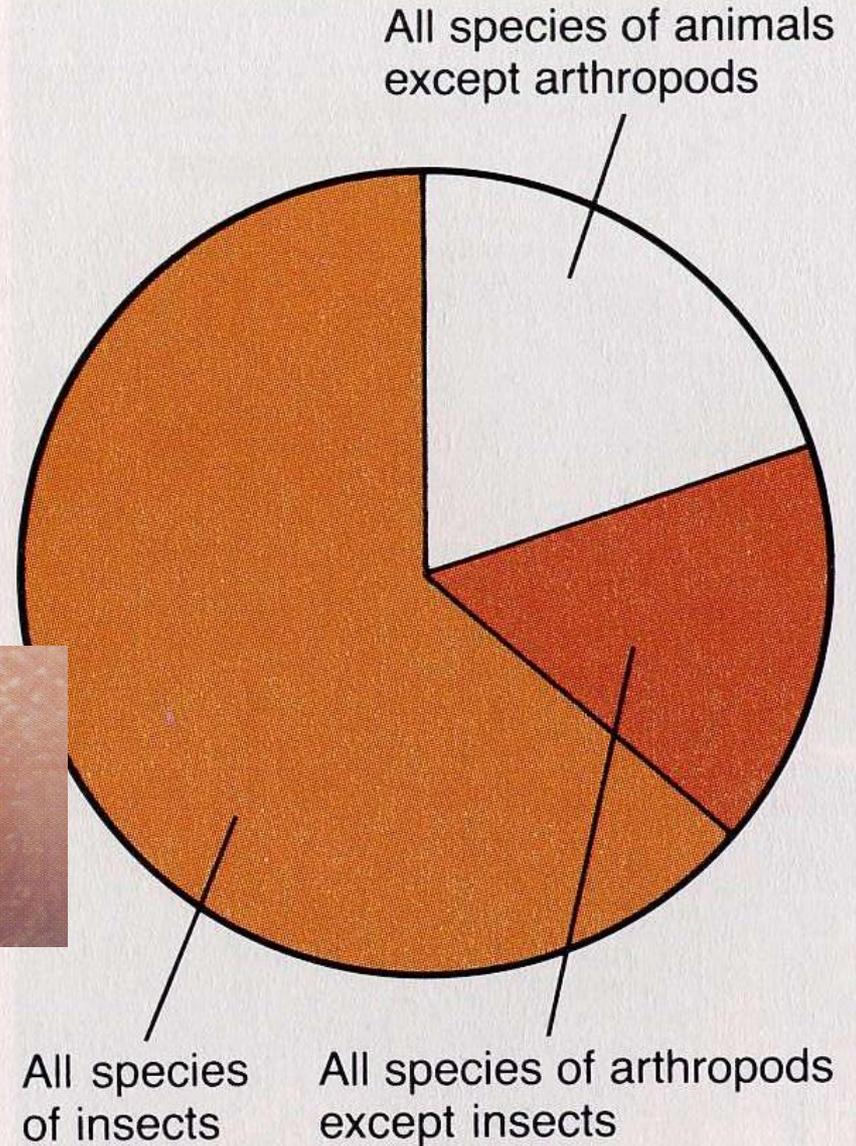


# **INTRODUCTION OF PHYLUM: ARTHROPODA**

**Department of entomology  
CSA University Kanpur  
B.Sc. Horti. (IIIrd SEM)**

# Phylum Arthropoda

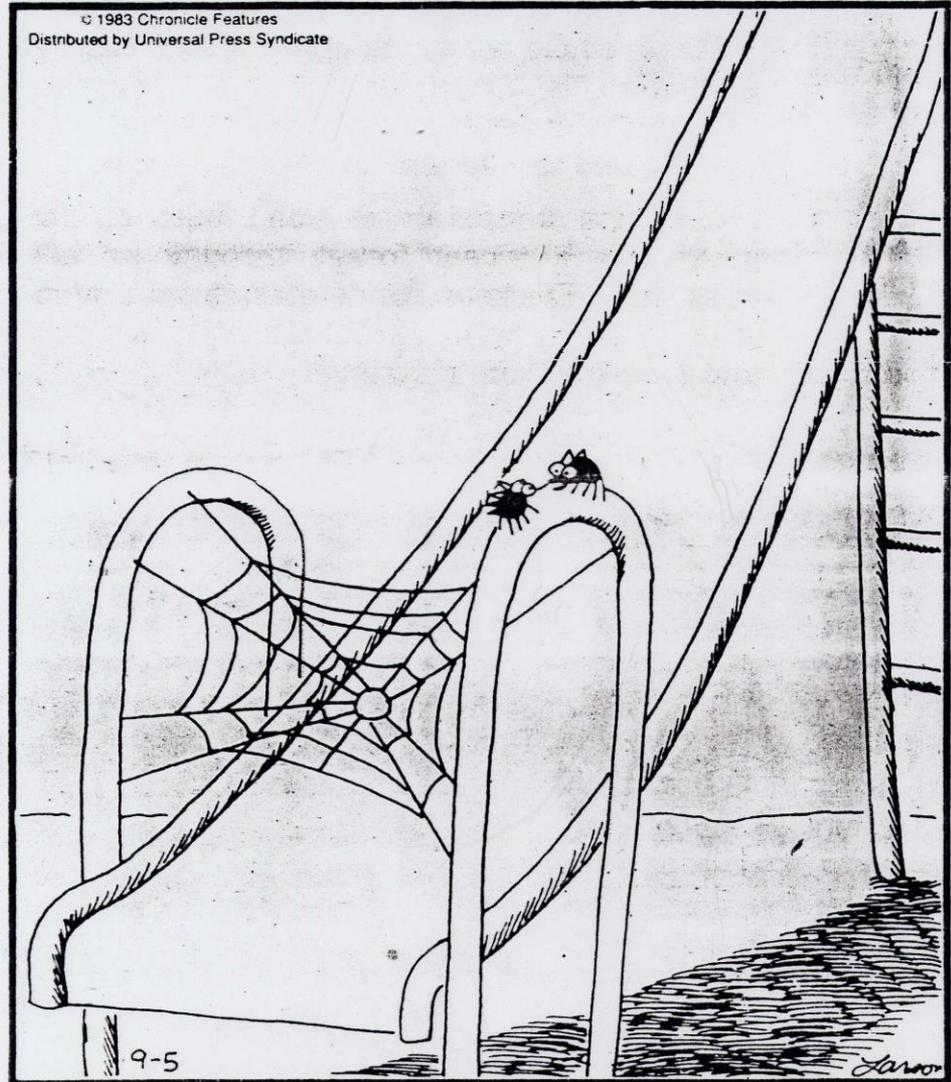


