



Information

Bohart Museum of Entomology

No. 007

Lice

Lice are flat-bodied, wingless insects that feed exclusively on blood. These insects have legs adapted for crawling through hair or on clothing. Lice are not capable of jumping any distance. Human body, head and crab lice are exclusively human parasites and are not able to feed on any other animals. Human lice must feed every 24 hours, and if they cannot do so they quickly starve to death.

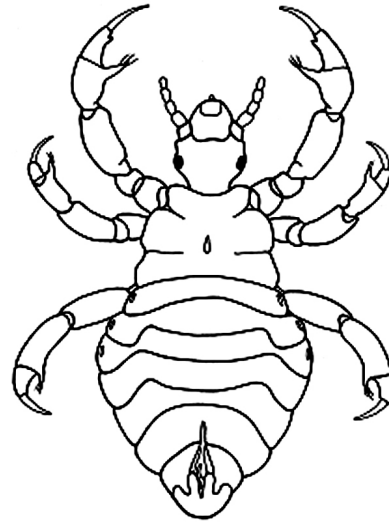
Lice can be detected by characteristic symptoms including persistent itching and redness, particularly on the scalp, on the back of the head, or in pubic areas (depending on the kind of louse). The eggs, or nits, can be recognized immediately: they are white to gray and are glued firmly to the base of hairs. If only nits are observed, and never any lice, then the "nits" should be examined under magnification to prevent mis-identification. There are instances where skin flakes and other debris in the hair can closely resemble nits. These will appear lumpy or angular and asymmetrical under magnification. Louse eggs, even when dead, appear smooth and rounded.

A number of common sayings actually refer to lice. Calling someone a "nitwit" is the same as saying they have the intelligence of a louse egg (nit). "Getting down to the nitty gritty" and "nit-picking" refer to the detailed work involved in removing nits. Describing someone as "lousy" implies that they have lice.

Treatment. There are a number of insecticidal shampoos available on the market that can be used to treat lice. A minimum of two treatments is necessary. While adults are susceptible to insecticidal shampoos, the nits are relatively impervious to them. Because it takes 10-14 days for the eggs to hatch, a second treatment is needed after two weeks to kill the adults that develop from the surviving eggs. Additionally, care should be taken to remove visible nits with a fine-toothed louse comb or fingernails.

Children with head lice need to be routinely inspected. All bedding, as well as any hats or clothing that come up to neck level should be washed. This should be done corresponding with each shampoo treatment.

Head Lice. Head lice, *Pediculus humanus capitis*, are commonly found in preschoolers and elementary school aged children. They are transmitted from one person to the next by direct contact, head to head, or head to hat to head. They live in the hair on the head (not facial hair), and live nowhere else. Eggs are cemented to hairs on the head and



not on clothing. It takes roughly 21 days for the entire life cycle from egg to egg. These lice are not known to transmit any disease pathogens. They also have very specific temperature requirements and will die if the temperature drops too low.

Body Lice. This louse, *Pediculus humanus humanus*, is also called a "cootie". Although closely related to the head louse, it differs biologically in a number of significant ways. Body lice lay their eggs in clothing, cementing them to fibers. Adult and immature lice take shelter in the seams and folds of clothing worn for long periods, moving onto the host only to feed. The life cycle is 9-10 days from egg to adult, unless clothing is removed at night, in which case complete development might take 2-4 weeks. However, these lice will die if clothing is not worn for several days. Body lice are known to transmit epidemic and relapsing typhus in a few parts of the world. Body lice are found in the United States only in indigent populations, particularly homeless individuals.

Crab Lice. The crab or pubic louse, *Phthirus pubis*, is shorter and broader than the other two types of human lice. The general life style is essentially the same as the head louse, except that the crab louse is generally found on pubic and armpit hair, and less commonly facial hair. It can survive only short periods off the host, and is transmitted primarily by human-to-human contact, particularly sexual contact. This louse is not known to transmit any disease causing pathogens.