In all the cases (23) of blackwater fever examined before the onset of haemoglobinuria *Plasmodium falciparum* was found in the blood. With the onset of haemoglobin the parasites usually disappeared in one or two days. Many cases examined after the onset showed no parasites in the peripheral blood, but all post-mortem examinations obtained in such cases showed definite evidence of malaria.

No difference could be detected in cultures of parasites from cases of malaria and blackwater fever.

Crescents are comparatively rare amongst adult natives and adult Europeans, but are extremely common amongst native children and also in young European children. Out of 100 native children whose blood was examined on one occasion almost 40 per cent showed the presence of crescents. By far the most important carriers of malaria are therefore the children, an important point in reducing the malarial incidence.

The remarkable co-relationship of the incidence of malaria to blackwater fever, and the parasitic findings, together constitute overwhelming evidence that the causal organism of blackwater fever is the pernicious type of malarial parasite.

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**Echoes of the Past.**

INTRODUCTORY LECTURE DELIVERED TO THE CLASS OF MILITARY SURGERY IN THE UNIVERSITY OF EDINBURGH, MAY 1, 1855.1

BY SIR GEORGE BALLINGALL.

*Regius Professor of Military Surgery.*

(Continued from p. 302.)

With reference once more to this "civil element," for which we are indebted to his Grace the Duke of Newcastle, I would observe, that the expression is somewhat indefinite; and as we are not told how far it is to be carried in the re-organization of the medical department, I would say that if this element must be introduced into the department, it should be at the bottom, not at the top of the tree. I wonder what civil element actuated Larrey when he killed the spare horses of the officers to make soup for his men. This you will allow was a most uncivil proceeding; but for this, Napoleon made him, on the instant, a Baron of the Empire. The highest prize in the medical department ought to be accessible to the youngest assistant surgeon who enters the service; and a very paltry prize it is for this great country to hold out to the Chief Medical Officer of its army.

1 From an old book kindly lent by the late Dr. George Ballingall, St. Leonards-on-Sea.
The experiment of introducing the "civil element" into the medical department of our army, has heretofore been eminently unfortunate. Let us revert for a moment to the calamities of Walcheren. There was at that time a respectable old gentleman from civil life at the head of the department, the late Sir Lucas Pepys, who had, I believe, been a successful apothecary, or general practitioner at Weymouth, and had made himself acceptable to George III., when resident there. When called upon to proceed to Walcheren to give his assistance to the sick, he declined to move, sat still in Berkeley Street, and declared in an official communication, that he could be of no use, and that he knew nothing of camp and contagious diseases but what he had learned from Sir John Pringle's book. To this, it was said by Cobbett, a great political writer of the day, with all the bitter irony of which he was so great a master, that the old gentleman had only one additional declaration to make, that he was unable to draw his salary.

On another occasion, when the ophthalmia spread far and wide amongst the soldiery in this country, after the return of the army from Egypt, when the civil part of the population became alarmed for their eyesight, and when an enormous burden had been thrown upon the public by the number of men pensioned for blindness, a distinguished oculist from civil life, the late Sir William Adams, was placed at the head of a large and expensive ophthalmic hospital in the Regent's Park; what was the result? "It cannot," says Dr. Vetch, "fail to surprise every impartial mind to observe, that even from the report of Sir William Adams himself, so far from effecting a national saving of £60,000 per annum, which he had promised, by a reduction of the ophthalmic pensioners, not one has been sufficiently benefited to admit of his pension being either reduced or taken away; and of six soldiers included in the report, all of them, cases of opaque cornea, combined with the second stage of Egyptian ophthalmia, not one has been rendered fit for duty, and all have been added to the list of pensioners." It is, most assuredly, not with any idea of under-rating the attainments of my many eminent friends in civil life that I express myself thus strongly, but for the purpose of deprecating what I consider an injustice to the medical department of the army.