# (PHYLUM: ARTHROPODA)

- Includes horseshoe crabs, spiders, insects, crustaceans, ticks, mites, centipedes & millipedes
- Aquatic or terrestrial
- Bilateral symmetry

Far Side

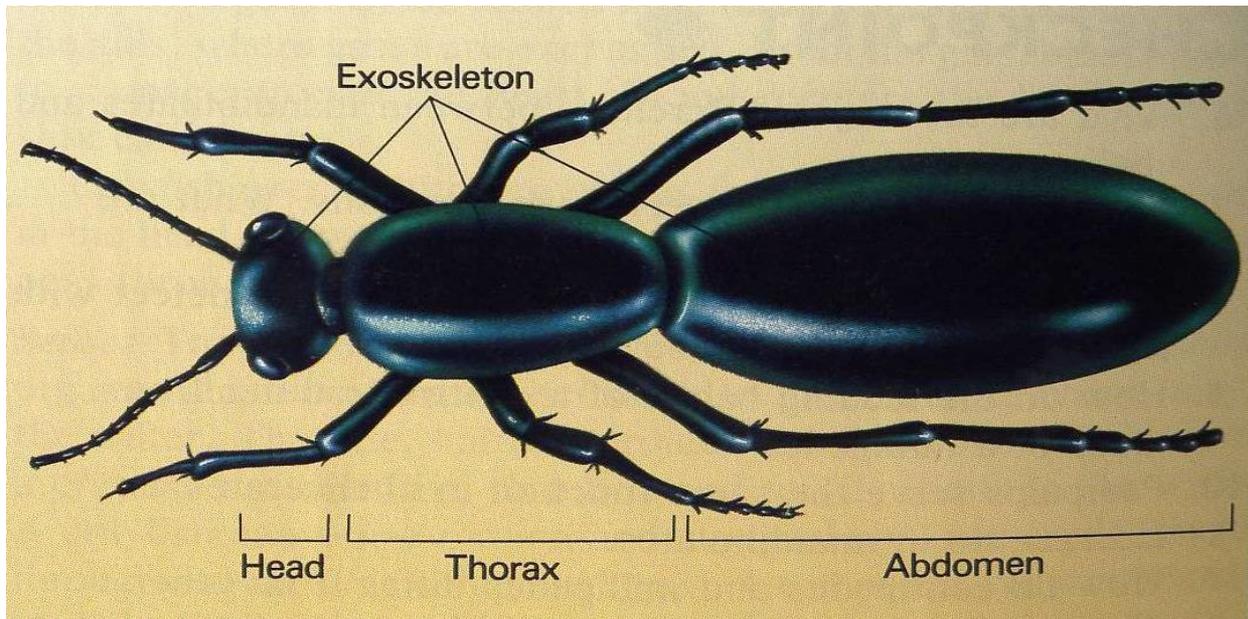
© 1983 Chronicle Features  
Distributed by Universal Press Syndicate



