

BRIAN J. FORD, a Cardiff social investigator, discusses pediculosis

IN this, the era of prostheses and vaccines, of synthetic steroids and pacemaker equipment, it is disturbing to find a reservoir of people infested with a parasite characteristic of the Middle Ages.

But, as far as one can estimate, there are probably well over a million people in the United Kingdom infested with head lice. This is certainly an appalling state of affairs, especially perhaps since it is a condition that is essentially easy to eradicate — easy, that is, by the standards set by microbial diseases.

For some reason few people talk of pediculosis these days; the stigma that has become attached to the condition has left its mark even in some of the advertisements for medicated shampoo; set in old-fashioned type, many of them talk of “waving lotion” and tactfully avoid any reference to lice, nits, disease or even (couching the problem in the politeness of orthodox terminology) pediculosis.

To some extent there is even misunderstanding in the problem among those more professionally involved. I have seen an account which states “Lice may reach a length of 1/10th of an inch” — yet I have seen cases with adult lice almost as much in breadth!

There is too, still some confusion over terminology. The human louse is of course *Pediculus humanus* (L), the head-louse and body-louse are strains of the parent species: *P. humanus* var. *capitis* (de Geere), and *P. humanus* var. *corporis* (de Geer) respectively.

In ordinary use the two are regarded as simply *P. capitis* and *P. corporis*, which is certainly admissible as working terminology, although on a pedantic basis the names are incorrect.

Crab louse

There is another louse that infests Man, happily less frequently.

This is *Phthirus pubis* (L), the crab louse which infests pubic and perianal hair (sometimes additionally the eyelashes).

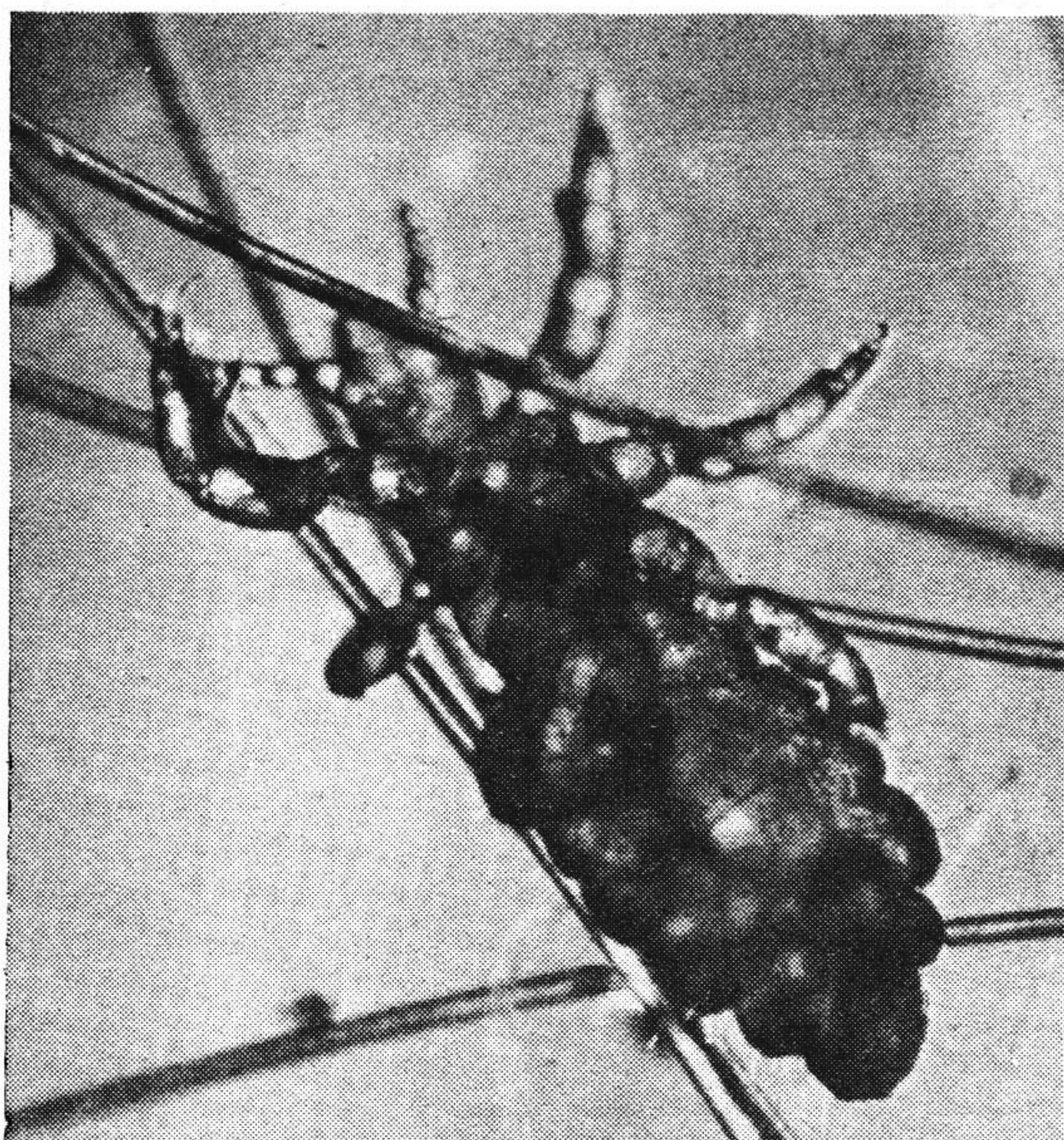
There is in the minds of many an association between lice and dirty hair, yet it has been shown that clean hair is equally susceptible to infection.

