, May 29, 1954

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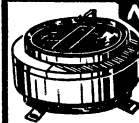
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