

## PUBLIC HEALTH

# Tennessee Valley Presents Tuberculosis Mystery

## Higher Death Rate Found in Kentucky and Tennessee Than in Any Other State Except Those with Resorts

**A** MYSTERY for tuberculosis and public health experts to solve exists in the Tennessee Valley area. The mystery is the excessively high tuberculosis death rate among white persons in that region. The situation was described by Dr. C. C. Dauer, Tulane University Graduate School of Medicine, and Dr. L. L. Lumsden, U. S. Public Health Service, at the meeting of the National Tuberculosis Association in New Orleans.

More tuberculosis deaths per 100,000 white population occur in Kentucky and Tennessee, these physicians found, than in any other state in the country except Colorado, New Mexico and Arizona, where the death rates are high probably because of the large numbers of tuberculous persons who go to those states from other parts of the country in search of climatic benefit.

An area of high tuberculosis mortality is found in central and eastern Tennessee and in western and northeastern Kentucky, shading off gradually in all directions from this central zone in two broad belts. The central zone had the comparatively high tuberculosis death rate of 92.6 per 100,000 white population while the average tuberculosis death rate for the United States is 57 per 100,000.

Drs. Dauer and Lumsden stated at the meeting that they could find no explanation for the high tb death rate in the Tennessee Valley area. Such factors as climate, economic status, occupation, rural and urban conditions, racial composition of the population, education, age, sex, and prevalence of other diseases were investigated, but gave no clue to the solution of the mystery.

A possible clue in the vegetation and soil content of the region was suggested by the two physicians in a report just published by the U. S. Public Health Service. The area of high tb death rate and the adjacent area of about average tb death rate lie in the southern portion of the Central Hardwood Forest, as shown on a forestry map of the Department of Agriculture. Farther south, in a region corresponding with the

Southern Forest Pine Lands, the tb death rate is much lower.

"Such a coincidence so far as it goes presents an interesting field for both speculation and practical research," Drs. Dauer and Lumsden state.

The difference in soil dusts, average sunshine and dew precipitation may influence the ability of the tb bacillus to survive outside the human body, they suggest. A difference in the living habits of the people, dependent somewhat on the trees of the region, is also pointed

## MEDICINE

# Home Better Than Institution For Protecting Child from TB

**A** CHILD can be better protected from tuberculosis by proper care in his own home than by spending a few months or a year in a preventorium. A study supporting this view was presented by Dr. Lewis J. Moorman of Oklahoma City at the meeting of the National Tuberculosis Association.

Figures from 18 years' experience at the Oklahoma City Tuberculosis Dispensary were cited by Dr. Moorman. During this period 1,156 children who would be considered eligible for preventorium admission were allowed to remain at home but were taught how to take care of themselves to avoid development of the active disease and were given as careful observation by the dispensary staff as possible. Of this number, only one child died of active tuberculosis while under observation.

This record, Dr. Moorman pointed out, bears out the experience of other physicians who have reported disappointing results of preventorium care and have even recommended its discontinuance.

The object of the preventorium is to give the child enough sleep, food and sunshine so that he can build up resistance to tuberculosis infection and thus avoid the development of active tuber-

culosis. It is designed for children exposed to continuous contact with tuberculosis in the family or those children already infected with the germs but not yet sick with tuberculosis. The objection to the preventorium is that, besides breaking up the family and being a large expense to the community, its effect is not sufficiently lasting. Whether the child is cared for in a preventorium or at home, ultimate success depends on teaching the child and his family to apply continuously necessary preventive measures.

out as having a possible bearing on the prevalence of tuberculosis. Families residing in the hardwood regions with good shade trees, it was found in one survey, are much more prone to spend a good part of their time during the day in fair weather sitting out in the yard and freely expectorating on the ground under the trees where young children often play and where dew remains on the grass and fallen leaves through the early morning hours. In the pine-land regions, the top soil is usually porous sand, grass is scanty and tree shading in the yards is poor or absent.

Tests with guinea pigs under similar conditions of soil pollution with human tuberculosis germs, and study of the ability of the tb germ to survive on these different types of soils are suggested as a means of following this clue to a possible solution of the mystery of high tb death rates in the Tennessee Valley area.

*Science News Letter, May 2, 1936*

## PALEONTOLOGY

## 15,000,000-Year-Old Fossils in Interior Asia

**A** NOTABLE find of fossils has been reported from the region of Lake Balkash in Kazakstan, near the Mongolian border. Especially noteworthy are skeletal remains of *Moropus*, a "missing-link" animal, between horse and rhinoceros, extinct some 15,000,000 years. The Institute of Evolutional Morphology and Paleozoology has sent an expedition to explore the deposits.

*Science News Letter, May 2, 1936*