Crab Lice, *Pthirus pubis* (L.)

Psocodea: Phthiraptera; Pthiridae

Theresa A. Dellinger and Eric Day, Department of Entomology, Virginia Tech

Description Crab lice are very small (1.5–2 mm; 0.06–0.08 inch), wingless, flattened insects with mouthparts for sucking blood. The body is about as wide as it is long, broadest at the "shoulders", with a small head. Crab lice are gray to tan in color. If they have fed recently, the blood meal will be visible through the body and make them appear darker in color. Crab lice have a large claw at the end of the last two pairs of legs that fits snugly around a hair shaft, allowing them to cling securely to coarse hair on their host. The claws resemble those of an aquatic crab, hence the common name of "crab lice." Crab lice cannot fly or jump; they can only crawl. Crab lice are not the same parasites as head or body lice.



Images of crab or pubic lice, *Pthirus pubis* (L.) (Photo from Centers for Disease Control)

Life Cycle Crab lice have an incomplete life cycle consisting of egg, nymphal, and adult stages. The oval-shaped eggs, or nits, are firmly glued to hair shafts close to the skin's surface. They hatch in about a week but only if kept at body temperature. The empty nit will remain firmly glued on the shaft even after the nymph has hatched out. Nymphs look much like adults, but they must feed and grow through three molts before reaching the adult stage. Crab lice complete their development from egg to adult in 25-30 days. Adult crab lice live up to a month.

Damage Crab lice are blood feeders and require multiple blood meals throughout their lives for survival. A louse only ingests a small amount of blood each time it feeds, but crab lice feed frequently and the bites are a source of intense discomfort and irritation. A person may have crab lice for a week or so before developing the symptoms of itching. Scratching the bites may lead to secondary infection of the skin by bacteria, which may require additional medical attention. Fortunately, crab lice do not transmit disease.

Habitat Crab lice and their nits may be hard to see without strong light and a magnifying glass. They are fast moving, avoid light, and are very small. Crab lice are usually found on the coarse hairs of the pubic area, but they can also live in armpits, chest hair, or heavy facial hair. They are sometimes found on eyelashes and eyebrows, especially in pre-adolescent children without much body hair. Crab lice spread from host to host by direct, intimate human contact; their presence on children may be an indication of sexual abuse. They do not feed on other animals and people cannot catch them from dogs or other pets. Pets do not need to be treated if crab lice are found in the household. Someone could potentially acquire crab lice from furniture or bedding, but only if someone picked up the lice very soon after they fell off an infested person. Crab lice die in 1–2 days if they fall off the host and don't find a new one. Theoretically it's possible to acquire crab lice from an infested toilet, but only if someone used a toilet very soon after an infested person did. The legs of crab lice are not built to grasp a slick surface like a toilet seat and they would likely fall off very quickly.

Treatment Shaving is not required and may not eliminate all the crab lice. Mechanically removing as many nits and crawling lice as possible will help eliminate the infestation faster. Comb wet hair with a fine toothed comb or a lice comb. Kill any nits or crawling lice found by placing them in very hot water, rubbing alcohol, Lysol, or medicated lice shampoo. Be sure to disinfect the comb as well when you are done.

For the fastest elimination of crab lice, use a medicated shampoo or lotion specifically labeled for louse treatment. Usually these contain the insecticides pyrethrin or permethrin and are available over the counter in a pharmacy. Follow the label exactly for best results. Do not use more than one kind of medicated treatment at a time. Pregnant or nursing women and children under two should not use medicated shampoos without the advice of a medical doctor. Consult a medical doctor for advice on the treatment of crab lice around the eyes as the eyes must be protected from potential damage from the louse treatment. If crawling lice are found one day after proper application of a medicated shampoon, consult with a medical doctor or healthcare provider. Stronger treatments may be available with a prescription from a medical doctor.

In addition to medicated treatments, all possibly infested bedding, towels, etc. should be washed in hot water and dried with high heat. Items such as comforters and pillows can be placed in a plastic storage bin with a tightly closing lid or in a heavy plastic bag that can be securely closed and left unopened for about a week. Lice cannot survive more than two days without feeding. Vacuum carpets and upholstered furniture to remove any hair that may have fallen out with nits attached. Treating the house with aerosol insecticides or foggers is not necessary.

If live lice are still found several days after following the above suggestions, including the proper use of medicated shampoos or lotions, it may appear that the treatments have failed. While it is possible that the lice have developed resistance to the insecticide in the medicated shampoo, it is more likely that a reinfestation has occurred (from another infested person or from infested items) or that the control steps were not followed rigorously and thoroughly (i.e., not using a medicated shampoo, applying the shampoo incorrectly, etc.).

People who do not have nits or crawling lice, but share a bed or a room with someone who does, should consider a prophylactic louse treatment. A person diagnosed as having crab lice should notify all sexual partners and encourage them to seek treatment for possible infestation. Abstain from all sexual activity

until the infestation is eliminated from all partners to avoid reinfestation. The use of condoms will not protect against crab lice. Because crab lice are so contagious, they are often classified as a sexually transmitted disease (STD). Healthcare providers recommend screening for additional STDs whenever crab lice are detected. The presence of crab lice on adolescent children may signal sexual abuse.

Alternative Treatments Home remedies or treatments for crab lice described as "natural" or "pesticide free" are not recommended because there is no research data to show that they are effective in killing crab lice, how long the application should remain in place to be effective, or if the remedy won't cause additional harm. Such treatments may kill only the crawling lice and not harm the nits at all, in which case multiple treatments would be necessary to eliminate the lice as they hatch out. Using a medicated shampoo or cream will effectively eliminate the infestation within several days when combined with manually removing the lice with a comb, cleaning infested items, and vacuuming the home. Home remedies may require much longer periods of time than that, and if they are not very effective, may not actually control the lice at all.