It is not, Gentlemen, I repeat, from the want of able and intelligent men among the staff and regimental surgeons serving in the army of the Crimea, that that army has in any degree suffered. The want of that army, as of many others, has been in the inferior ranks, indeed in the very lowest grade of the attaches to the medical department—the want of a numerous and efficient hospital corps. In so far as some of the duties of such a corps have been zealously, kindly, and successfully discharged by Miss Nightingale and her female followers, I most willingly acknowledge the civil element; and in so far as these benevolent ladies have made up for the want of numerous orderlies, and thus spared the effective force of regiments, I am sure that every commanding officer will feel grateful to them.
Touching the alleged failures in the Crimea, "the medical department failed," says a public writer, "not because Surgeon Brown could not dress a wound, or Dr. Jones prescribe for a case of dysentery, but because no adequate preparation had been made for the reception of sick and wounded; because medical stores were sent to one port, while invalids were sent to another; and because purveyors were left to squabble for authority with inspectors, while patients were dying." And pray, whose fault was this? I have the best authority for saying, that had the resources and transport of the medical department been at its own disposal, much of the misery of that army would have been obviated.

One gentleman, I regret to think, has been most severely handled by the public press, not for any want of professional talent, but for apathy and want of interest, with which he was charged by the gallant officer commanding the troops. How far Dr. Lawson's health may have been impaired, and his energies prostrated, by a protracted residence on the coast of Africa, for which (with a spirit most becoming in an army surgeon) he volunteered his services, I am unable to say. It is many years since I have seen him, but it is due to this gentleman, and to the memory of his excellent uncle, the late Staff-surgeon Badenach, to say, that when a pupil of this class, some twenty years ago, a more steady, correct, industrious, intelligent, and promising student never sat on these benches. Of this you may judge by the following extract from the Edinburgh Medical and Surgical Journal for 1835:—"On Monday, the 16th day of April, at the last meeting of the class of Military Surgery in the University of this city, in the presence of a considerable number of the professors of the medical faculty, and most of the medical officers of the Army, Navy, and East India Company's Service, resident here, the professor, after concluding the lecture, proceeded to announce the names of the gentlemen who had obtained prizes."

"By nearly the unanimous votes of the class, after a competition conducted in the presence of the Principal of the University, and numerous professional gentlemen, the individual selected as most distinguished by a knowledge of the subjects of military medicine and surgery, was Mr. Robert Lawson, from Perthshire, in which—decision the professor concurred, and Mr. Lawson was accordingly recommended to the Director-General. We understand that he has since received the appointment so justly due to his merits."

It was, I think, upon that occasion that my predecessor Dr. Thomson, in congratulating me on the appearance of my pupils, observed, that Sir James M'Grigor would require to extend his patronage—enough to show that Dr. Lawson did not win his honours without a formidable competition.

There is only one other point, Gentlemen, on which I should wish to be indulged with a few words; but as I have already trespassed upon your time, and have elsewhere expressed myself on the subject, I will endeavour to be brief. I have been very sorry to find anything said which is calculated...
to disparage our regimental hospitals, or any countenance given by gentlemen whose judgment I respect, to the opinion that they are only adapted to peaceable times, and that a forty years' peace has disqualified the medical officers of the army from expanding their views to the management of a general hospital.

This seems to me to be altogether a gratuitous assumption; and I would observe that it was not in a time of peace, but of war, that the advantages of our regimental hospitals became fully developed. Hear what the late venerable Director-General says upon this subject! In a letter to his friend the late Dr. Chisholm, written at the termination of the Peninsular war; after expressing his surprise at the extent and success of the regimental hospitals, Sir James M'Grigor goes on to say,—“However short a time a battalion or a corps rested in one place, a regimental hospital was established. It was frequently established in the face of an enemy, and nearly within reach of his guns. By making every corps constantly keep up an establishment for itself, we could prevent the general hospitals from being crowded. Much severe and acute disease was treated in its early and only curable stage, and no slight wounds or ailments were ever sent off from the regiments; by which means the effective force of the army was kept up, or perhaps increased by several thousand men, and this was effected by the joint exertions of the medical officers who served in the Peninsula, the result of medical science, and their experience of soldiers, their habits, and their aptitude to particular diseases.” Dr. Chisholm adds for himself—“In regimental hospitals, health and economy are united—in general hospitals, death and a destructive waste of money. My own experience, which has been tolerably extensive, justifies this.”

