

Correspondence.

"Audi alteram partem."

BILHARZIOSIS.

To the Editor of THE LANCET.

SIR,—Bilharziosis in Natal is by no means the serious disease which is reported from other parts of Africa north of the Zambesi. The disease is seldom associated with any more severe symptoms than hæmaturia, slight and continuous, and in this it corresponds with the slighter of the two forms reported from Egypt. In Natal, the egg, which is readily found in urine recently passed by a patient suffering from the disease, is characterised by a spine-pointed shell. This spine is always terminal, though the transparent shell is sometimes oval, sometimes pear-shaped. If a little warm water be added to some recently passed urine on a microscopic slide, a more or less definable mass can shortly be seen through the shell. Sooner or later one can define the ciliary movements of the embryo and, within an hour as a rule, the miracidium can be seen escaping from its shell, which is ruptured by a longitudinal tear. Experiments to ascertain the future history of the miracidium all failed until May of this year, when Dr. Warren, the director of the Natal Government Museum, added some miracidia I had supplied him to fresh water containing a number of snails of the genus *Physopsis africana*, which abound in those rivers in Natal where boys who bathed frequently were as often as not affected by the disease. It was on May 10th that I supplied him with the miracidia—in the colder part of the year before the bathing season commenced. Early in June he notified me that he had found sporocyst containing cercariæ with bifid tails in the liver of one of these snails. The information was communicated at once to the *British Medical Journal*, but its importance was not recognised; however, a short report was given by Dr. W. Watkins-Pitchford in the July number of the *Medical Journal of South Africa*. The appearance of these cercariæ (for which I suggested the name of *C. secobii*, in memory of our old school in Kent) was similar to that described by Leiper and Atkinson.¹ The cercaria consisted of a body containing two suckers, one oral and one ventral; no pharynx could be detected and there were no pigment spots. The tail of the cercaria was bifid for half its length and showed no indication of cuticle covering. Dr. Warren has made microscopic preparations of these cercariæ. He kindly allowed me the washings of these snails. These I used for infecting a guinea-pig, but it is feared that the washings were obtained before the cercariæ had escaped from the liver of the snails; for, although the guinea-pig died the following month with an abnormal increase of peritoneal fluid, no bilharzia worms could be detected in the veins of either the mesenteric or portal system.

Further experiments will be awaited with interest; but it is to be regretted that more coöperation cannot be arranged with independent research workers in other parts of the world. It was only on May 30th, 1914, that Kumagawa² reported the results of experiments undertaken to infect snails with miracidia in Japan, and in June

of this year that Leiper³ succeeded in demonstrating the danger of snails already infected with cercariæ in Egypt.

In view of the large number of British troops who are now exposed to infection in Africa and the extraordinary tenacity of this infection once it has got hold of a patient, it is hoped that control experiments will shortly be completed with the form of the disease which has been described and steps taken by the Union Government of South Africa to remove infective snails from popular bathing-places.

I am, Sir, yours faithfully,

F. G. CAWSTON, M.B., B.C. Cantab.

CRIME AND LEGAL INSANITY.

To the Editor of THE LANCET.

SIR,—In an annotation under this heading in THE LANCET of Dec. 18th you express incredulity of the usefulness of an amendment of the criminal law which I have suggested. "Looking back at certain past trials in which prisoners have been found guilty," you doubt whether they would have been acquitted as irresponsible if their appreciation of their acts and the circumstances thereof had been considered at their trials. Of course, I do not know what the trials are to which you allude. Presumably they are trials in which the prisoner ought, in your opinion, to have been acquitted on the ground of insanity, but was nevertheless found guilty. I have examined every case reported for the last 30 years in the *Times* in which the plea of insanity has been raised on behalf of a prisoner, and in every case that afforded reason for comment I have made in the *Journal of Mental Science* such comments as seemed to be required, and I cannot recall any case during that time in which a prisoner was convicted on evidence that appeared to me to justify his acquittal on the ground of insanity. Previous to that time there were such cases, and it is to these that you must be alluding. In every such case, however, the prisoner would have been acquitted on the ground of insanity if my formula had been applied. It is out of the question to examine all that I can remember, but with your permission I will examine two or three that were tried in the year 1885.

James Cole was found guilty of the murder of his child. It was proved that the reason he gave for murdering the child was that his wife was hiding men under the floor and in the cupboard in order to poison him. Under the MacNaughten formula this was not enough to exonerate him, for if the circumstances had been as he deludedly believed they were, they would not have justified the act. He knew the nature of his act—that he was killing his child; he knew its quality—murder; he knew that it was legally wrong, and that he was liable to be hanged for it. On that formula, rigidly applied by Mr. Justice Day, he was necessarily convicted. But on my formula he could not have been convicted; for it was clear that he did not appreciate how wrong his act was; nor did he know or appreciate the circumstances in which it was done, for the circumstances in which he imagined it was done (the hiding of men under the floor, &c.) did not exist; nor did he appreciate that the killing of the child had no bearing on the action of his wife, even supposing that action was real.

¹ Brit. Med. Jour., Jan. 30th.

² Tropical Diseases Bulletin, vol. iii., 1914, p. 456.

³ See Journal of the Royal Army Medical Corps, July and August, 1915.

