

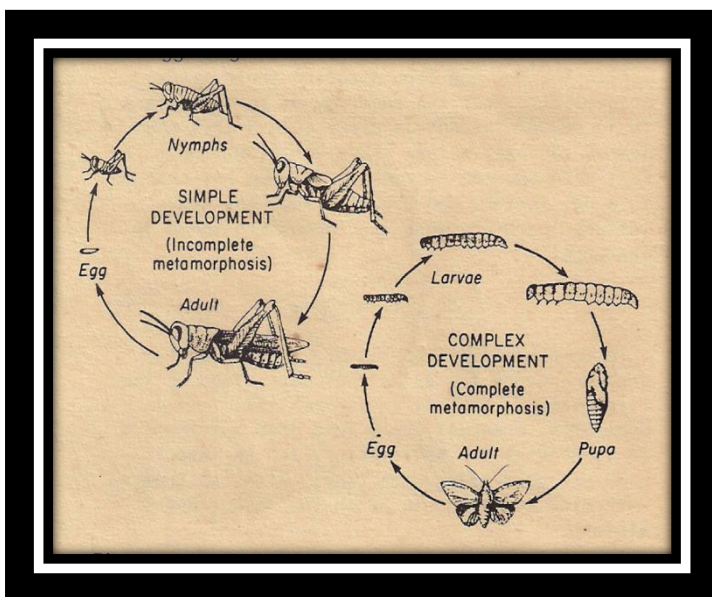
## INVESTIGATING an Insect's Life History

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Anyone fascinated with insects should enjoy delving into their life histories. What is a life history? It is simply the complete cycle of life stages through which an insect progresses (a generation), and the time period to which their life cycle occurs under natural conditions. One complete life cycle or generation (from the egg on to the egg again) takes a full year for most insects but there are many exceptions.

Fast-growing aphids, for example usually have 4 to 5 generations in one summer. The common fruit flies that we all see flitting around over-ripe bananas seem to be the record holder for the shortest life cycle. It may complete 25 generations in one year, though this occurs only in the tropics or in the laboratory. In contrast, one species of cicada requires 13 years in the south and 17 years in the north for its full life cycle. This is the well-known 17 year cicada which probably has the longest life cycle of any insect.

All but a few insects begin their lives as eggs (a few are born alive). Then from the egg, a small immature insect emerges. Depending upon the group to which it belongs, it will be either a larva or a nymph, but it may be called by various names. For instance, the larvae of the familiar butterflies and moths are often called caterpillars. And larvae of flies are called maggots, those of some beetles are grubs and juvenile mosquitoes are known as wrigglers. "Baby" bugs, which closely resemble their parents in miniature are just called nymphs.



As the immature larva or nymph feeds and grows, it enlarges by shedding its rigid outer skin called an exoskeleton. Every time it does this it changes to a new stage called an instar. The first instar emerges from the egg and develops to the first moult. The last instar develops into the adult in a simple development. Most common insects have 3 to 6 instars.