It were superfluous, and it were idle to make farther quotations upon this subject, because I believe that every experienced man conversant with these hospitals, who has committed his opinion to paper, has expressed himself to the same effect. But on an occasion like the present, when the state of our hospitals has been so frequently and so unfavourably contrasted with those of our allies the French, it may not be out of place to refer to the sentiments of Baron Larrey. I had the pleasure of conducting that distinguished surgeon over the establishments of this city, both civil and military, now nearly thirty years ago, and I shall not soon forget the admiration which he expressed with the state of the regimental hospital in Piershill Barracks, then occupied by the 7th Hussars, and under the charge of an assistant-surgeon, Dr. Moffit. Not satisfied with this, he repeated his commendations to Sir James M'Grigor when he went to London, and wrote back to me to say that he had done so, and that he had commended to him the gentleman whom he was pleased to term my protégé. Dr. Moffit’s promotion took place soon after, and he considered it hastened by this kind recommendation of the Baron.

General hospitals, however, are indispensable on every extended scale of warfare, and I believe they never can be more advantageously conducted...
than by assimilating them as far as possible to our regimental establishments. General the hospital may be, general, as much as you will, in so far as the provisions, the cooking, the washing, the bedding, and the clothing of the sick are concerned, but let us, if possible, have their own surgeons to attend their own men. This may be carried to a great extent by classing the patients according to the divisions, brigades, or regiments to which they belong, having the medical staff of those divisions, brigades, or regiments to attend them, assisted by those non-commissioned officers and good conduct men of every regiment who may happen to be patients in the hospital, and who take an interest in their comrades, which strangers cannot be expected to do. This is a classification, as regards military hospitals, of equal, if not greater importance than some of those usually adopted on purely professional grounds; and the general hospital, whether under one or more roofs, thus becomes, as it were, a congeries of regimental hospitals.

I have already pointed out the difference between the province of the purveyor and the surgeon; and it is remarkable, that it is precisely at the point where the general and regimental hospitals meet, that the duties of a purveyor become paramount and indispensable, while the duties of a medical officer are in no degree changed, except in so far as he has to treat a disease which, having been acute in a regimental hospital, may probably have become chronic in a general one—a change for which surely every medical man is prepared. The purveying of a regimental hospital is for the most part a simple affair, and conducted successfully by the hospital sergeant, under the direction of the surgeon; but when serving in a general hospital, within the reach of daily or hourly communication with a purveyor, the surgeon is happily relieved of this.

So much are my old-fashioned notions in favour of the regimental principle, that I cannot help thinking it might with great advantage have been extended farther in the recent operations in the Crimea. Had the large addition, so strenuously recommended by Mr. Guthrie, been made to the regimental, instead of the general medical staff, I see nothing to have prevented the assistant-surgeons of regiments from having been detached in succession with the sick and wounded, just as the numbers of these increased, and as the number of fighting men diminished; to have succoured and assisted those men on their stormy passage across the Euxine, to have afterwards attended them in the hospitals on the Bosphorus, and to have returned to their regiments with such of them as might again have become fit to take the field. I am here only referring to what has repeatedly happened to myself. I have, over and over again, been detached from my regiment with parties of sick, and it has happened to me to have served, more than once, in general and garrison hospitals, and to have sometimes had a portion of one of them given up to me for a regimental establishment, according to an arrangement which may, I believe, at this moment, be seen in the King's Infirmary, in the Phoenix Park, at Dublin.
or at least was to be seen when I last visited that establishment some few 
years ago.

I know of no duty of a staff assistant-surgeon to which a regimental 
assistant is not competent, but I do not hold that the converse of this pro-
position is, equally true. I have the highest opinion of that "esprit de 
corps," which is fostered by regimental intercourse, and those "ties of 
regimental discipline," which, as Dr. Millingen says, "constitute the 
superiority of battalion hospitals." I know well how much that knowledge 
of character acquired by a regimental surgeon—that interest on the one 
hand, and that confidence on the other—engendered between him and his 
patients, contributes to the successful treatment of disease. I have, my-
self, been sent for to amputate the limb of a soldier, lying in a garrison 
hospital, a few miles distant from the spot where I happened to be 
encamped. This young man, finding that his limb must come off, asked 
as a special favour that his own surgeon might be asked to operate. 
This the garrison surgeon kindly consented to, and the young man speedily 
recovered.

