THE MINOR HORRORS OF WAR

BY

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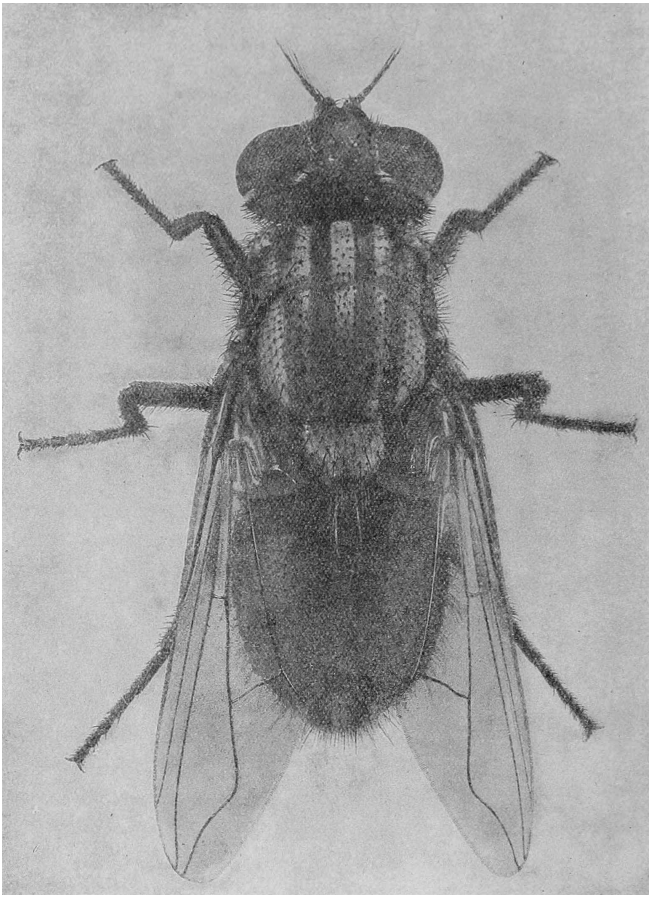

Photograph of enlarged model of the house-fly (*Musca domestica*) in the American Museum of Natural History, New York. (From Gordon Hewitt.) P. 57.

PREFACE

The contents of this little book hardly justify its title. There are whole ranges of 'Minor Horrors of War' left untouched in the following chapters. The minor poets, the pamphlets of the professors, the people who write to the papers about 'Kultur' and think that this is the German for Matthew Arnold's over-worked word 'Culture,' the half-hysterical ladies who offer white feathers to youths whose hearts are breaking because medical officer after medical officer has refused them the desire of their young lives to serve their country. Surely, as Carlyle taught us, '*There is no animal so strange as man!*'

These 'Minor Horrors of War,' and many besides, have for the moment been neglected in favour of certain others which attack the bodies, the food, or the accoutrements of the men who are giving all that they have to give, even unto their lives, for their homes and for their country.

I deal with certain little Invertebrata: animals which work in darkness and in stealth, little animals which in times of Peace we politely ignore, yet little animals which in times of War may make or unmake an army corps. As that wise old Greek, Aristotle, wrote—and he knew quite a lot about them—'*One should not be childishly contemptuous of the study of the most insignificant animal. For there is something marvellous in all natural objects.*'

We are shy of mentioning these organisms in times of Peace; but all of them are within the cognisance of every medical officer of health and of every police-court missionary. These gentlemen do

not talk about them in general society: the subject is as a rule ‘taboo.’ Yet if we face these troubles with courage and frankness, they can be overcome. As ‘Emigration Jane’ says: ‘*Well, there’s nothink lower than Nature, an’ She Goes as ’Igh as ’Eaven.*’

I confess that these articles have been written in a certain spirit of gaiety. This is the reflex of the spirit of those who have gone to the Front and of my fellow countrymen in general. For more years than I care to remember, the spirit of Great Britain and of Ireland had been sombre, self-distrusting—we were till half a year ago far too ‘*conscious of each other’s infirmities*’; but with the outbreak of the War everything changed. Our nearest relatives, our dearest friends, are dead, or dying, or wounded, or prisoners; but we at home at once caught the spirit of those who have died or have suffered for us abroad, and we have kept and still keep a high heart. As Mrs. Aberdeen, the immortal ‘bedmaker’ at King’s College, Cambridge, said: *But surely, Miss, the world being what it is, the longer one is able to laugh in it, the better.*’ Mrs. Aberdeen spoke in times of Peace; but I feel that that indomitable old lady would have said the same in times of War.

