

Bed bug eggs, which are slightly curved, measuring 0.8-1.3mm long by 0.4-0.6mm broad, are cemented to the surfaces of the harbourages, often in large numbers. Unhatched eggs are an opaque, pearly white colour, whilst hatched eggs, which remain in position long after hatching, are opalescent and translucent. While temperature and the availability of food have a profound effect on egg production, under optimal conditions egg laying is almost continuous, at a rate of about three per day. The number of eggs laid by a female in the course of her adult life has been variously quoted as between 150 and 345. The first-stage nymphs which hatch from the eggs are just over 1 mm long and, like all the nymphal stages, appear very similar to the adults, except in size and colour.

Early instars tend to be more amber than the darker brown of the adult. Each nymph requires one full blood meal before moulting to the next stage. Though there are variations in size, due mainly to the effects of feeding, which may increase the bug's weight by up to 6 times, the approximate lengths of each of the five nymphal stages are: stage I 1.3mm, II 2.0mm, III 3.0mm, IV 3.7mm and V 5.0mm. The rudimentary wings appear in the last moult.

The speed of development from egg to adult and the duration of adult life vary according to temperature and availability of food. With frequent feeding, at normal room temperatures (ca. 18-20°C) adults live for 9-18 months, with egg incubation taking 10-20 days and the complete cycle 9-18 weeks. Under these conditions nymphs feed at about 10 day intervals and the adults weekly. If necessary, both can survive long periods without food. Under cool conditions (13 deg C) starved adults could survive for as long as one year.

in unheated rooms where the temperature drops below 13°C in the winter, egg laying, moulting and feeding stops and the population declines as eggs and young nymphs die. Under such conditions there is only one generation per year. Where temperatures do not fall so dramatically, breeding may continue throughout the year and two generations can be attained.

Bed bugs are not regarded as disease carriers, but their blood feeding can cause severe irritation in some people, resulting in loss of sleep, lack of energy and listlessness, particularly in children. Iron deficiency in infants has resulted from excessive feeding by bed bugs. The bite often gives rise to a hard, whitish swelling which distinguishes it from the flea bite which leaves a dark red spot surrounded by a reddened area. Different individuals react differently to bites, some gaining immunity.

Probably more important, however, is the distaste with which these insects are regarded. Bed

bug excrement gives a characteristic speckled appearance to their harbourages, whilst their 'stink glands' confer a distinctive and unpleasant almond-like smell on infested rooms. In addition, the very thought of being preyed upon by such creatures is quite sufficient to make most people take immediate action to control them. The bed bug may even help to create slums by driving away householders with reasonable standards of hygiene, leaving behind only those who are less concerned with such matters.

It is interesting to note that many factors are helping to sustain existing bed bug populations: modern building techniques, which allow easy access between adjoining properties; the increased use of central heating, which allows continued feeding and proliferation during winter; the movement of furniture in the second-hand market, which aids their distribution; all these serve to maintain population levels.