

The Epidemiology of Human Pediculosis in Ethiopia

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REVIEW OF THE LITERATURE

Human lice are obligate blood-sucking ectoparasites belonging to the family Pediculidae. Three species are now recognized: the crab louse, *Pthirus pubis* (Linnaeus), the head louse, *Pediculus capitis* De Geer, and the body louse, *P. humanus* Linnaeus. Biologically, the principal difference between the head and body louse is in habitat. The head louse occurs primarily on the head and cements its eggs to the hair shafts. The body louse is found on the body and attaches its eggs to fibers of clothing, especially along the seams of the clothing's inner surface. The body louse feeds less frequently and is generally more robust than the head louse. The crab louse is quite distinct from the head and body louse in its appearance, habits and location. It is found principally in the pubic and perianal regions, but occasionally may occur in coarse hair on other parts of the body (Buxton, 1947; Busvine, 1966).

Although all three species are cosmopolitan in distribution, the behavioral differences between them are reflected in their relative prevalence throughout the world. Thus, the chance of becoming infested with body lice is remote for most people in the industrialized nations where clothing is washed and changed frequently. This is not the case for the head louse which has recently emerged as a significant problem in developed countries. The incidence of the crab louse is not well known, but it is considered to be much lower than for *Pediculus* spp. (Busvine, 1969).

In the laboratory, the causal organisms for typhus and relapsing fever have been shown to reproduce in both the head and body louse; however, only the body louse has been associated with major epidemics in the past and is the only proven natural vector of both diseases. Like *Pediculus* spp., the crab louse causes irritation by its bites, but its medical importance as a disease

vector is limited by its sedentary habits and low rate of infestation (Busvine, 1973).

General discussions of the medical importance, biology and control of human lice can be found in Buxton (1947), Busvine (1966) and PAHO/WHO Symposium (1973). Busvine (1976) has compiled a collection of fascinating curiosities and historical references to lice and other human ectoparasites not found in other sources.

The taxonomic history and position of human lice and other Anoplura is summarized in a monograph by Ferris (1951). In a more recent study of the taxonomic status of the head and body louse, Busvine (1978) concluded they should be accorded specific rank. His conclusion was based in large part on the examination of louse specimens obtained during this investigation from Ethiopians with double infestations.

Gratz (1973) reviewed the current literature and unpublished reports to WHO and noted that surveys on body lice were generally made incidentally to other activities, such as insecticide susceptibility tests, or as follow-ups to insecticide operations after outbreaks of louse-borne diseases. He concluded that while comparatively accurate information was available on the geographical distribution of the foci and outbreaks of louse-borne diseases, little was known regarding the prevalence and distribution of body lice in these foci or elsewhere. In Gratz's opinion, this deficit in statistical information regarding body louse surveillance makes it difficult to: (1) predict the areas at risk from disease outbreaks, (2) determine if infestations are becoming widespread and (3) plan effective control measures before outbreaks occur and an emergency situation develops. The latter is of special importance since the widespread resistance of lice to insecticides