Richard Hitchins was convicted of the murder of his sister, whom he shot dead for the reasons that the day before she had not passed him the newspaper, and had passed him in the street without speaking to him. He was a confirmed epileptic. He knew the nature and quality of his act, and that he was liable to be hanged for it, and was therefore necessarily convicted under the MacNaughten formula, rigidly applied by Mr. Justice Field; but on my formula he would have been acquitted, for though he knew his act was wrong he did not appreciate how wrong it was, nor did he appreciate its extreme disproportion to the circumstances in which it was done.

William Gouldstone was convicted of the murder of his five children, whom he killed because his wife had had twins, and he was afraid he would not be able to maintain them all. He was a sober man, a good workman, in regular work. Under the MacNaughten formula, rigidly applied as it was by Mr. Justice Denman, he could not be acquitted; but under my formula he must have been acquitted, because it was clear that though he knew he did not appreciate the circumstances in which the act was committed. He did not appreciate that he was quite well able to maintain his family on his earnings. Though he knew the consequences of his act—that is to say, that it meant the death of all his children—he did not appreciate those consequences; that is to say, he did not appreciate that their immediate death was worse than the remote possibility that they might have to suffer privation at some future date if he were thrown out of work.

I submit, Sir, that these three cases alone establish my contention that my formula is better than the MacNaughten formula, and that your doubt is not justified as far as these cases are concerned. If there are other cases in your mind, in which a prisoner who ought to be acquitted on the ground of insanity would still be convicted even if my formula were law, I should be glad to know of them, and would modify my formula so as to rope them in. Still, in the ten years that have elapsed since my book was published, though I have not changed my opinions, I have evolved my ideas, and I could now elaborate a better formula than that which has been adopted by the subcommittee. For this reason I regret that I was not invited to serve on the subcommittee, or at any rate was not apprised that it was sitting, for though I think my formula is incontestably superior to the existing law, I do not assert that it is final, or as good as it could be made.

I am, Sir, yours faithfully,

Parkstone, Dorset, Dec. 18th, 1915.

CHAS. A. MERCIER.

GERMAN MEASLES.

To the Editor of THE LANCET.

SIR,—For more years than I care to think I have tried to get rid of the above obnoxious name for a very common disease. Has not the time now arrived to bury this name in oblivion, and substitute the more suitable title of epidemic roseola, or roserash?

I am, Sir, yours faithfully,

CLEMENT DUKES, M.D. Lond.,

F.R.C.P. Lond.,

Rugby, Dec. 15th, 1915. Consulting Physician to Rugby School.

* * Another very common disease, rickets, is known in Germany as the "English" disease. We might suggest that both alien epithets be returned to the country of their origin.—ED. L.

UREA AS A BACTERICIDE, AND ITS APPLICATION IN THE TREATMENT OF WOUNDS.

To the Editor of THE LANCET.

SIR,—In reference to the article under this heading by Dr. T. S. Kirk and myself in THE LANCET of Dec. 4th, we would like to state that our work with urea in Belfast has been so encouraging that representations have been made to Sir Alfred Keogh as to the value of urea in the treatment of the wounded. As a result we have been invited to proceed to the Near East on H.M.S. *Britannic* in order that wider experience may be acquired. The *Britannic* is being fitted with a thorough bacteriological laboratory. We believe that this is the first hospital ship to be so fitted. Dr. Kirk and I go in an honorary civilian capacity, and are assured by the authorities that our method shall have ample trial.

Urea in crystalline form is the substance we use; thus for the first time an organic substance native to the animal body is shown by us to be a powerful bactericide as regards non-sporing bacteria, this urea having been previously regarded as a mere useless waste product. We find that urea in the solid form keeps indefinitely, but when dissolved in water it absorbs the elements of water and is transformed into ammonium carbonate. Urea is practically non-poisonous—e.g., 2 grammes injected into a rabbit's peritoneum cause no appreciable change in the animal. When applied to living tissues it is certainly not injurious, as has been repeatedly shown by Dr. Kirk in all kinds of operations, abdominal and others. It is a fact that when applied to the raw surface of some of the more recent wounds there is considerable smarting, which, however, in a few minutes passes away and is succeeded by a feeling of coolness and comfort. We may mention here that when urea passes into solution there is a most marked absorption of heat, the temperature of the solvent falling to near freezing-point.

We call particular attention to the remarkable fact that urea acts as a bactericide even in the presence of blood and pus, and that this fact constitutes in our opinion one of its essential values in the treatment of wounds. We would also call your attention to the very valuable saving of labour effected by the use of urea, as mentioned in our paper. The facts published there were merely a few taken from our notes of cases and tests as accumulated by us during the last four years. There are a number of other points at which we are still working and which we shall hope to make public when we shall have satisfied ourselves that they are worthy of attention. We hope on our return from the trip in the *Britannic* (which contains 3400 beds) to have accumulated a sufficiency of materials from which to draw a detailed report as to the value of urea.—I am, Sir, yours faithfully,

Belfast, Dec. 6th, 1915.

W. ST. C. SYMMERS.

A COMBINED PHYSICAL TREATMENT FOR DISABLED SOLDIERS.

To the Editor of THE LANCET.

SIR,—In your issue of Nov. 27th I notice a communication on the above subject. In plain English I assume that "hyperthermal eau courante" is "hot running water." About the application of this in one form or another there seems nothing very novel to a humble balneologist