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THE BEDBUG A troublesome household pest.

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Bedbugs are especially likely to be abundant in poorly constructed houses where numerous cracks and crevices furnish convenient hiding places. However their temporary presence may occur in the best kept homes. These insects are necturnal in habit, feeding largely at night, and for this reason are most commonly associated with beds. During the day, however, many of the insects seek hiding places about the room. Cracks and crevices of all kinds furnish ideal places of concealment, while loose wall paper, the upholstering of various articles of furniture and similar places also hold their full queta of bugs in a badly infested house. No treatment will be effective which does not include these hiding places as well as the bed.

ERADICATION

Once a house has become severely infested a very thorough campaign will be required to eradicate the bugs.

The methods which may be used in fighting the bugs may be summarized as follows:

- 1. A general clean up of the infested quarters.
- 2. The use of insecticides.
- 3. Fumigation.

Cleaning infested quarters.

Whenever bedbugs are discovered in the home, the infested room, and if necessary, the entire house should be given a thorough cleaning. All carpets, furniture, etc., should be removed. The carpets, bed clothing, and other fabrics should be cleaned and aired in the sun for a day or more. The bed and mattress should receive special attention. All parts of the bed-stead which will not be injured should be washed with soap and a solution of hot water and Creolin. When the water has dried, kerosene should be poured liberally into all cracks and crevices about the bedstead.

The room itself should receive equally thorough treatment. The floor should be washed with hot water, soap, and Creolin, being careful to clean out all cracks, crevices, and out-of-the-way places. The walls should be examined, cracks should be treated with kerosene or filled with plaster or putty. Loose pieces of wall paper should be removed and after a thorough cleaning, the walls should be repapered if desired.

The use of insecticides.

Insecticides should be used in connection with a clean up campaign as just described. Their use should also accompany fumigation where the bugs are eradicated by means of gases.

Kerosene seems to be the most useful insecticide for the eradication of bedbugs. It is fatal to the eggs as well as to the bugs. It has good penetrating power and will soak into cracks which can be reached by almost no other material.

Gasoline, because of its more rapid evaporation, seems to be less effective than kerosene. It may sometimes be used on articles which would be spoiled by the use of kerosene. Upholstered furniture, for example, may be placed on an open porch or in a shed and the parts infested treated with liberal applications of clear gasoline. When using kerosene or gasoline, keep the windows open and all fire away during the period of application, otherwise fire or explosion may occur.

Mercuric Chloride (corrosive sublimate) one ounce dissolved in one pint of alcohol to which is added one-fourth pint of turpentine. This is probably the most lasting and effective insecticide for use against bedbugs, when poured into the cracks and crevices of the bedstead. The eggs are not affected, but a thin film of the substance remains to attack the bugs as soon as the eggs hatch. This substance is poisonous and should be handled with caution. The container should be properly labeled and kept out of reach of children, and should never be applied to substances which might be chewed by children or pets.

Pyrethrum powder (Insect powder) of good quality is effective in killing the bugs. It will not affect the eggs, and will not penetrate cracks and crevices. Commercial pyrethrum sprays are also of value but it is necessary to hit the bug in order to kill it, therefore necessary to apply spray with pressure.

Fumigation. *

In combatting bedbugs in old shacks, bunk-houses, and similar buildings, much labor may be saved by the use of gases in killing the insects.

First clean out all rubbish, etc., from the building to be treated. Open all cupboards, boxes, etc., which may be in the rooms. Arrange all bed clothing and other articles so that the gas may have easy access to them.

Make the building as nearly air tight as possible by stopping cracks and openings. Fumigation is ineffective if the gas can rapidly escape.

Sulfur fumes when properly used, are fatal to the bugs and also destroy the eggs. Stick or flour sulfur should be procured at the rate of 2 pounds to every 1000 cubic feet of space to be fumigated. The sulfur should be placed in a large metal pan raised from the floor on bricks. A small amount of kerosene oil is then poured over the sulfur, and this set on fire. Close the building allow the fumes to act for 24 hours. The building should then be opened and aired.

Caution - (see next page)

^{*}Fumigation may sometimes be employed for the eradication of bedbugs in hotels and other large buildings, or even in the home. However, it should be understood that polished metals will be tarnished and colored fabrics and wall paper injured by the use of sulfur fumes. Bed posts and similar metals may be covered with paper or coated with vaseline to protect them during fumigation. Hydrocyanic acid gas is particularly effective, but it is deadly to human beings and animals and should be used only by a well-informed person, preferably by a professional fumigator working under a license.

Caution: It is necessary to guard against fire in the use of this treatment. This may be accomplished by placing the metal pan on bricks in a tub partially filled with water.

After fumigation, insecticides may be used, if it seems necessary, to kill any insects which may have escaped the effects of the sulfur fumes.