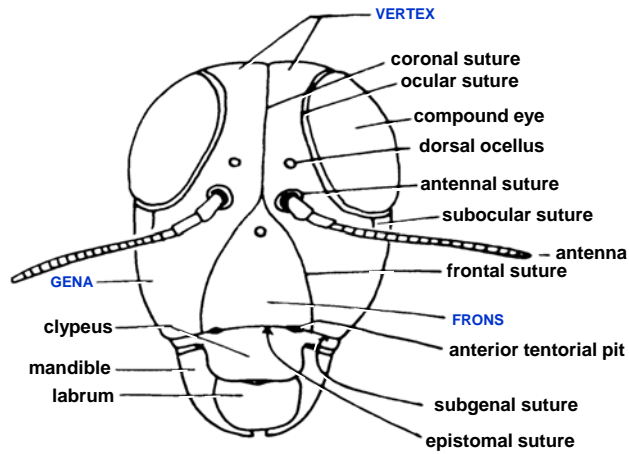
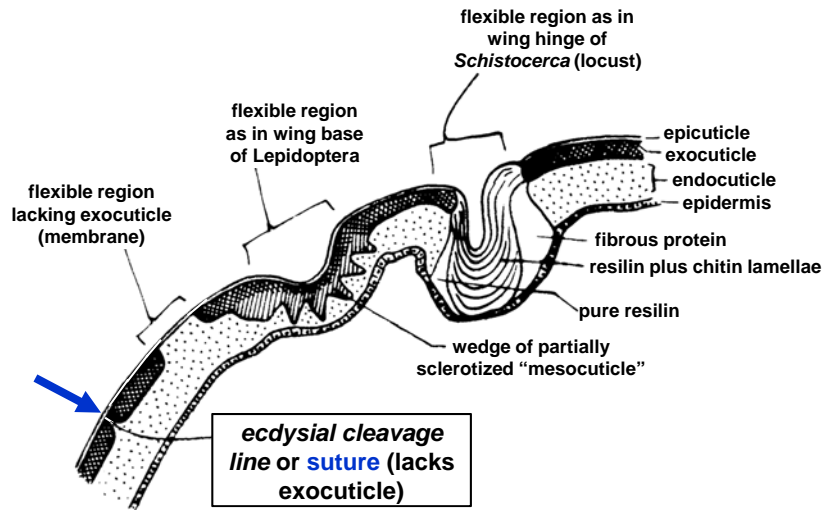


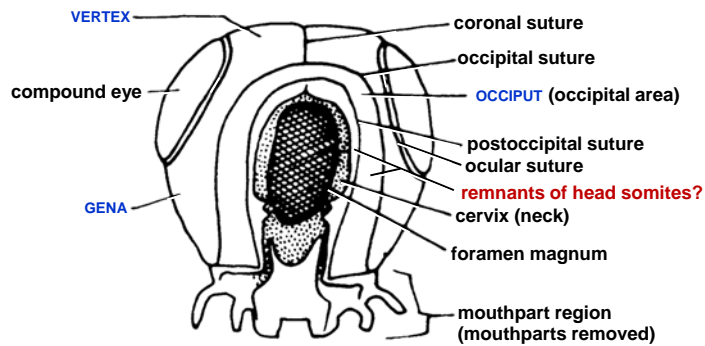
Generalized insect head:
Anterior aspect



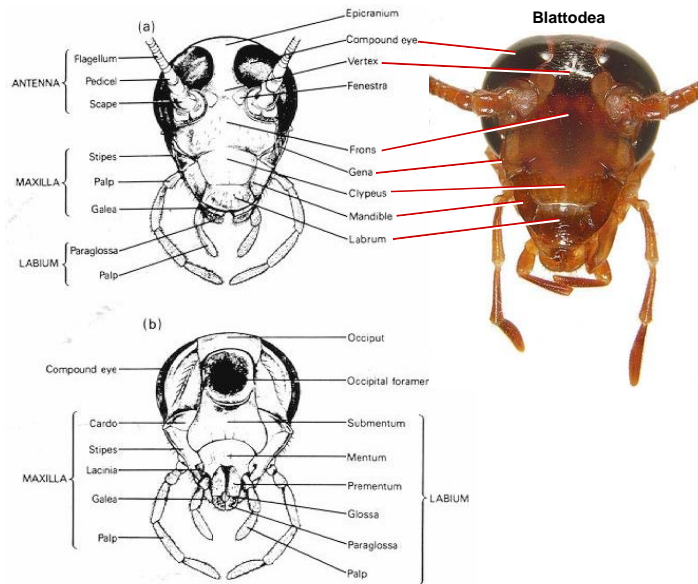
Suture lines: lines of weakness associated with **molting**