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THE
MINOR HORRORS OF WAR

CHAPTER I

THE LOUSE (*Pediculus*)

Care'll kill a cat, up-tailles all and a louse for the hangman!
(B. JONSON, Every Man in his Humour.)

LICE form a small group of insects known as the *Anoplura*, interesting to the entomologist because they are now entirely wingless, though it is believed that their ancestry were winged. They are all parasites on vertebrates. In quite recent books the *Anoplura* are described as 'lice or disgusting insects, about which little is known'; but lately, owing to researches carried on at Cambridge, we have found out something about their habits. As lice play a large part in the minor discomforts of an army, it is worth while considering for a moment what we know about them.

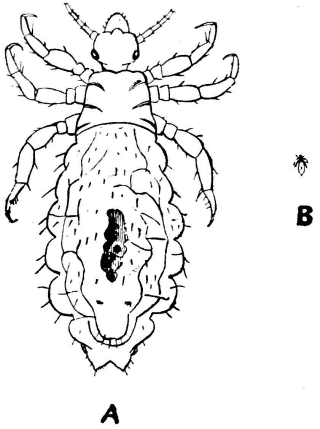

FIG. 1.—*Pediculus vestimenti* (Nitzsch). A, Magnified 20 times; B, natural size.

Recently, the group has been split up into a large number of genera, but of these only two have any relation to the human body. I do not propose, in the present chapter, to consider one of these two genera—*Phthirius*—which frequents the hairs about the pubic region of man and is conveyed from one human being to another by personal contact. We will confine our attention to the second genus, *Pediculus*, which contains two species parasitic upon man—(*Pediculus capitis*) the hair-louse and (*Pediculus vestimenti*) the body-louse. Both of these are extremely difficult to rear in captivity, though in their natural state they abound and multiply to an amazing degree.

Wherever human beings are gathered together in large numbers, with infrequent opportunities of changing their clothes, *P. vestimenti* is sure to spread. It does not arise, as the uninformed think, from dirt, though it flourishes best in dirty surroundings. No specimen of *P. vestimenti* exists which is not the direct product of an egg laid by a mother-louse and fertilised by a father-louse. In considerable collections of men drawn from the poorer classes, some unhappy being or other—often through no fault of his own—will turn up in the community with lice on him, and these swiftly spread to others in a manner that will be indicated later in this chapter.

Like almost all animals lower than the mammals, the male of the body-louse is smaller and feebler than the female. The former attains a length of about 3 mm., and is about 1 mm. broad. The female is about 3·3 mm. long and about 1·4 mm. broad. It is rather bigger than the hair-louse, and its antennae are slightly longer. It so far flatters its host as to imitate the colour of the skin upon which it lives; and Andrew Murray gives a series of gradations between the black louse of the West African and Australian native, the dark and

smoky louse of the Hindu, the orange of the Africander and of the Hottentot, the yellowish-brown of the Japanese and Chinese, the dark-brown of the North and South American Indians, and the paler-brown of the Esquimo, which approaches the light dirty-grey colour of the European parasites.

> As plump an' grey as onie grozet,

as Burns has it.

The latter were the forms dealt with in the recent observations undertaken by Mr. C. Warburton in the Quick Laboratory at Cambridge, at the request of the Local Government Board, the authorities of which were anxious to find out whether the flock used in making cheap bedding was instrumental in distributing vermin. Mr. Warburton at once appreciated the fact that he must know the life-history of the insect before he could successfully attack the problem put before him. At an early stage of his investigations, he found that *P. vestimenti* survives longer under adverse conditions than *P. capitis*, the head-louse.

