The people at the foot of these hills are closely related to the Todas, the aborigines of India, who inhabit the surrounding hills to a certain extent.

Other tribes in the South of India eat white ants also, the popular idea being that they act as a tonic. They are eaten raw and alive, or roasted.

I am, &c.,

Station Hospital, Secunderabad,

Deccan.

J. H. DOUGLAS,
Captain, R.A.M.C.

ENTERIC INCIDENCE IN INDIA AND ITS LESSONS.

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

SIR,—The November number of the Journal contains a paper by Lieutenant-Colonel G. S. Thomson, which appears to be deserving of sympathetic consideration. One is tempted to call especial attention to it, as a perusal of the discussion, reported as having followed the reading of this paper before the United Services Medical Society, suggests that his critics and hearers failed to appreciate the need of a wider view being taken as to the possible factors concerned in the etiology of enterica than is presented by a contemplation of the life-history of a specific germ.

In submitting these remarks, I do not imply that I accept as satisfactory either the facts or theories put forward by Colonel Thomson, neither do I question the etiological significance of the Bacillus typhosus; but I do plead for an intelligent and systematic attempt to solve some of the mysteries associated with the metabolic changes in that living body which is the only soil in which the specific germ can apparently produce the clinical phenomena which we call enteric fever. Colonel Thomson directs our attention to one particular and possible disturbing factor in the condition of that human soil: that is, he lays stress on dietetic variations, and significantly hints that a luxus consumption of proteins may be a dominant variant. This is no new idea, but so far as my reading goes this paper of Colonel Thomson's is the first in which it has been seriously advanced.

Eight years ago, in my annual report as Sanitary Officer of the Rawal Pindi District for the year 1899-1900, I referred to certain enquiries I had been making as to the possible existence of an antecedent condition of excessive intestinal putrefaction in the persons of those contracting enterica, which condition I thought might or might not be a complementary or determining factor in typhoid infection. As an index of this condition, I took the ratio between the total and conjugated or aromatic sulphates in the urine. The conjugated sulphates are the products of the breaking down of amino acids derived from the splitting up of protein molecules. Under normal conditions of metabolism, my observations
showed the ratio of the aromatic to the total sulphates to be approximately as one is to nine, while under circumstances of gross feeding, more especially excessive protein intake, the ratio was one to five, or even one to four in extreme cases. Only a limited number of observations was made, but the significant fact was elicited that a high conjugated sulphate ratio was almost invariably a precursor to fever, and in two out of the ten cases observed this fever was declared ultimately to be enterica. The series of observations was too small from which to generalise, but I suggested at the time that it was a line of enquiry worth following up. Except in that annual report, which was printed by the Government of India, my ideas were never published, but officers who attended my lectures at Netley and at the College in London will recall that I referred to this aspect of the question as a field too much neglected, as it is clear that few are able to get out of the narrow bacillary work in enteric etiology. Similarly, in view of the apparent elective affinity of the enteric germ for bile salts, it would be interesting to know whether there is any relation between hepatic activity and enteric incidence.

The appearance of Colonel Thomson’s paper tempts me to refer to the conception of enterica which many fail to grasp, that without a suitable soil in which to grow the causative bacillus is non-pathogenic. Is it not time to break away and try new lines of enquiry? and among the first to be followed I suggest that of metabolism as a possible predisposing cause of enteric incidence. It is obvious that such an inquiry will entail much labour and application, but it will not be wasted if it do but tell us how far the altered climatic conditions and more liberal regimen of the Tropics affect the metabolic normals of the European soldier. On these points we are absolutely ignorant at present.

I am, &c.,

R. H. Firth,
Lieutenant-Colonel, R.A.M.C.

November 11th, 1908.

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

Sir,—With reference to my remarks on "Enteric in West Africa" (p. 504 of the November number of the Journal), I write to say that they have been wrongly reported. What I actually said was as follows: "In West Africa, in my opinion, the British troops consume more proteid than in India. I have had the opportunity of serving in both countries, and my experience is that the men are much hungrier, and more inclined to consume large quantities of food, in West Africa than in India. "During 1905 no cases of enteric occurred amongst the garrison, and during this period the strength of the European troops was about 150."

I am, &c.,

H. W. Grattan,
Major, R.A.M.C.

Royal Army Medical College,
Millbank, November 11th, 1908.