

SUMMARY

At least 138 of 592 persons attending these banquets developed illnesses. In 98 cases the illness was undoubtedly scarlet fever. In 40 the evidence is not sufficient to warrant a positive diagnosis. Evidence is presented to show that the source of infection was probably the lobster meat in a lobster salad. The approximate time of contamination of the lobster meat is evident, but the carrier or missed case responsible for the contamination could not be definitely identified.

The occurrence of outbreaks of scarlet fever and sore throat from a common source of infection, with secondary cases of scarlet fever following contact with

sore throat patients, shows the importance of sore throats in the spread of scarlet fever. These might better be classed as cases of scarlet fever without eruption.

Experiments were carried out which indicate that a hemolytic streptococcus may remain alive in lobster salad for a period long enough to infect those who partake of the salad.

NOTE: Acknowledgment is made of the valuable aid given by Dr. Edwin H. Place, Boston City Hospital, and Dr. Hans Zinsser, Harvard Medical School. Recognition is made of the great assistance rendered by Dr. Michael Donovan, Dr. G. E. Emerson and John T. McGrath, health officers of the cities concerned, and others in gathering data and material from various sources. Finally, special mention should be made of the work done by the following State District Health Officers, Dr. Lyman A. Jones, Dr. George T. O'Donnell and Dr. Oscar A. Dudley.

POPULATION MAPS

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IN THE OCTOBER number of the JOURNAL appeared a population map of Iowa, the work of Dr. W. J. Wallace of the Iowa State Department of Health. This useful method of using maps based on population, instead of on acreage, is of very recent development. In fact, the only item of value on this subject that the writer knows is that by Karl G. Karsten, *Charts and Graphs*, Chapter LII, published in 1923.

Population density is an important factor in the study of the spread of communicable diseases. Unless some such device as is illustrated here is employed, it is practically impossible to take population density into consideration in studying the epidemic diseases, especially in California, for in different sections of this state the population density is found to vary between very wide limits. In the Fourteenth Census of the United States, the density in Alameda County is given at 470 persons per acre, in Los Angeles County 227 persons per acre, in Alpine County 0.3 person per acre, and in Trinity County 0.8 person per acre.

There is presented herewith a population map of California prepared on the estimated population of June 30, 1924, the Thirteenth

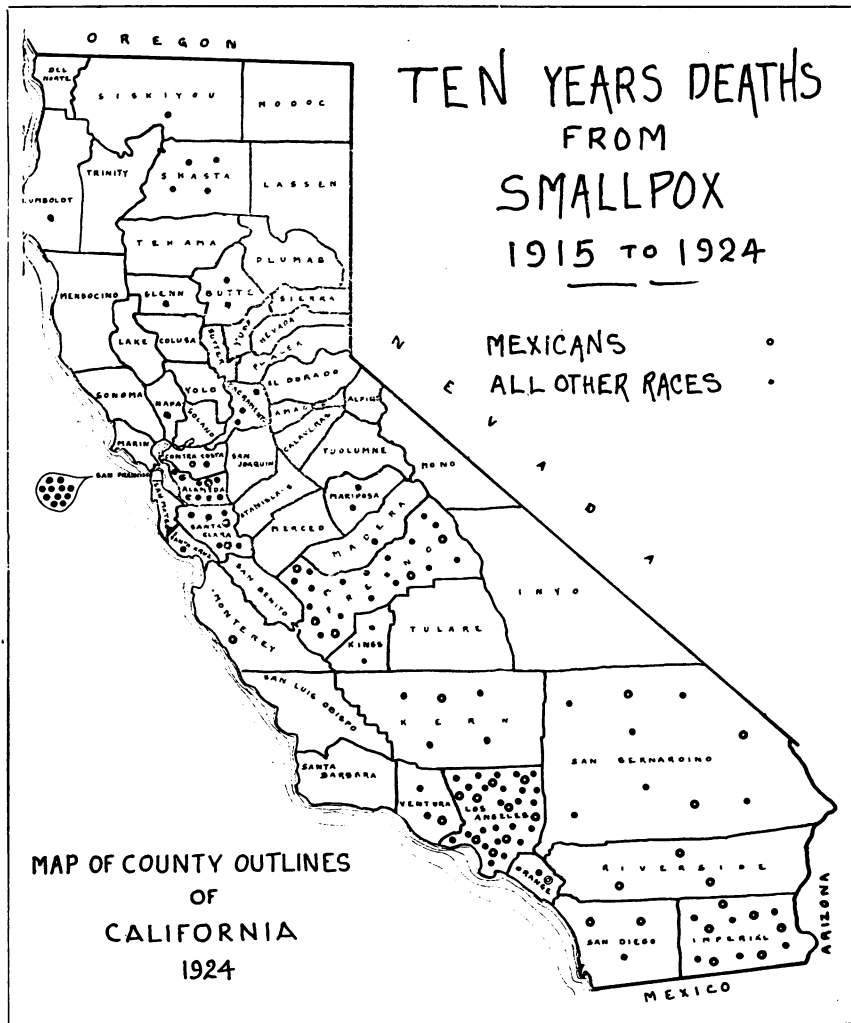
Census and Fourteenth Census having been used in making the estimate. In constructing the map, although the shapes of individual counties were distorted, the contacts with other counties were preserved, and an effort was made to adhere to the state outline as closely as possible.