The habitat of the body-louse is that side of the under-clothing which is in contact with the body. The louse, which sucks the blood of its host at least twice a day, is when feeding always anchored to the inside of the under-clothing of its host by the claws of one or more of its six legs. Free lice are rarely found on the skin in western Europeans; but doctors who have recently returned from Serbia report dark-brown patches, as big as half-crowns, on the skins of the wounded natives, which on touching begin to move—a clotted scab of lice! But the under-side of a stripped shirt is often alive with them.

After a great many experiments, Mr. Warburton succeeded in rearing these delicate insects, but only under certain circumscribed conditions: one of which was their anchorage in some sort of flannel or cloth, and the second was proximity to the human skin. He anchored his specimens on small pieces of cloth which he interned in small test-tubes plugged with cotton-wool, which did not let the lice out, but did let air and the emanations of the human body in. For fear of breakage the glass tube was enclosed in an outer metal tube, and the whole was kept both night and day near the body. Two meals a day were necessary to keep the lice alive. When feeding, the pieces of cloth, which the lice would never let go of, were placed on the back of the hand, hence the danger of escape was practically *nil*, and once given access to the skin the lice fed immediately and greedily.

His success in keeping lice alive was but the final result of many experiments, the majority of which had failed. Lice are very difficult to rear. When you want them to live they die; and when you want them to die they live, and multiply exceedingly.

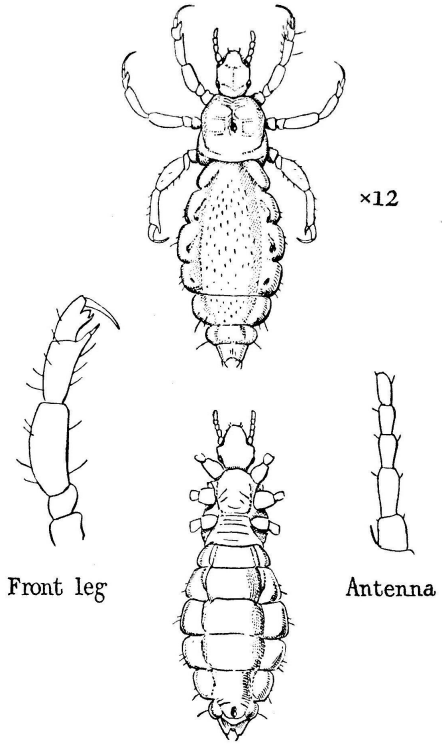

FIG. 2.—*Pediculus vestimenti.* Dorsal and ventral views.

A single female but recently matured was placed in a test-tube, and a male admitted to her on the second day. The two paired on the sixth day and afterwards at frequent intervals. Very soon after pairing an egg was laid, and during the remaining twenty-five days of her life the female laid an average of five eggs every twenty-four hours. The male died on the seventeenth day, and a second male was then introduced, who again paired with the female. The latter, however, died on the thirtieth day, but the second male survived.

The difficulty of keeping the male and female alive was simple compared with the difficulty of rearing the eggs. Very few hatched out. The strands of cloth upon which they were laid had been carefully removed and placed in separate tubes, at the same time being subjected to different temperatures. It was not, however, until the eggs were left alone undisturbed in the position where they had been laid and placed under the same conditions that the mother lived in that eight, and only eight, of the twenty-four eggs laid on the cloth hatched out after an incubation period of eight days. The remaining sixteen eggs were apparently dead. But the tube in which they were was then subjected to normal temperature of the room at night (on occasions this fell below freezing-point), and after an incubation period of upwards of a month six more hatched out. Hence it is obvious that, as in the case of many other insects, temperature plays a large part in the rate of development, and it becomes clear that the eggs or nits of *P. vestimenti* are capable of hatching out up to a period of at least from thirty-five to forty days after they are laid.

