


Biomedical Parasitology

Parasitic Arthropods



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Arthropod: "jointed limbs"

- Extremely versatile
- Compared to Swiss Army Knife











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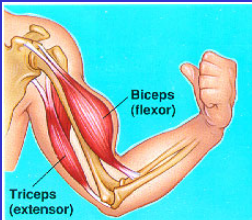
Arthropods

- Phylum Arthropoda, kingdom Metazoa & superkingdom Eukaryota
- Segmented body, jointed limbs & exoskeleton
- 555 millions years old - 320 myo than dinosaurs
- ~1.2 million species described - 80% of animal species described
- *Live everywhere, eat everything!*

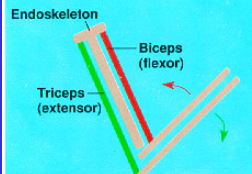




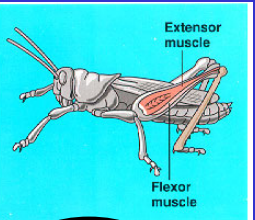
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flexion against skeleton

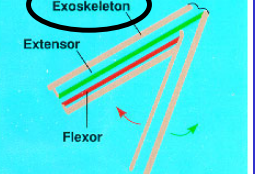


Endoskeleton





Exoskeleton




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ARTHROPODS

defining characteristics

- metazoa
- invertebrate
- haemocoel
- metameric
- jointed limbs
- exoskeleton



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EXOSKELETON

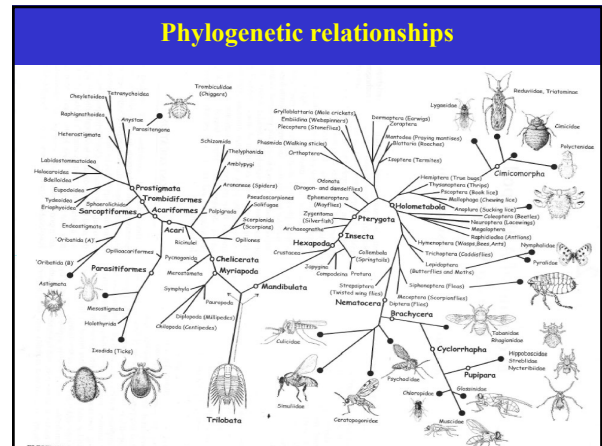
- hard cuticle (chitin-protein, sometimes wax)
- strong support (muscular leverage)
- flexible movement (articular membrane)
- provides protection (solar radiation, predators)
- allows internal fertilization (protected eggs)
- waterproof (prevent desiccation)
- permitted colonization of land (and air)
- problem for growing animal overcome by periodic moulting (ecdysis)

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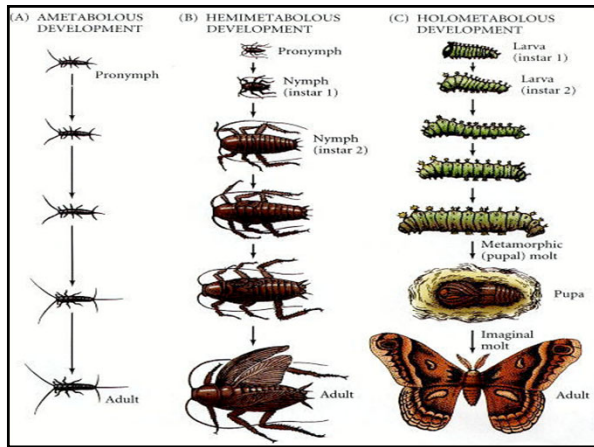
Development modes

- Simple development: immature stages resemble adults
- Incomplete metamorphosis: immature stages gradually come to resemble adults
- Complete metamorphosis: immature and adult stages are strikingly different

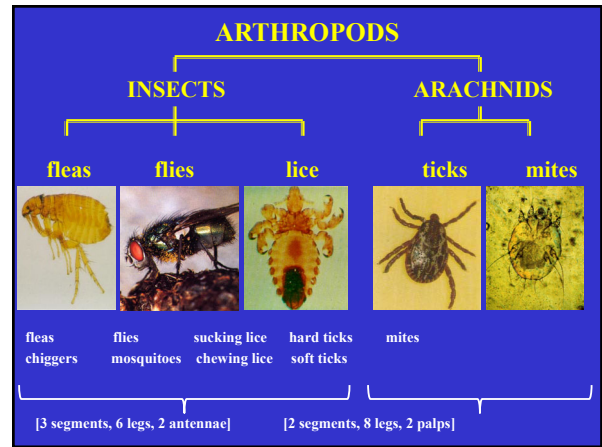
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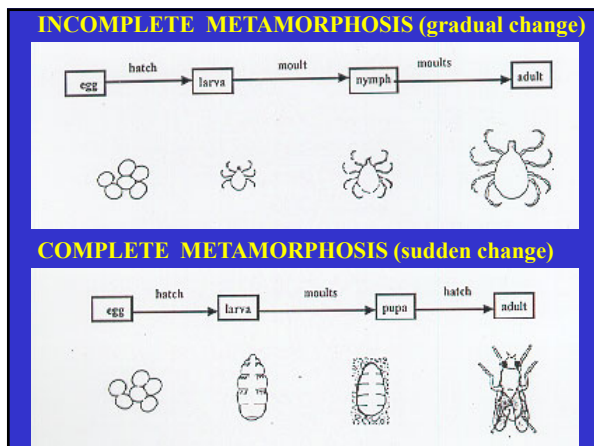
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