

question to Dr. James Galloway, a member of the Advisory Board, and an authority on skin diseases. He replied as follows: "So far as I know no authentic data can be given as to the actual death of the ova of the *Acarus scabiei* after the application of a parasiticide to the skin. Any statements as to the probable duration of life are derived from clinical experience only." It was on account of this uncertainty that bathing was forbidden for one month after the application of the remedy. From further observation it has been found that, provided the initial bathing and application are *faithfully* carried out, there is no necessity to prohibit bathing for so long a period. The later cases have been allowed a bath after fourteen days, and in future it is intended to gradually reduce this period. It is very probable it will ultimately be found that it will be quite safe to allow bathing after two or three days, as is done in some of the continental armies where this treatment is carried out. The patient should be kept in a *very hot* bath for at least half an hour and soap plentifully used. The other day I caught a patient standing in a tepid bath and washing himself without soap. Such a case would have been quoted as a relapse. The varnish must be evenly and continuously applied to the whole surface of the body. Three ounces of balsam mixed with 1 ounce of glycerine is required for a man of average size. The whole treatment *must* be supervised by an intelligent orderly.

I am, &c.,

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December 24th, 1906.

THE "ALLIES" OF ENTERIC FEVER IN INDIA.

TO THE EDITOR OF THE "JOURNAL OF THE ROYAL ARMY MEDICAL CORPS."

SIR,—Lieutenant-Colonel S. Glenn Allen, R.A.M.C., in his interesting article "The 'Allies' of Enteric Fever in India," in the January number of the Journal, mentions "the Thornhill system of trenching" as being one of the dangers of the Indian conservancy system. With the rest of his article I am in general agreement, but in this particular I feel bound to differ from him. The problem of enteric fever in barracks in India depends, in my mind, in the first place on the question of removal, in the second place on the question of removal, and in the third place on the question of removal; and under "removal" I include custody of excreta pending removal. The question of "disposal" I look on as entirely secondary. Given a good system of removal, a system, that is, which follows the old maxim of *cito tuto et jucunde*, and which removes to a safe distance and safe position, and the method of disposal is, in my opinion, *quod* causation of enteric fever, a matter of small importance.

The crux of the matter is the safe distance and the safe position. As regards the former I would say at least two miles; as to the latter the prevailing wind, and in strategically important stations the possible permanent or temporary extension of the cantonment must be taken into consideration.

We come now to the question of disposal. What do we actually mean by the word? Do we mean the hiding away of the sewage where it will not be again seen, but remain more or less unaltered, or do we mean its biological resolution; in other words, the complicated series of changes usually denoted by the word "nitrification"? Surely the latter. We cannot at this stage in our civilisation consider any deep burial of sewage as otherwise than a temporary expedient, yet this is what Colonel Allen advocates. Nitrification is what we should aim at, and this can be obtained in two ways. One is by a "biological" installation (septic tank and filters, for instance), the other is by application to the land. The former is out of the question in Indian cantonments in my opinion; the expense of sewerage so scattered a collection of buildings would be prohibitive, and without a water carriage system a biological installation is a difficult affair to manage. I am aware that it is done, and successfully done, at Maymyo, in Burma, but I do not think such an installation would meet with success elsewhere for many reasons.

Application to the soil remains, therefore, the only available road to nitrification, and that is best attained, in my opinion, by Colonel Thornhill's system of trenching. But his system must be carried out with the strictest attention to detail. When properly carried out there is such complete admixture of the soil with the faecal matter that within twenty-four hours the presence of the latter cannot be recognised by the eye, and hardly by the nose. That this system can pay, or partially pay, its way is an advantage which, as sanitarians pure and simple, we may disregard. As men of the world we cannot afford to do so. The success of any system of disposal depends, not on the Sanitary Officer who recommends, but on the Cantonment Magistrate who carries out the work. If the work is to be unproductive, if the filth, that is, is to be buried merely as a means of hiding it, then we cannot expect the Cantonment Magistrate to take any particular interest in the matter. If the work is to be reproductive and bring grist to the cantonment mill, then not only can we demand that he shall interest himself in it, we shall find him doing so for his own sake.

I admit that there are stations in India, Quetta, for instance, where the Thornhill system is difficult to carry out, if not impracticable, owing to difficulties with regard to procuring suitable soil. In such places biological installations should be set up. Quetta is the most ghastly commentary on the "deep burial" system, that one could wish to see. It was instituted there on the recommendation of a committee, of which I was a member, in 1898, as a *temporary expedient*. It has been continued as a permanent system, and I think one visit to the Sahibzada pits would be sufficient to convict any believer in deep burial of the error of his ways.

I am, &c.,

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War Office,
January 9th, 1907.