The association is of course a secondary one: it is that lower social groups are both more likely to suffer from vermin and to be less clean, but there is no cause-and-effect relationship.

Some local authorities (Brighton is a prime example) have attempted to make an active attack on pediculosis, but the majority are more passive in their attitudes. Cardiff, for example, where my own work has been centred, made only a few lines of mention in the relevant council report.

Teachers concerned with the problem have rather more reason to be actively involved, especially those who have contracted the condition themselves. I have heard from many teachers in recent weeks of the apathy of some of the legislative channels through which remedial action might be taken.

**A head louse
crawls
through the
hair of a
Cardiff child**



Mediaeval problem in today's setting

Pediculus is not, however, a very significant vector of pathogenic micro-organisms: *Rickettsia prowazeki* (da Rocha Lima), the causative organism of typhus fever, is carried by *Pediculus* and indeed it cannot complete its cycle of transmission without the louse.

Trench fever, which is caused by *R. quintana* (Munk) is similarly transmitted. Relapsing fever, due to *Spirochaeta recurrentis* (Lebert) is transmitted largely by mechanical means.

The spirochaete is removed in the host's blood as the louse feeds and is subsequently found in the visceral haemolymph. Crushing of the insect thus releases the organisms which can thence regain admittance through the dermal tissues.

Lice are voracious. I have observed them, after a period of starvation, feeding on my hand under the microscope, take blood until the visceral tract overfills and ruptures.

The blood then mingles with the haemolymph of the insect's body cavities and its death ensues.

There is little or no irritation from the bite itself, though the pin-prick traumata continue to bleed for a little while after the puncture, no doubt due to the presence of anticoagulant materials in the fluid that may be injected during the biting process.

These are quite possibly necessary for the digestive processes of the louse — the fate of an insect whose main course coagulated and solidified in its viscera is speculatively an unhappy one.

Heavy infestations are no longer seen, at least in the sense implied by earlier accounts. Thomas à Becket, when stripped of his clothing after his murder, was found to erupt with a boiling mass of silvery wriggling lice that lived in his hair under-vest.

The worst case I have seen was a teenaged girl with lice several millimetres in length in such numbers that a dozen or so were revealed each time a comb was drawn through the hair: she had, too, *Phthirus* in the pubic hair.

We must accept that actual rates of incidence are higher — perhaps very much higher — than the figures generally available, since many cases have, in past

surveys, been shown to be missed by cursory examinations. It may be that levels are factorially higher than is generally realized.

However, whereas tubercle or poliomyelitis can exist in other reservoirs and are theoretically therefore difficult to eradicate entirely, *Pediculus* is a vulnerable insect. It must be kept above 68 degrees F. to breed, and needs to feed on human blood every three days or so if it is to survive at all.

There should be no objection to the establishment of small pilot teams of social workers with the necessary legislative powers to rehabilitate “problem families” and clean their homes during their absence.

Reinfestation cannot occur where the lice are absent, and they will die after only a few days away from the host.

But above all we must realize the extent of the condition, and encourage authorities to take more active steps to eradicate it. This is not for any risk of high-pathogenicity; simply because the high incidence of pediculosis in the mid-twentieth century is a sign of apathy and poor public education that we should not be prepared to tolerate.