

MEDICINE

New Whooping Cough Vaccine Promises Better Protection

From 400 to 500 Children Vaccinated in Effort to Test Its Value in Comparison With Unvaccinated Group

BETWEEN 800 and 1,000 children somewhere in the United States, all born since July, 1935, are going to show scientists within the next two years whether or not a new whooping cough vaccine prepared at the U. S. Public Health Service's National Institute of Health gives better protection against this serious childhood plague than the vaccine now in use.

Dr. W. T. Harrison, Senior Surgeon, U. S. Public Health Service, who is in charge of this new disease-fighting venture, has just returned from an unnamed city where he superintended the vaccination of from 400 to 500 of the children. He said that the name of the city must be kept secret or the test will be spoiled because mothers of unvaccinated children will insist on having their children vaccinated.

Since there is no test for immunity to whooping cough like the Schick test for diphtheria, the only way to learn the effectiveness of the new vaccine is to watch two large groups of similar children, one vaccinated and one unvaccinated, and see how many in each group gets whooping cough or fails to get it in the natural course of events. This will require about two years' time.

Very encouraging results were obtained with the new whooping cough vaccine in its first trial in Cumberland, Md. Reporting these results in the current issue of the Public Health Reports, Dr. Harrison and associates, Dr. Joseph A. Bell of the U. S. Public Health Service and Dr. Joseph P. Franklin, Deputy State Health Officer, Maryland, were extremely conservative because of the small number of children in the group.

Not Conclusive

Among 82 vaccinated children, 10 cases of whooping cough developed during the year, while among 109 unvaccinated there were 21 cases of whooping cough. This is considered too small a difference to give conclusive evidence of the vaccine's value and that is why the larger trial has been started.

The new vaccine is prepared by pre-

cipitating the Sauer whooping cough vaccine now used with alum, a process something like that used to prepare diphtheria toxoid for diphtheria immunization. The alum precipitation treatment makes it take much longer for the vaccine to be absorbed by the body. This gives a chance for more disease-fighting, whooping cough antibodies to be formed in the body and should therefore give greater protection against the disease. Another advantage is that only two doses of the new vaccine are used, whereas with the old type six doses, one in each arm at three different visits, must be given.

Science News Letter, June 11, 1938

PALEONTOLOGY

"Rod-and-Bead" Markings Are Not Worm Casts

WORM casts or seaweed? Markings in the Salem limestone of Indiana, widely used building material, have been the cause of a friendly debate between Dr. Titus Ulke, veteran naturalist of Washington, D. C., and Prof. Robert R. Shrock, geologist of the Massachusetts Institute of Technology.

The point at issue seems now to be settled in favor of Dr. Ulke, with the publication (*Science*, May 14) of a statement by Prof. Shrock that he has checked Dr. Ulke's observations, "and believes that the suggested origin warrants serious consideration."

The markings in question consist of flattened-out tubes or cylinders, interrupted here and there by flattened bead-like structures. Prof. Shrock first interpreted these as worm casts left on the oozy bottom of the sea where the limestone was once a soft, calcareous mush. Dr. Ulke raised several points indicating that they might rather have been slender seaweeds.

They always lie flat on what was once the surface of the bottom, for example; the material within the rods and beads is the same as that of the surrounding limestone; they are separated from the matrix by a shallow, groove-like depres-

sion as though there had once been a delicate shell or body wall. Dr. Ulke cited several other seaweed-like features. And Prof. Shrock now assents.

An interesting feature of Dr. Ulke's study was that the principal specimens he examined were neither in a museum nor in the quarries where the limestone is produced. They consist of the steps of a Washington church, which were built of Salem limestone.

Science News Letter, June 11, 1938

SEISMOLOGY

Radio Signals Interfere With Earthquake Records

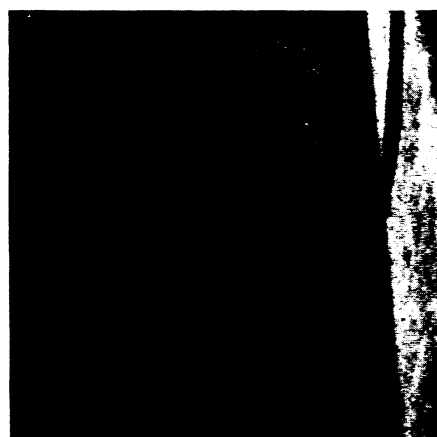
HOW one kind of research can unexpectedly interfere with another was described by E. A. Hodgson, of the Dominion Observatory, Ottawa, who has installed a new Benioff seismometer.

In this instrument, a sensitive short-period galvanometer records an electric current whenever there are earth tremors. Changes in the strength of the current indicate all the features of the earthquake.

It was found that regular disturbances were being recorded by the galvanometer which were not due to seismic tremors, and these were traced to the regular short wave radio signals sent out second by second through the 24 hours of every day by the Dominion Observatory. A rectifying contact in the control assembly transmitted this signal to the Benioff galvanometer.

A longer signal, also sent out regularly, had no effect upon the seismic records.

Science News Letter, June 11, 1938



NOT WORMS

The markings in this Washington, D. C., church step of the Salem limestone of Indiana, are not fossil casts of worms but are the remains of ancient seaweed.