Difficult as it was to keep the adults alive, and more difficult as it was to hatch out the eggs, it was most difficult to rear the larvae. Their small size made them difficult to observe, and, like most young animals, they are intolerant of control, apt to wander and explore, and less given to clinging to the cloth than their more sedentary parents. Naturally, they want to scatter, spread themselves, and pair.

Like young chickens, the larvae feed immediately on emerging from the egg. They apparently moult three times, at intervals of about four days, and on the eleventh day attain their mature form, though they do not pair until four or five days later.

Mr. Warburton summarises the life-cycle of the insects, as indicated by his experiments, as follows:—

> Incubation period: eight days to five weeks.
> From larva to imago: eleven days.
> Non-functional mature condition: four days.
> Adult life: male, three weeks; female, four weeks.

But we must not forget that these figures are based upon laboratory experiments, and that under the normal conditions the rate may be accelerated. From Mr. Warburton's experience it is perfectly obvious that, unless regularly fed, body-lice very quickly die. Of all the verminous clothing sent to the Quick Laboratory, very little contained *live* vermin. The newly hatched larvae perish in a day and a half unless they can obtain food.

With regard to the head-louse:—

> Ye ugly, creepin', blastit wonner,
> Detested, shunn'd by saunt an' sinner,

it is smaller than the body-louse, and is of a cindery grey colour. The female measures 1·8 mm. in length and 0·7 in breadth. Like the body-louse, it varies its colour somewhat with the colour of the hair on the different branches of the human race. It lives amongst the hair of the head of people who neglect their heads; it is also, but more rarely, found amongst the eyelashes and in the beard. The egg, which has a certain beauty of symmetry, is cemented to the hair, and at the end of six days the larvae emerge, which, after a certain number of moults, become mature on the eighteenth day. The methods adopted by many natives of plastering their hair with coloured clay, or of anointing it with ointments, probably guards against the presence of these parasites. The Spartan youths, who used to oil their long locks before going into battle, may have

feared this parasite. Some German soldiers, before going to war, shave their heads: thus they afford no nidus for *P. capitis*. The wigs worn in the late seventeenth and at the beginning of the eighteenth centuries undoubtedly owed something to the difficulty of keeping this particular kind of vermin down. The later powdering of the hair may have been due to the same cause.

This book, however, attempts to deal more with the troubles of the camp, and *P. capitis* is in war time less important than *P. vestimenti*. The former certainly causes a certain skin trouble, but the latter not only affords constant irritation, but, like most biting insects, from time to time conveys most serious diseases. *P. vestimenti* is said to be the carrier of typhus. This was, I believe, first demonstrated in Algeria, but was amply confirmed last year in Ireland, when a serious outbreak of this fever took place, though little was heard of it in England. Possibly, *P. capitis* also conveys typhus, but undoubtedly both convey certain forms of relapsing or recurrent fever. The irritation due to the body-louse weakens the host and prevents sleep, besides which there is a certain psychic disgust which causes many officers to fear lice more than they fear bullets. Lice are the constant accompaniment of all armies; and in the South African War as soon as a regiment halted they stripped to the skin, turned their clothes inside out, and picked the *Anoplura* off. As a private said to me: ‘We strips and we picks ’em off and places ’em in the sun, and it kind o’ breaks the little beggars’ ’earts!’

In conjunction with the Quick Professor of Biology at Cambridge, I have drawn up the following rules. None of them will be possible at all times, but some of them may be possible at some time in the campaign. At any rate, by acting on these rules, a relative of mine who took part in the South African War was able to escape the

presence of lice on his body, and the General commanding his brigade told me on his return that he was the only officer—and in fact the only man—in the brigade who had so escaped.

How the Soldier may Guard Himself against Infestation with Lice

In times of war, when men are aggregated in large numbers and personal cleanliness—but especially an adequate change of clothing—cannot be secured, infestation with lice commonly takes place. The prevalence of lice in troops in the South African War was a source of serious trouble in that their attacks caused much irritation to the skin and disturbed men's sleep.

