

Insects and People - Entomology 101

External Morphology

Segmentation - a series of primitive similar segments that constitute the body

Tagmosis - grouping of segments into distinct, functional body regions called tagmata (tagma - singular)

- a. head
- b. thorax
- c. abdomen

Exoskeleton - an external support system, an external skeleton, the integument

- a. advantages
- b. disadvantages

c. structure

epicuticle

exocuticle and endocuticle

chitin

reslin

hypodermis (epidermis) - living layer

d. flexibility

sclerites and sutures

e. cuticular appendages

setae and spines

Body Regions (Tagmata)

a. Head

1. compound eyes
ommatidia

2. ocelli

3. antennae (antenna - singular)

4. mouthparts

chewing (grasshoppers, caterpillars)

sucking (piercing-sucking) (plant bugs, mosquitoes)

sponging (house fly)

siphoning (adult butterfly, adult moth)
chewing-lapping (bees)

b. Thorax

prothorax
mesothorax
metathorax

appendages of the thorax include wings and legs

legs

natatorial
saltatorial
raptorial

wings

flight is a tremendous advantage

cuticular layers

types

membranous

tegmina (grasshoppers, cockroaches)

hemelytron (true bugs)

elytron (beetles)

scales (modified membrane, butterflies)

c. abdomen

ovipositor (egg laying)

sting (modified ovipositor)

cerci (sensory in function)