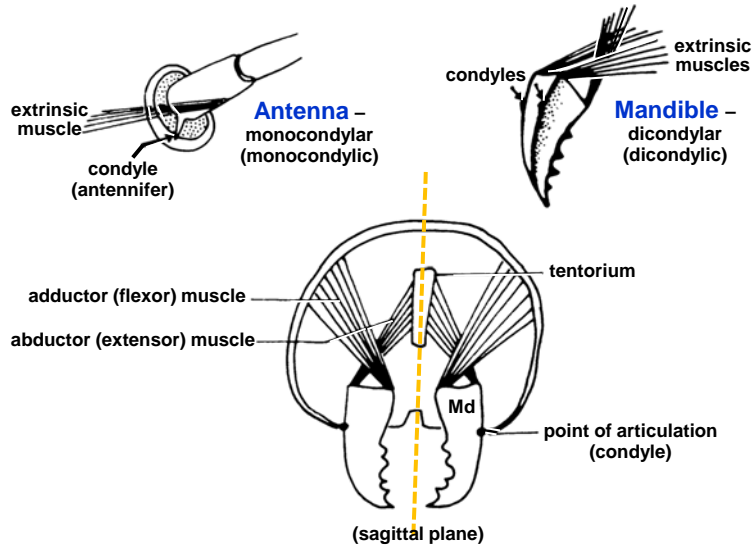
**Generalized insect head:
Posterior aspect**



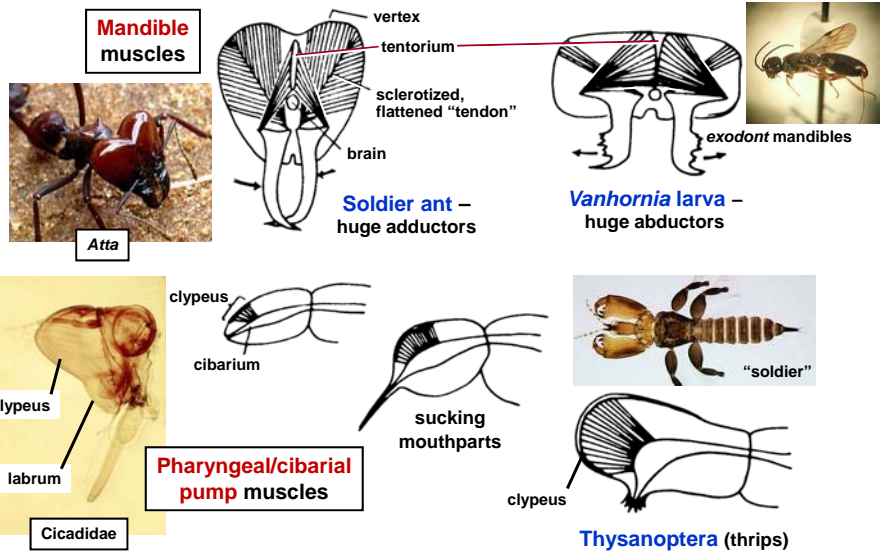
Generalized insect head: cockroach (Dictyoptera: s.o. Blattodea)



