

Entomology – the study of insects

- Insects are the most diverse and abundant forms of life on earth.
- There are over a million described species (that's more than a third of all known organisms).
- Estimates predict that if the biomass (mass of biological tissue) of all humans and all insects were measured, insects would outweigh humans more than 30 to 1.

Forensic Entomologist

A forensic entomologist:

- Identifies the immature insects
- Determines the size and development of the insects
- Calculates the growth of the insects and passage through stages of the life cycle in laboratory
- Compares the growth against weather conditions to estimate time of oviposition (egg laying)

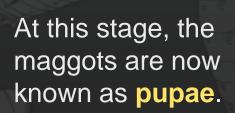
adult

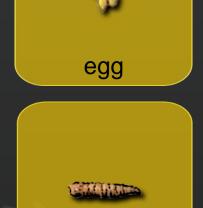
Fly life cycle



Once burrowed, the maggots enclose themselves in a hard shell and begin the metamorphosis (change) that will result in an adult fly.







1st instar





The Post Mortem Interval

Different insects are attracted to each of the four different stages of decomposition. The ordered series of insects attracted to the decomposing body is called a succession.

The succession pattern is useful in estimating how long a cadaver has been exposed to the insects.

Calculating PMI from

23

27

22

130

143

Total

1610

3500

5040

14140

24150

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1610

1890

1540

9100

10010

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Accumulated Degree Hours (ADH)					
From	То	Temp	Hours	ADH	•

70° F

70° F

70° F

70° F

70° F

1st Instar

2nd Instar

3rd Instar

Pupa

Adult Fly

Egg

1st Instar

2nd Instar

3rd Instar

Pupa



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