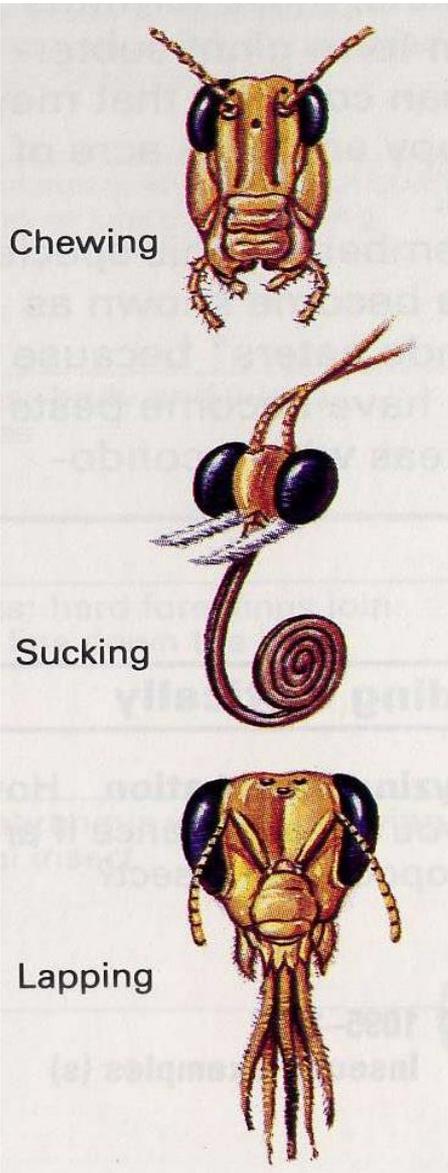
9-5  
“If we pull this off, we’ll eat like kings.”

# (PHYLUM: ARTHROPODA)

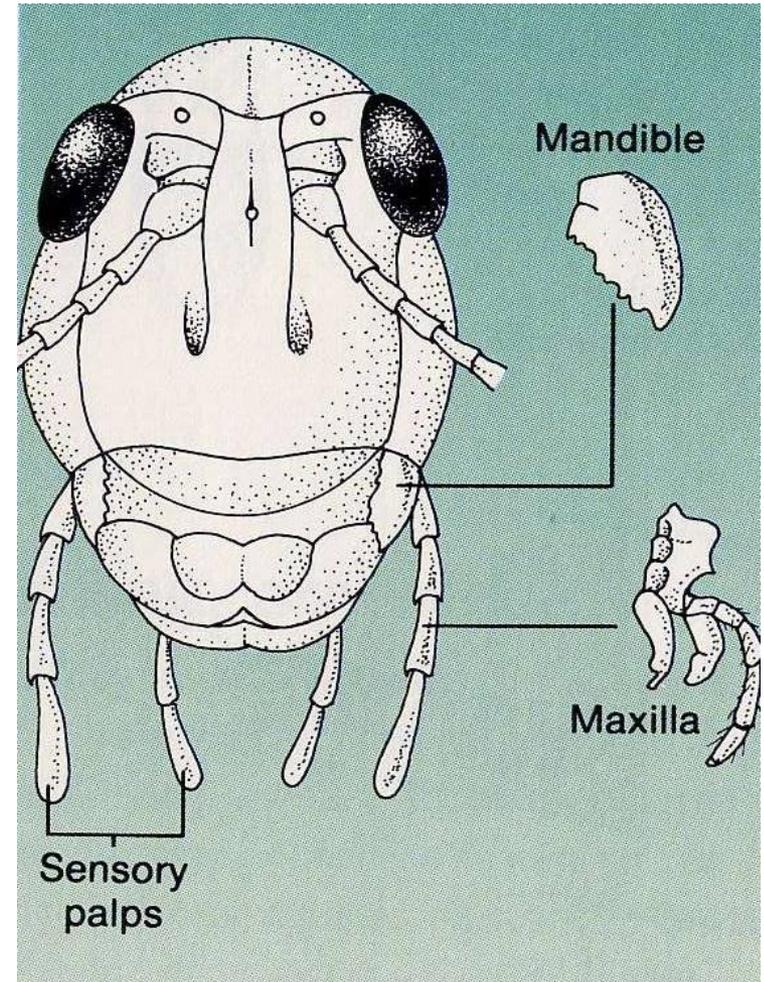
- Segmented body:
  - 1. Head, thorax, abdomen
  - 2. Cephalothorax- fused head & thorax; abdomen
- Jointed appendages -
  - Sensory, walking, feeding, mating, flying



