

woollen clothing one day, and discarding it the next, is the commonest cause of the colds from which they suffer. Repeated attacks of cold bring about that depreciation of tissue which makes them easy victims to the bacillus of consumption.

Then, again, their reluctance to burn anything which has come from them, such as blood, &c., prevents the best mode of disposing of the infected sputa from being adopted—namely, cremation. As it is, you will often find an old crone coughing up millions of bacilli, which she distributes impartially over all parts of the whare—except the fire.

Another factor which will in the near future make for the physical welfare of the Maori is his increasing necessity for work. The indolence and laziness seen among the Natives in older settled places is undoubtedly productive of much poverty and consequent sickness.

The abolition of the tangi, with its lavish and reckless expenditure, and consequent semi-starvation and physical depreciation; the relegating of pigs and other animals to quarters other than those occupied by the owners themselves; the construction of watertight, yet ventilated, whares; the proper disposal of nightsoil: these are some of the important reforms which the department hopes to see effected ere long among the Native as well as the pakeha.

DEPARTMENTAL.

A tabulated statement of the whole of the work done by the department will be submitted to you in the next report. We are gradually getting the various offices filled.

The under-mentioned gentlemen have been appointed:—Dr. Makgill, District Health Officer, Auckland; Dr. Valintine, District Health Officer, Wellington; Dr. De Lisle, District Health Officer, Napier; Dr. Ogston, District Health Officer, Dunedin; Dr. Roberts, Acting District Health Officer, Nelson; Dr. Anderson, Acting District Health Officer, Blenheim; Dr. Symes, Acting District Health Officer, Christchurch; Dr. Pomare, Health Officer to the Maoris.

The appointment of the Inspectors for the several districts is now a matter of urgent necessity. When these have been gazetted we will then have a staff of workers which will, I feel satisfied, fully justify by their labours the creation by Parliament of a Department of Public Health.

I have, &c.,

J. MALCOLM MASON, M.D.,
Chief Health Officer.

APPENDIX.

BACTERIOLOGICAL REPORT ON KELLY CASE AND PLAGUE AMONG RATS, BY J. A. GILRUTH.

These were received by me in Wellington on the arrival of the Wellington-Manawatu train at 9.50 p.m., 25th June, having been transported by hand from Dr. G. P. Baldwin, Health Commissioner in Auckland. They consisted of smears from the lymphatic gland and spleen, and pus from the affected gland, spleen, and lung, in specially prepared hermetically sealed Pasteur pipettes.

The smears on the slides were rather thick for satisfactory examination, but they showed the presence of bacilli which, so far as could be observed, were fairly characteristic of those of bubonic plague. Other micro-organisms, such as putrefactive germs, were also present. On opening the pipettes, however, and examining the contents under the microscope, bacilli in every way typical were seen to be present in considerable numbers, they having increased evidently in number after the pipettes were filled. Tubes of nutrient agar and of blood-serum were inoculated from the pipettes.

A guinea-pig and a full-grown rat were each inoculated with about three drops of the contents of the gland pipette; and a rat (No. 2) was inoculated with some of the contents of the spleen pipette. In fifteen hours the guinea-pig was evidently *in extremis*, and was killed by chloroform. As the animal had probably been affected principally by the toxine formed in the tube by the growth of the bacilli, there were practically no pathological lesions. However, a few bacilli were found in the spleen and the blood. At twenty hours a very faint slight growth was apparent in one of the agar tubes. This on examination proved to consist of short oval coccobacilli, some so short as to almost resemble cocci in appearance, while others were longer. As there were evidently other foreign bacilli present a fresh guinea-pig (No. 2) was inoculated in the thigh with a small quantity of this growth by means of a platinum needle. Unfortunately a sub-culture was not made at the time, and by next day all the tubes with the exception of one showed a more or less luxuriant growth of foreign organisms, due to the contamination of the pipettes' contents, *post mortem*, or at the time of filling. One tube, however, showed on the last streak a few separate, almost invisible, points of growth which were pure colonies of the bacillus pestis, and from this fresh sub-cultures were made.

Rat No. 1 died about forty-eight hours after inoculation, and, on *post-mortem* examination, enlarged gland above seat of inoculation, swollen and dark spleen, were observed. The gland and spleen contained numerous characteristic bacilli, but some foreign micro-organisms were also present.

Rat No. 2 died about eighty-six hours after inoculation. *Post-mortem* examination showed gland above inoculation point very much enlarged and inflamed, spleen much enlarged, soft and dark, liver congested, and lung with patches of congestion here and there. Typical bacilli were present in bubo and in organs.

Guinea-pig No. 2 (inoculated with culture) died eighty hours after inoculation. *Post mortem* showed enlarged inflamed precrural gland (above seat of inoculation); other glands slightly enlarged; hæmorrhagic areas in intestines; spleen enlarged and mottled with greyish patches; Liver enlarged and showing a few whitish points about the size of a pin-head. The bubo was crowded with typical bacilli, which were also numerous in the spleen, especially in the whitish degenerated portions. The blood contained but very few bacilli.