The successful discharge of regimental duties was always looked upon 
in my day, and, I believe, very justly looked upon, as the best preparation 
for the duties of the staff, whether military or medical. Where, I should 
be glad to know, except in the exercise of regimental duties, were such 
men as Jackson, M'Grigor, Hennen, Guthrie, French, Franklin, and many 
others prepared for those general duties which they have so successfully 
discharged in all quarters of the world? Of the last two named gentlemen, 
the former went to China as surgeon of the 49th regiment, and was placed 
at the head of the department as the senior medical officer of the Queen's 
troops employed in the Chinese War. The other was Inspector of Hospitals 
to the Queen's troops at Chillianwallah and Goojerat, those conflicts in 
the Punjaub which have given peace to that part of India for many years 
past. No! Gentlemen, I will not believe that the surgeons of the army 
are unequal to the conduct of general hospitals.

At the commencement of my last course of lectures, I promised myself 
numerous interesting communications from my friends serving in the war 
against Russia, and in this I have not been disappointed. I have lately 
had a letter from Dr. Hall, the chief of the medical staff in the Crimea—a 
man who has had both hard work and hard words—a man of much labour 
and little thanks. It is most gratifying to find him speaking confidently of 
the improved health and never-failing spirits of the men. From Dr. Deas, 
the head of the medical department of the Black Sea Fleet, and formerly 
a pupil of this class, I had lately a most valuable communication. He has 
conducted the duties of his department with much credit to himself, and 
with great advantage to the public service, notwithstanding the scarcity of 
hands in the junior ranks of the naval medical establishment. It would 
appear that he early detected, as an observant naval officer might be 
expected to do, the extensive prevalence of a scorbutive taint amongst all
hands, soldiers, seamen, and marines, which rendered, in many instances, their dysenteries intractable, and their wounds incurable. From Dr. Linton, who was a frequent attendant in this class-room some two years ago, I had some touching details of poor Dr. Mackenzie's last hours, and of the earlier operations in the siege of Sebastopol. He was, and still is, at the head of the staff of the First Division, at one time so gallantly commanded by the Duke of Cambridge, who, I observe, has expressed himself fully satisfied with his medical officers.

Amongst other recent communications, I have had a very kind letter from Sir James M'Grigor, thanking me for a letter which I addressed some months ago to the Secretary-at-War, on the Medical Department. He evidently feels and deeply deplores what he calls the "black cloud" which has fallen on the department; expresses a confident expectation that it will right itself; and concludes with a well-known Scotch proverb—"We maun jouk and let the jaw gae o'er."

It is with pleasure that I refer, for one moment, to another matter in which some of you are aware that I have taken great interest—the endowment of chairs of military surgery in the two other capital cities of the empire. From a reply by Mr. Peel, the Under Secretary-at-War, to a question put to him in the House of Commons by Mr. Grogan, the member for Dublin, it would appear that arrangements are making to carry out this measure. In Dublin, a class of military surgery has for several years been in operation, and I trust that the gentleman who has so well conducted it will speedily be commissioned by the Crown, and put in possession of an endowment. In as far as concerns London, I believe that one great difficulty has been the trouble and expense of removing the Chatham Museum to town, but this I have always looked upon as something very like a bugbear; nor have I ever been able to see why it should be the cause of one hour's delay. If the mountain cannot be brought to Mahomet, why should not Mahomet go to the mountain? How often did my late venerable colleague, Professor Jameson, cross the Forth with his pupils to illustrate his geological views by showing them the rocks on the coast of Fife? How often, and how far, does my excellent colleague, and former pupil, Dr. Balfour, go into the country to illustrate his botanical doctrines? He thinks nothing of going with his pupils to Aberdeen before breakfast, botanising for the day, and returning in the evening. As some indication that the Government has now come to see the propriety of encouraging special courses of instruction for the rising generation of military and naval surgeons, I may mention that I have lately obtained, through the assistance of our city member Mr. Cowan, who kindly visited my museum that he might be able to speak to the point, a small grant of money for the purpose of putting that museum into better order, and reprinting my Catalogue, which I hope to be able to put into your hands before the close of the session.