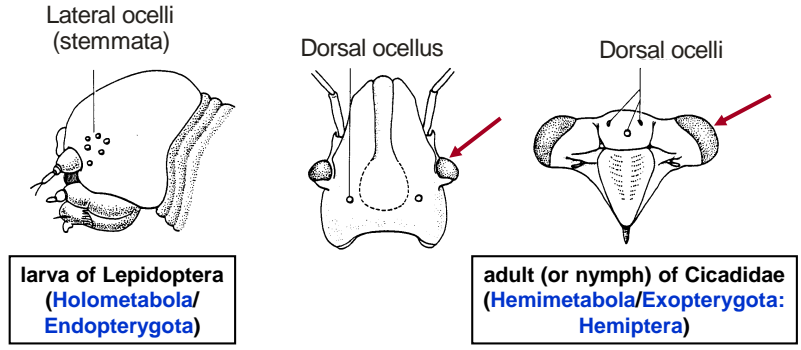
Head articulations and muscles



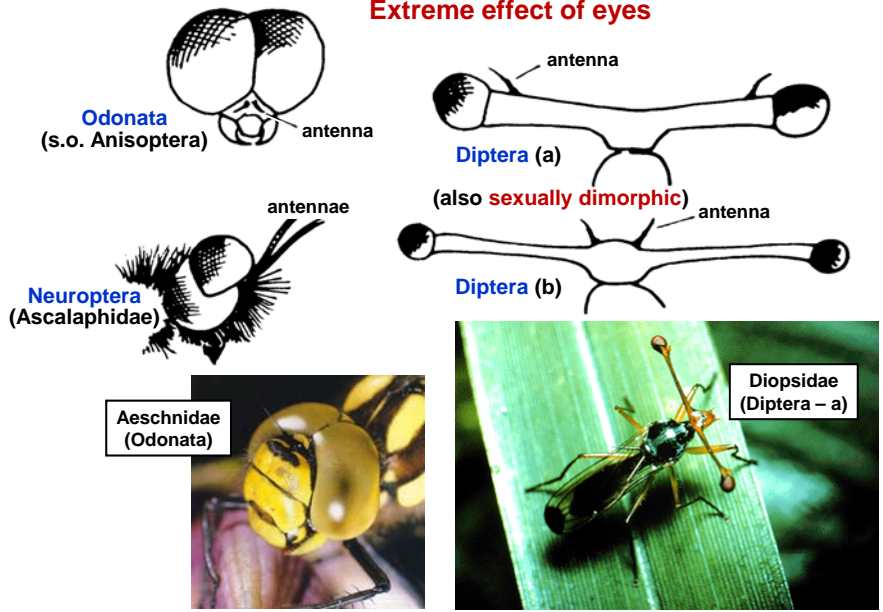
Head shape I: the effect of Muscles [Note sexual & caste dimorphism]



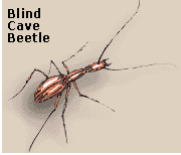
Head shape II: Compound eyes



Head shape: Extreme effect of eyes




Other modifications of the compound eye

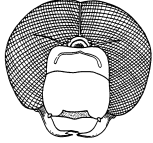


Blind Cave Beetle

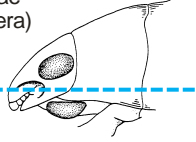
male Strepsiptera



Odonata




Gyrinidae (Coleoptera)

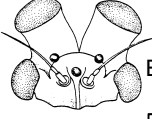


water surface

Thysanoptera

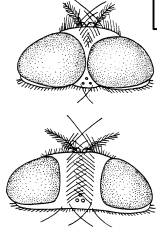


male Ephemeroptera




Sexual dimorphism:


Male and female *Drosophila* (Diptera)



Ascalaphidae (Neuroptera)

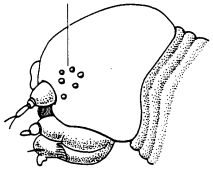


Simple eyes: Stemmata and Dorsal Ocelli



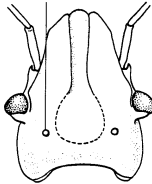
Blind Cave Beetle

Lateral ocelli (stemmata)

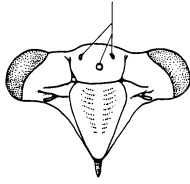


larva of Lepidoptera (Holometabola/Endopterygota)

Dorsal ocellus

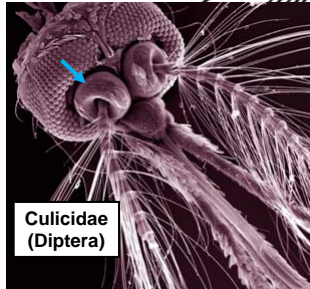
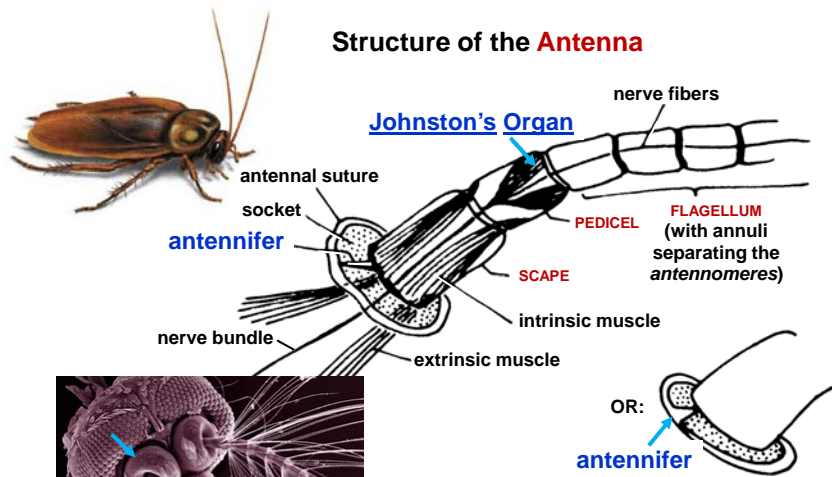


Dorsal ocelli



adult (or nymph) of Cicadidae (Hemimetabola/Exopterygota: Hemiptera)