# (PHYLUM: ARTHROPODA)

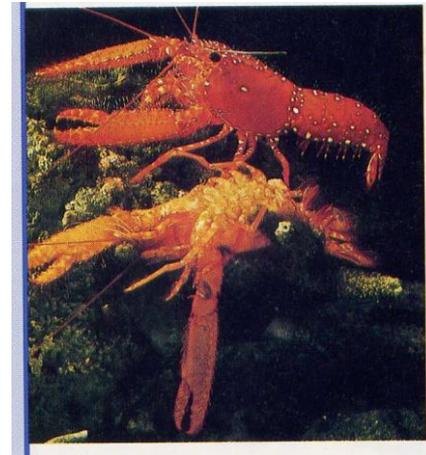


- Most have compound eyes
- Most have separate sexes
- Mandibles - mouth parts



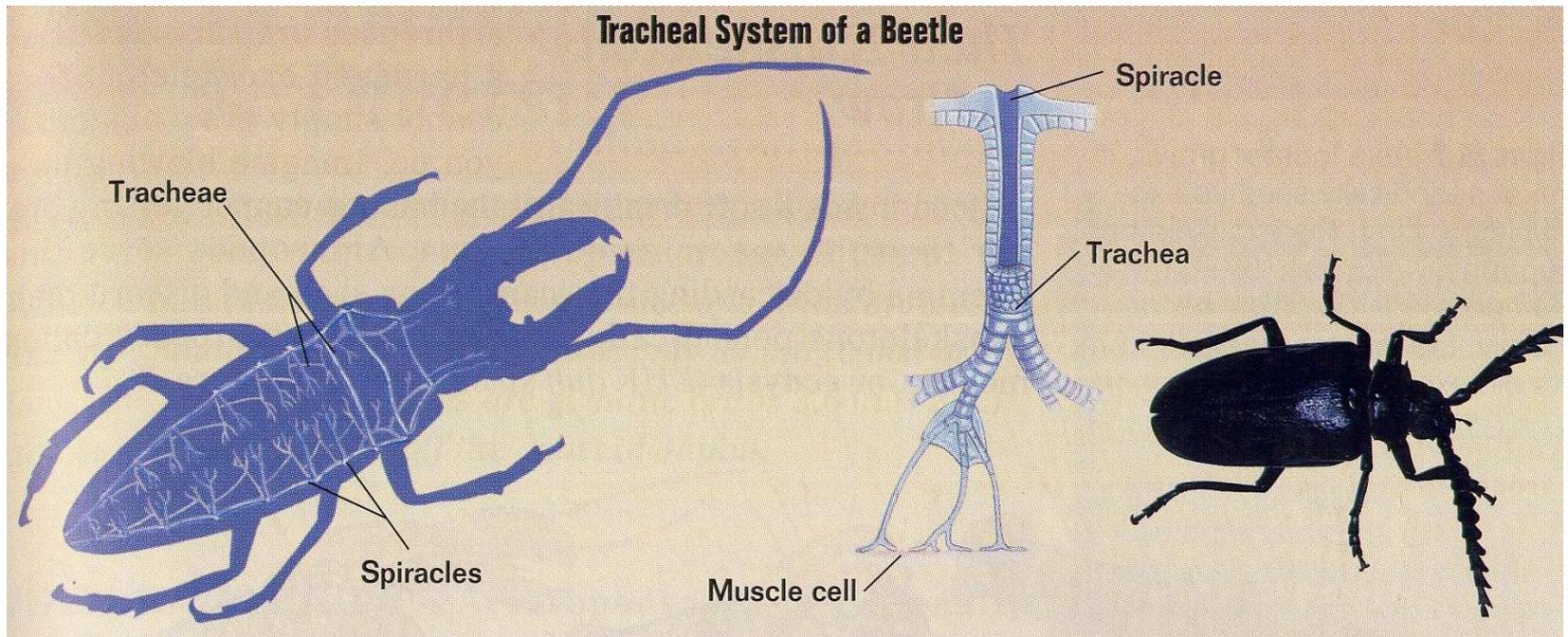
# (PHYLUM: ARTHROPODA)

- Exoskeleton:
  - Adv: Protection, prevents water loss
  - Disadv: Heavy, restricts growth
- Molting - shedding the old exoskeleton



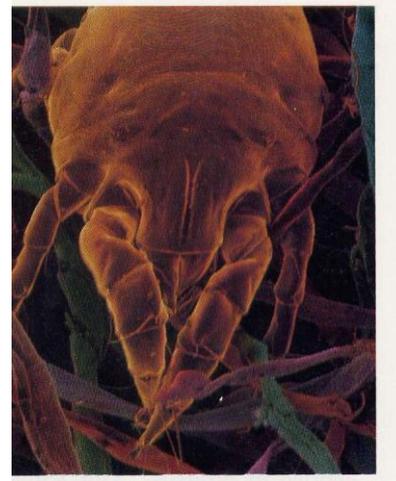
# (PHYLUM: ARTHROPODA)

- 3 types of breathing structures:
  - 1. Gills (water)
  - 2. Tracheal tubes (land)
  - 3. Book lungs (land)



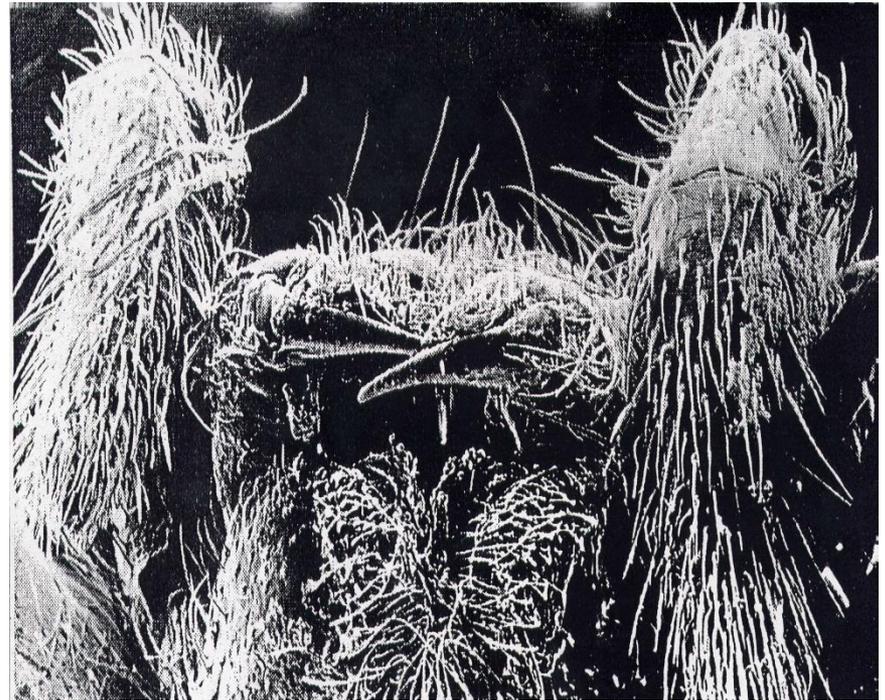
# CLASS: ARACHNIDA

- Spiders, scorpions, mites & ticks
- Terrestrial
- Most have a cephalothorax
- 4 pairs of legs



# (CLASS: ARACHNIDA)

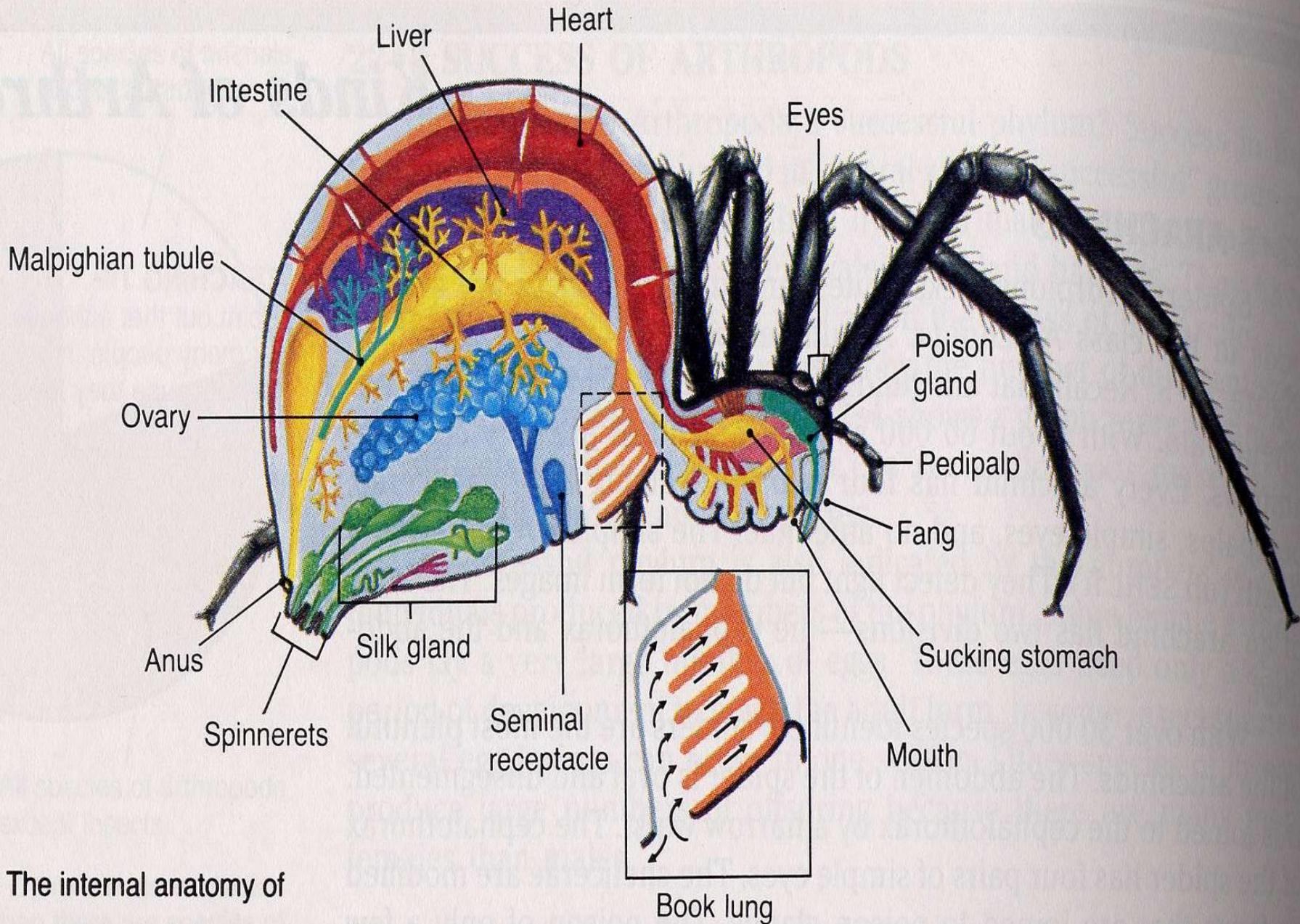
- Chelicerae - fangs to inject poison
- Pedipalps - handling food, sensing, reproduction
- Ocelli - 8 simple eyes



# (CLASS: ARACHNIDA)

- No antennae
- No mandibles
- Spinnerets - secretes silk for web spinning
- Book lungs - gas exchange





2•6 The internal anatomy of

# CLASS: CRUSTACEA

- Crabs, lobsters, shrimp, crayfish & barnacles
- Most are aquatic
- Most have 5 pairs of legs (1 pair = claws)





**Hermit crab**

# (CLASS: CRUSTACEA)

- 2 pairs of antennae
  - Antennules - balance
  - Antennae - sensory
- Mandibles
- Compound eyes



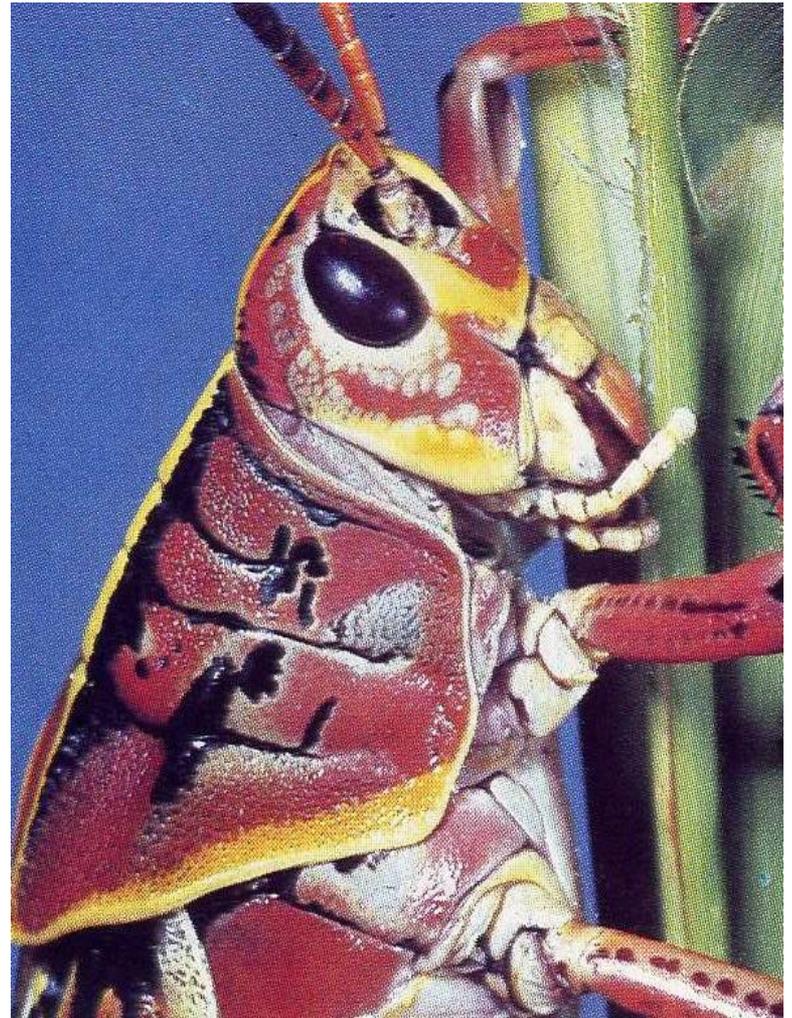


<ul style="list-style-type: none"><li>•CLASS</li></ul> <b>CHILOPODA</b>	<ul style="list-style-type: none"><li>•CLASS</li></ul> <b>DIPLOPODA</b>
<ul style="list-style-type: none"><li>•Centipedes</li></ul>	<ul style="list-style-type: none"><li>•Millipedes</li></ul>
<ul style="list-style-type: none"><li>•Flat body</li></ul>	<ul style="list-style-type: none"><li>•Round body</li></ul>
<ul style="list-style-type: none"><li>•Carnivores/ (Insectivores)</li></ul>	<ul style="list-style-type: none"><li>•Herbivores</li></ul>
<ul style="list-style-type: none"><li>•1 pr.</li></ul> Legs/segment	<ul style="list-style-type: none"><li>•2 pr.</li></ul> legs/segment



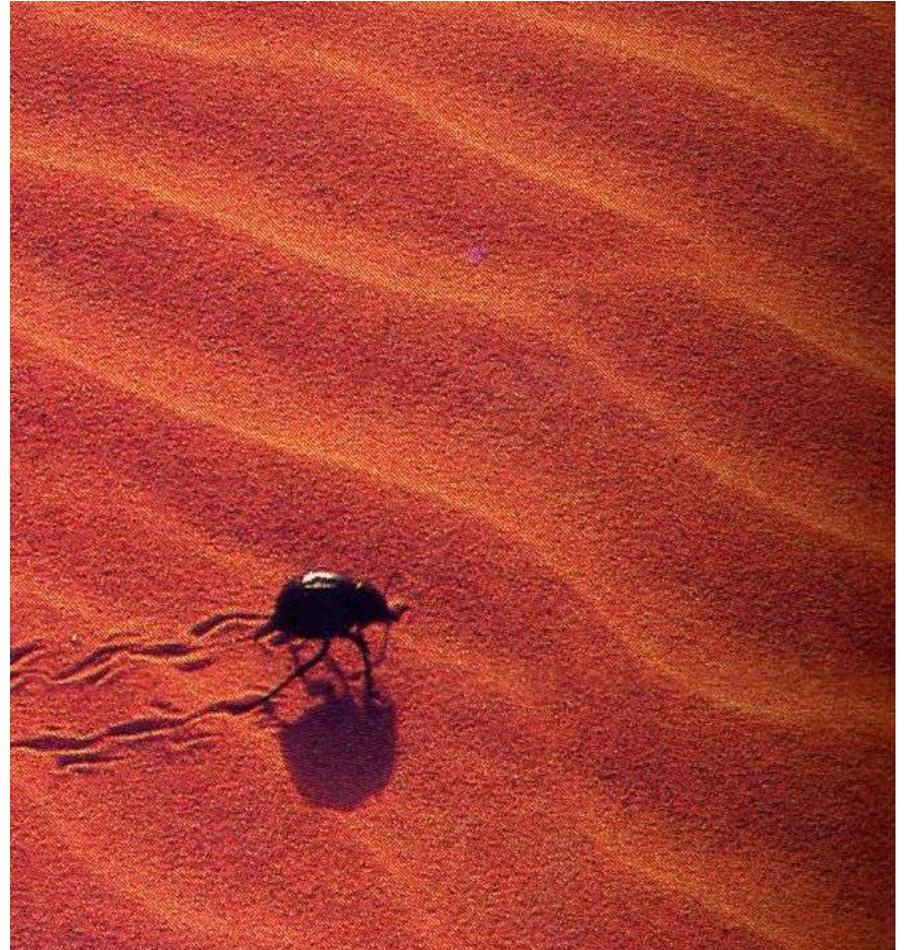
# CLASS: INSECTA

- Flies, grasshoppers, lice, bees, beetles & butterflies
- Largest group of arthropods
- Aquatic and terrestrial
- 3 pairs of legs



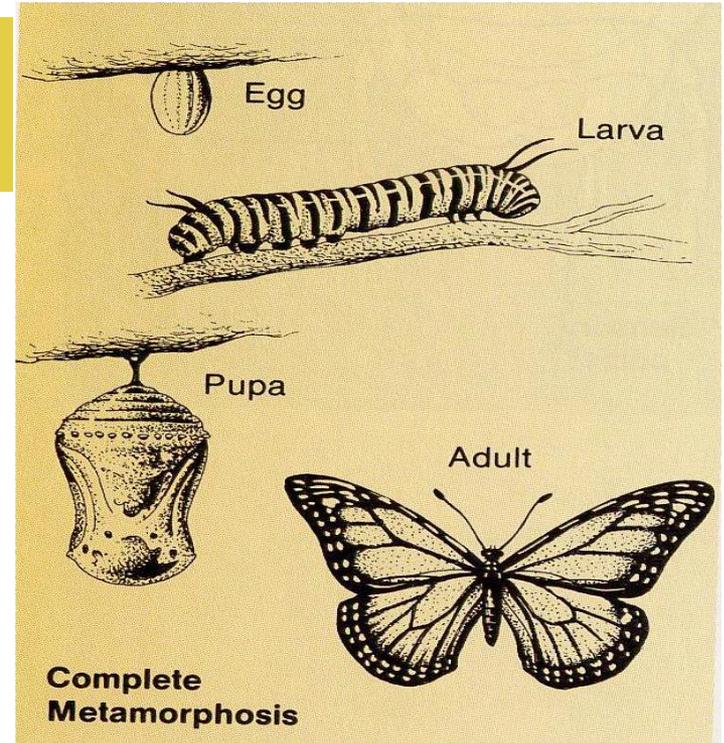
# (CLASS: INSECTA)

- Most have 1 or 2 pairs of wings
- 1 pair of antennae
- Mandibles
- Breathing structures:
  - 1. Spiracles
  - 2. Tracheal tubes



# (CLASS: INSECTA)

- Complete metamorphosis
  - 1. Egg
  - 2. Larva
  - 3. Pupa
  - 4. Adult



**1. EGG**



**2. LARVA**



**3. PUPA**

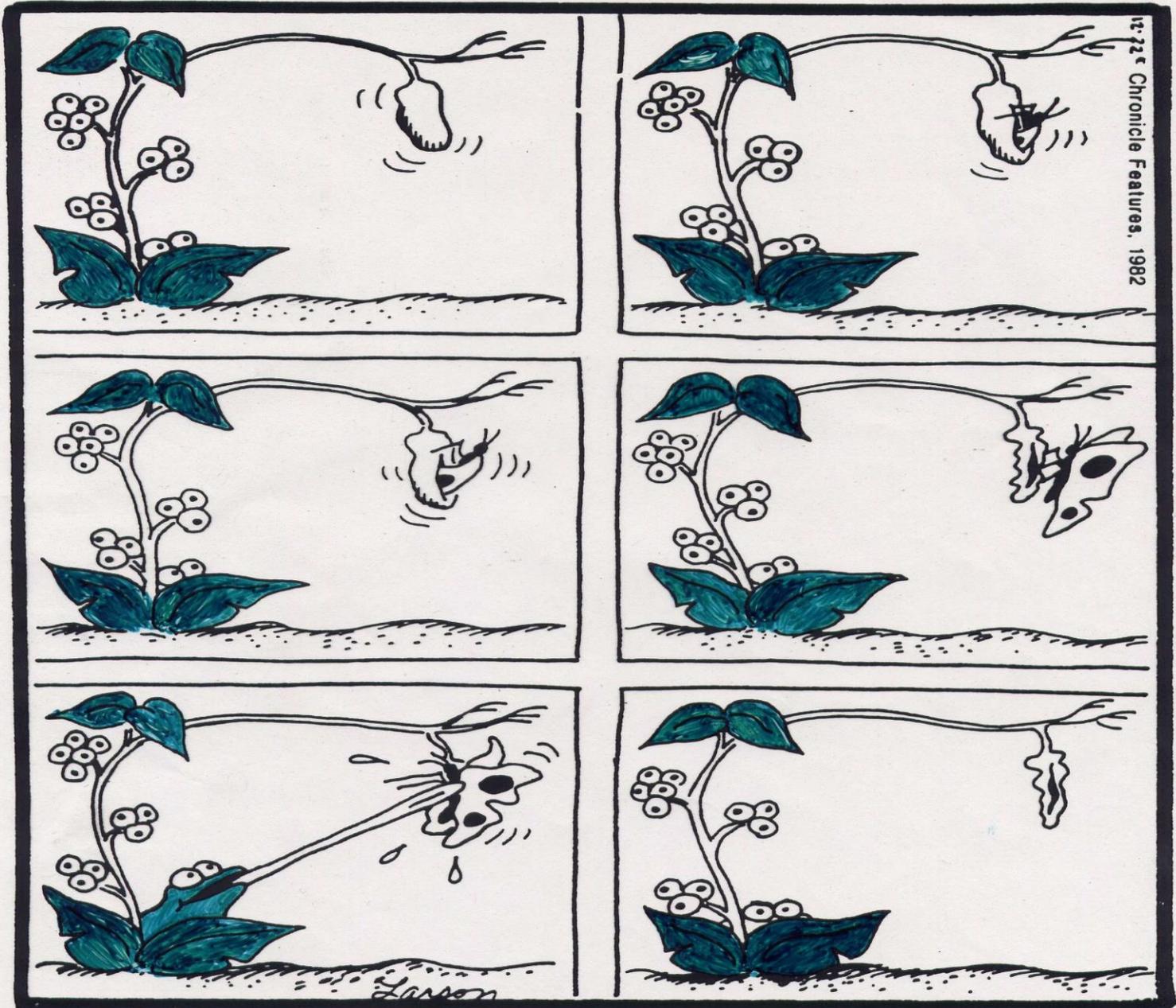


**4. ADULT**



# THE FAR SIDE

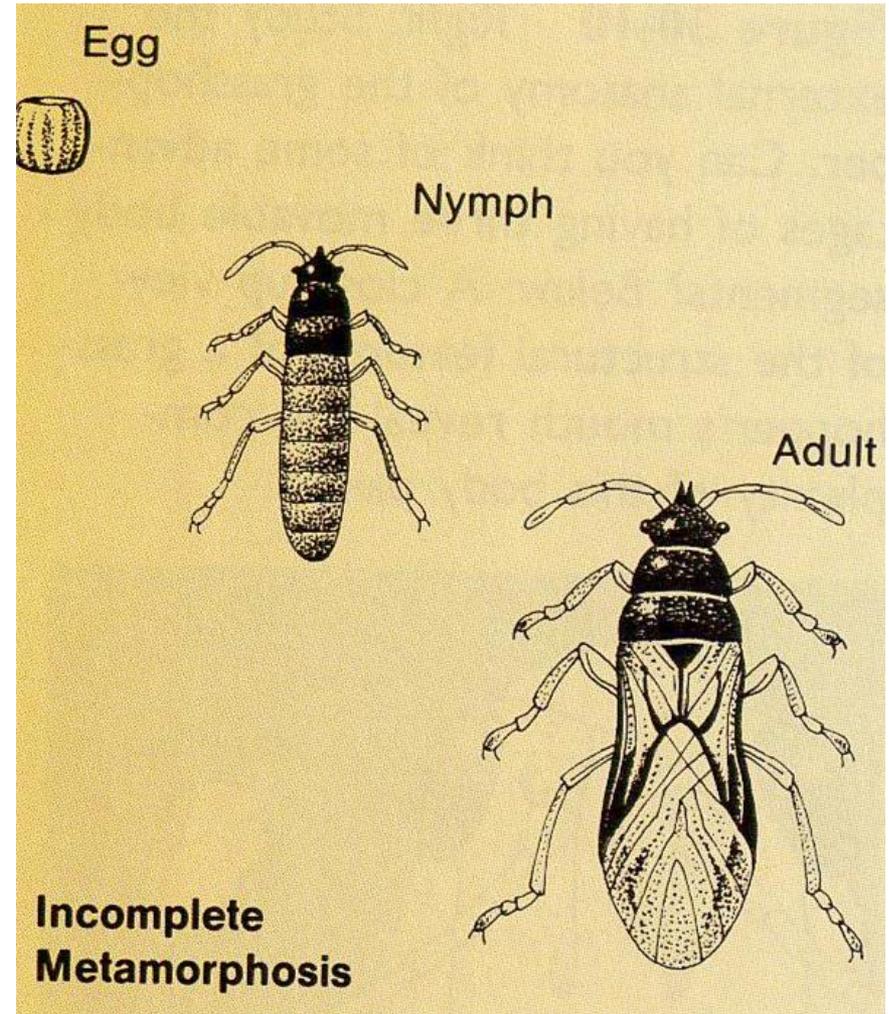
By GARY LARSON



Metamorphosis

# (CLASS: INSECTA)

- Incomplete metamorphosis
  - 1. Egg
  - 2. Nymph
  - 3. Adult



THE END!

m