Lice occur chiefly on the body (*Pediculus vestimenti*) and head (*P. capitis*). They are small greyish-white insects. The female lays about sixty eggs during two weeks; the eggs hatch after nine to ten days. The lice are small at first; they undergo several moults and grow in size, sucking blood every few hours, and attain sexual maturity in about two weeks. The eggs will not develop unless maintained at a temperature of 22° C. or over—such as prevails in clothing worn on the human body or in the hair of the head. This is why, *when clothing is worn continuously*, men are more prone to become infested with lice derived from habitually unclean persons, their clothing, bedding, &c. *P. capitis* lives between the hair in the head, and the eggs, called 'nits,' are attached to the hairs. *P. vestimenti* lives in the clothing, to which it usually remains attached when feeding on man; it lays its eggs in the clothing, and usually retreats into the seams and permanent folds therein. This is of importance in considering the means of destroying lice.

To avoid these pests the following rules should be observed:—

1. Search your person as often as possible for signs of the presence of lice—that is, their bites. As soon as these are found, lose no time in taking the measures noted under paragraph 5.

2. Try not to sleep where others, especially the unclean, have slept before. Consider this in choosing a camping-ground.

3. Change your clothing as often as practicable. After clothes have been discarded for a week the lice are usually dead of starvation. Change clothes at night if possible, and place your clothing away from that of others. Jolting of carts in transport aids in spreading the lice, which also become disseminated by crawling about from one kit to another. Infested clothing and blankets, until dealt with, should be kept apart as far as possible.

4. Verminous clothes for which there is no further use should be burnt, buried, or sunk in water.

5. If lice are found on the person, they may be *readily destroyed by the application of either petrol, paraffin oil, turpentine, xylol, or benzine*. Apply these to the head in the case of *P. capitis*. Remember that these fluids are all **highly inflammable**. When possible, soap and wash the head twenty-four hours after the last application of petrol, &c. The application may be repeated on two or more days if the infestation is heavy. Fine combs are useful in detecting and removing vermin from the head. Tobacco extract has been advocated failing other available remedies. In the case of *P. vestimenti*, the lice can be killed as follows: Under-clothes may be scalded—say, once in ten days. Turn coats, waistcoats, trousers, &c., *inside out*; examine beneath the folds at the seams and expose these places to as much heat as can be borne before a fire, against a boiler, or allow a jet of steam from a kettle or boiler to travel along

the seams. The clothing will soon dry. If available, a hot flat-iron, or any piece of heated metal, may be used to kill vermin in clothing. Petrol or paraffin will also kill nits and lice in clothing. If no other means are available, turn the clothing inside out, beat it vigorously, remove and kill the vermin by hand—this will, at any rate, mitigate the evil.

6. As far as possible avoid scratching the irritated part.

7. Privates would benefit by instruction in these matters.

8. Apart from the physical discomfort and loss of sleep caused by the attacks of lice, it should be noted that they have been shown to be the carriers of typhus and relapsing fever from infected to healthy persons. Typhus, especially, has played havoc in the past, and has been a dread accompaniment of war.

Dr. R. F. Drummond has drawn my attention to a common folklore belief emplanted in the minds of our poorer people. Incredible as it seems, these uneducated and ignorant folk believe that lice on the person is a sign of productivity, and that should they be removed their hosts will become barren or sterile. They transfer, by a process of sympathetic magic, the productivity of the lice to the lousy. As Dr. Drummond writes, these ignorant mothers and aunts believe that the nits and the lice arise spontaneously, and are ‘an outward and visible sign of an inward and invisible fertility.’ Those who try to cleanse the heads and the bodies of our primary schoolchildren are ‘up against’ the superstitions of the little ones’ guardians, and the guardians unfortunately often prove the stronger. Similar views are held widely by the various peoples of India and the East—people we call heathen—and, apart from the connexion thought to be established between fertility and lice, the presence of