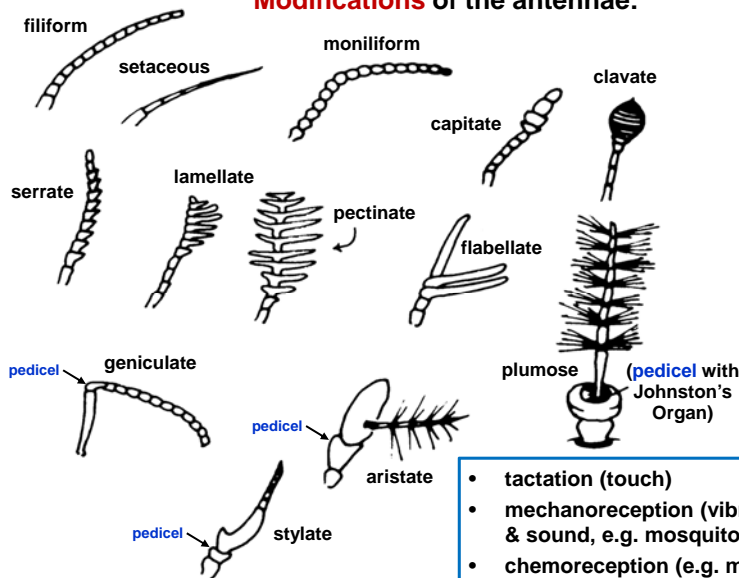
- *Dorsal ocelli* are commonly lost (even whole orders).
- *Compound eyes* usually retained, but lost in cavernicolous species.



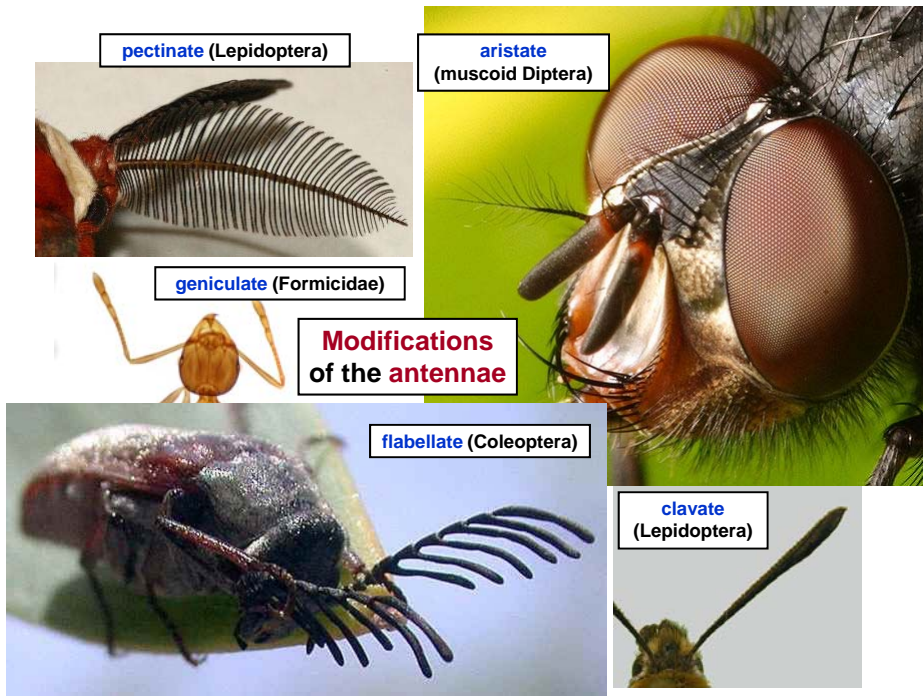
Lost in some endoparasites (Strepsiptera females) and ectoparasites (plant lice: Sternorrhyncha)



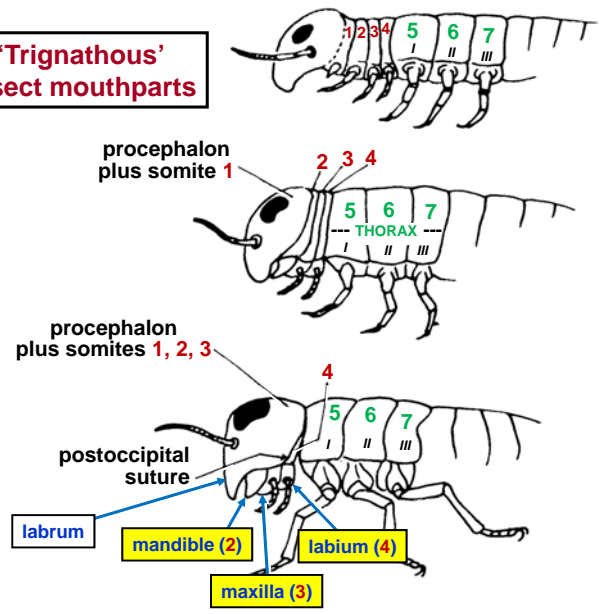
Modifications of the antennae:



- tactation (touch)
- mechanoreception (vibration & sound, e.g. mosquitoes)
- chemoreception (e.g. moths)
- prehension (sexual selection)



'Trignathous' insect mouthparts



Trignathous mouthparts:

