know that a hot dry season is favourable to typhoid, and that the summer months are always followed by an autumnal rise in typhoid. Telluric conditions are not greatly affected by a single hot or wet day, and a considerable period is required of continued hot or dry weather before the effects favourable to typhoid show themselves, while a further period elapses before the disease has passed its incubation period and asserted itself clinically. Another source of error in these charts is that the typhoid returns are for the whole province, while the meteorological figures apply to Auckland alone.

Probably a fairer interpretation of the charts is the following: Both 1901 and 1902 were colder than the average, and the typhoid returns are therefore probably lower than usual. The late autumn months in 1901 were dry, in 1902 unusually wet, accordingly in the former year we find typhoid unusually prevalent in June, July, and August, and much lower in the latter year. A noticeable feature in both years is the delay in the summer increase of typhoid, this increase generally beginning in December and rising steadily till April, being preceded by a spell of dry weather, with increasing temperature in the spring and early summer months. In 1901, however, though dry, the temperature was low in spring, and the early summer cold and wet; therefore the rise which began in December, as usual, did not continue, and it was not till a spell of very dry weather in January and February occurred that there was a noticeable increase in typhoid—delayed, thus, till March. In 1902 the early spring months—September and October—were wet and very cold; there was a delay therefore in the typhoid-increase until the unusual drought of November and December brought about the conditions favourable to the disease. We have, therefore, the increase in February, despite a wet cold January, the effect of which is not shown till March, when an unusual fall occurred.

In the City and Suburbs.

The contribution towards the total of 217 notifications of typhoid was 138—almost the same as last year. The deaths were eleven in number, showing a low case-rate. But the death-rate from enteric over the whole population of this area is 0·216 per 1,000 persons living, which is very high; that of England and Wales being about 0·175 on an average.

The *city* alone is responsible for 75, and, as before, the older parts, where there is a faulty drainage system, suffered most. A notable instance of the danger of allowing plumbing-work to be done in a careless manner occurred in a boardinghouse in the city to which five cases were traced. Here were all the classical faults—untrapped wastes connecting to unventilated house-drains and leading directly to the sewer, leaking soil-pipes, ill-flushed closets, and so forth. Typhoid has every encouragement in the city—defective drains, faulty plumbing, non-removal of refuse, a bad nightsoil service, and a polluted harbour.

Of the *suburbs*, *Parnell* shows up worst with 17 cases. Here again we have an indifferent drainage scheme and nightsoil service. But many of the cases are traceable probably to the harbour-pollution, the foreshore of this suburb especially suffering.

Devonport comes next with 10 cases, scarcely what one would expect, as the drainage system is on the whole fairly good. Some cases, as in all the suburbs, may probably have originated in the city, where the patients worked. But this would not account for so high a proportion in this particular suburb, and, moreover, some of the cases undoubtedly arose in the borough. Foreshore-pollution may be the source of these.

Mount Eden, with 8 cases, again has an undue proportion, though not as high as last year. Lack of drainage probably accounts for these cases. The lower slopes of the district suffered most.

Onehunga, with 7 cases, also points to the need for a drainage scheme.

The *country districts* were responsible for 79 cases.

Thames Borough shows a great improvement on last year, only 7 cases being recorded, this diminution being the result of the efforts made towards improvement, especially in the matter of milk-supply.

Waikato County.—The 8 cases are all traceable to one district—Wairangi. Here the principal source was undoubtedly the pollution of the Waerenga stream.

Ohinemuri County shows 13 cases, of which 6 were in Waihi; three of the latter being in one family, where the water-supply was from a polluted stream.

Waitemata County.—Seven cases, which were largely attributable to Helensville where local conditions are all in favour of the disease.

Whangaroa, 6; *Hokianga*, 12; and *Bay of Islands*, 3, are very high when the sparse population is considered. Many of these were among the Maoris, whose presence in a district generally tends to spread the disease, largely owing to their carelessness in the matter of keeping their water-supply free from contamination.

Scurces of the Disease.

An effort has been made to inquire into each case, and on the whole this year local conditions, such as foul drains and privies, seem to have been the principal causes. While there have been no extensive outbreaks traced to one source, such as oysters and milk-supplies, the following deserve some comment.

Harbour-pollution this year probably accounts for a large number of the cases in the city and suburbs, and thirteen have been traced with some degree of certainty. A large number were among children who are indifferent as to where they may bathe or play. A number of boys may often be found at the luncheon-hour fishing at the mouth of the sewer below the Railway Wharf, and touching their food with hands fouled by the filthy lines. The sewer-outfalls in St. Mary's Bay, Ponsonby, and St. George's and Mechanics' Bays, Parnell, also may be considered danger-spots.

The condition of the municipal salt-water baths was commented on in my last report. This year again one case seemed to have had its origin here.