EXPLANATION OF MAP MAKING

The unique peculiarity of a population map is that if a given area is selected, such as a circle one inch in diameter, anywhere on such a map, it would represent the same number of persons, whether taken in a densely populated, or in a thinly populated section.

In order to show the epidemiological value of such a method, a comparison is presented of deaths from smallpox during the past 10 years, spotted on a population map, and on a geographical outline map of the state about the same area. The spots on both maps indicate individual deaths from smallpox; the circles being deaths of Mexicans, and the solid spots deaths of others than Mexicans.

On the geographical map the spots appear to be unduly grouped around the several population centers of the state; on the population



map this grouping is not so apparent, and the natural inference must be drawn that the deaths from smallpox were distributed fairly evenly over the population of the state. On the geographical map it is impossible to tell whether location had much, if anything, to do with the large proportion of Mexicans among the deaths in the 10 years in question (25 per cent). However, on glancing at the population map, it is seen at once that the Mexican deaths were distributed fairly evenly over the southern part of the state. This is a natural condition, as the southern boundary of the state touches Mexico, and it is known that the largest portion of Mexicans in the state reside in the southern part.

CONSTRUCTION OF MAP

The construction of a population map is comparatively simple. It has been found that plastocine is a very convenient material for this purpose, lending itself admirably to the method of "cut and fit." It is usually necessary to do some preliminary figuring in order to determine the weights of the different lumps of plastocine to be used to represent the different counties.

Suppose that it is desired to construct a population map of the state of a certain size; a map of this size contains about 276 square inches of state area; consider that $\frac{1}{4}$ inch has been selected as the standard thickness. The total amount of plastocine to be used will be

276 x ¼, or 69 cubic inches. The weight of a piece this size is known as *weight A*. The weight of plastocine to represent a certain county will be that portion of *weight A* which the estimated population of the selected county is to the whole estimated population of the state.

When this amount of plastocine has been weighed out and rolled flat to the selected ¼ inch thickness, it may then be moulded by hand to the approximate county outlines, repeatedly rolling it back to the standard thickness from time to time as it gets moulded out of thickness.

Much time and patience may be required to mould this ¼ inch thickness of material so that the outlines on the population map retain the proper boundary contacts with adjacent counties. If different colors of plastocine are used, and these are separated by pieces of paper, it will help much in defining the county outlines, and in keeping the different colors from becoming mixed. When the counties have all been moulded to shape, it is a simple matter to trace these new boundaries on a piece of tracing paper laid over the map and to have blueprints made of the completed tracing.

JOURNAL OF PREVENTIVE MEDICINE

The Journal of Preventive Medicine is added to the long list of health periodicals with which the health officer must keep in touch if he is not to miss important papers on public hygiene. The new magazine, the editors tell us, is founded to advance the knowledge and practice of the prevention of disease and will contain chiefly original contributions bearing upon this subject, with occasional critical reviews of available information. As the avowed aims of the *Journal of Preventive Medicine*, which is subsidized, are essentially those of the AMERICAN JOURNAL OF PUBLIC HEALTH, which is self supporting, the question naturally arises whether or not the cause of public hygiene will be advanced by two publications dealing essentially with the same subjects. The health officer, already overwhelmed with a mass of health literature to which he cannot give adequate study, will be disposed to question the need for the new journal.

The AMERICAN JOURNAL OF PUBLIC HEALTH, which includes in each issue 10 or more original papers in addition to the several departments, must limit the space available for each of the contributions. There may be a need, then, for a publication in which space requirements do not curtail the length of papers, and in which memorial lectures can be printed in full and research in preventive medicine may be recorded without omitting protocols, descriptions of technic and method, and a critical analysis of the results. If the AMERICAN JOURNAL OF PUBLIC HEALTH in its present form cannot pro-

vide the space to publish such lengthy papers, the busy health official may ask if there are not already enough technical magazines in the fields of the sciences which form the basis of public hygiene.

The first two issues of the *Journal of Preventive Medicine* contain excellent papers dealing not only with the epidemiology and prophylaxis of communicable disease, but as well with the statistical and sanitary phases of preventive medicine. All of these papers are worthy of publication *in extenso*, a condition in which they would hardly be suitable for the AMERICAN JOURNAL OF PUBLIC HEALTH. Although it would seem that most of the papers would have been welcomed in the established technical journals devoted to the several sciences covering the studies reported upon, this is not true of all the papers.

Finally, even though all the articles might have been published elsewhere, such a condition would not show the inutility of the new journal, for as the number of students of public health increases with the development of the practice of the science the need for additional media of publication makes itself evident. The fair-minded health official must admit, perhaps grudgingly, that this addition to his library is justified. Indeed, once this admission is made, he will find the papers included in the first two issues so valuable to him that he will soon be convinced that he must, and will want to, keep in touch with the *Journal of Preventive Medicine*.

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